CITY OF MARSHALLTOWN
COUNCIL AGENDA
CITY HALL COUNCIL CHAMBERS
10 W STATE STREET
MAY 9, 2022, 5:30 PM

A. **CALL TO ORDER**

NOTICE TO THE PUBLIC: The Mayor and City Council welcome comments from the public during discussion of any of the agenda items. You are required to step to the microphone, state your name and address for the record and limit the time used to present your remarks to 3 minutes or less in order for others to be given the opportunity to speak. All speakers shall speak clearly and direct their comments to the Mayor and City Council and not to any Councilor specifically. It is at the discretion of the Mayor and Council to respond to specific questions and comments or to have staff respond during the meeting.

B. **PLEDGE OF ALLEGIANCE**

C. **ROLL CALL**

Hoop, Isom, Kell, Ladehoff, Schneider, Thompson, Walker

D. **MAYOR, COUNCIL AND ADMINISTRATOR COMMENTS**

E. **CONSENT AGENDA**

1. APPROVE MINUTES 04/25/22 MEETING AND BILL LIST $7,411,659.18

   Documents:

   2022-04-25 SIGNED Council Minutes.pdf
   2022-05-09_BILL LIST Summary.pdf
   2022-05-09_BILL LIST Detail.pdf

2. APPROVE LIQUOR LICENSE RENEWALS

   - Tremont on Main, 22-26 W Main St
   - Walgreens #03196, 5 E Anson St

3. REAPPOINT THOMAS MACK TO THE WATER WORKS BOARD OF TRUSTEES, 6 YR TERM 5/1/22-5/1/28

4. Receipt Of Building Permit Report, April 2022

   Documents:

   0422.pdf

5. Approval Of Renewal Applications For State Of Iowa Retail Cigarette, Tobacco, Nicotine And Vapor Licenses, Through 6/30/2022

   - Casey's #3228, 916 E Main St
   - Casey's #3508, 108 Iowa Ave W
   - Casey's #1303, 111 N 3rd Ave
   - Casey's #1441, 1402 S 12th Ave
   - Casey's #1564, 1009 W Lincoln Way
   - Dollar General #2019, 409 S 9th St
   - Dollar General #4206, 2413 S Center St
   - Dollar General #21858, 104 W State St
   - Hy-Vee, 802 S Center St
   - Hy-Vee Gas, 808 S Center St
   - Walmart #581, 2802 S Center St
   - Yesway #1148, 1701 Iowa Ave E

6. RESOLUTION 2022-118 ALLOWING OPEN CONTAINERS ON PUBLIC WAYS FOR A NEIGHBORHOOD BLOCK PARTY

   Documents:

   2022-05-09_2022-118_Resolution Approving Alcohol Public Way.pdf
   2022-05-09_2022-118_Special Events Application.pdf

7. RESOLUTION 2022-119 APPROVING CITY FEE SCHEDULE

   Documents:

   2022-05-09_2022-119_Resolution Approving City Fee Schedule.pdf
   2022-05-09_2022-119_Memo Approving Fee Changes.pdf
   2022-05-09_2022-119_Master Fee Schedule.pdf

8. RESOLUTION 2022-120 APPROVING CONTRACT CHANGE ORDER #1 FOR THE 2020 ADA SIDEWALK REPAIR PROJECT #SDW20001, AN INCREASE OF $15,680.97

   Documents:

   Increase CO.pdf
   Memo - ADA Sidewalk Repair_SDW 20 001_CO 1.pdf
   21026 Change Order 1 Pillar Signed.pdf

9. RESOLUTION 2022-121 TO NAME BANK DEPOSITORIES, ESTABLISH MAXIMUM DEPOSIT AMOUNTS, AND IDENTIFY POSITIONS AUTHORIZED TO CONDUCT BUSINESS ON BEHALF

OF THE CITY OF MARSHALLTOWN

Documents:

2022-05-09_2022-121_Resolution to Name Depositories Effective May 23 2022.pdf
Memo - Name Depositories.pdf

10. RESOLUTION 2022-122 REPEALING RESOLUTION 2008-090 DESIGNATING PUBLIC EVENTS AT WHICH DOGS ARE PROHIBITED

    Documents:

    2022-05-09_2022-122_Resolution Repealing 2008-090 Animals at Events.pdf
    2022-04-25_DISCUSSION4_Memo Dogs at Public Events.pdf

11. RESOLUTION 2022-123 DIRECTING ALLIANT ENERGY TO MAKE CHANGES IN EXISTING STREET LIGHTING SYSTEM

    Documents:

    Glenwood Park street light resolution.pdf
    Memo - Alliant Lighting _ Glenwood 22 05 09.pdf
    Exhibit - Alliant Lighting_Glenwood st light install map.pdf

12. RESOLUTION 2022-124 APPROVING AMENDMENT 2 TO THE PROFESSIONAL SERVICES AGREEMENT FOR THE IEDA DOWNTOWN REVITALIZATION GRANT (DTR), WITH RDG IA INC, IN THE AMOUNT OF $4,850.00

    Documents:

    2022-05-09_2022-124_RES Approving RDG Contract Amendment 2_DTR Grant.pdf
    2022-05-09_2022-124_MEMO Approving RDG Contract Amendment 2_DTR Grant.pdf
    2022-05-09_2022-124_RDG DTR Contract_G802_Marshalltown Facades_Amendment 2.pdf

13. RESOLUTION 2022-125 PLEDGING $250,000 TO TRAILS INC. FOR THE DESTINATION IOWA PROJECT APPLICATION FOR THE IOWA RIVER'S EDGE TRAIL

    Documents:

    2022-05-09_2022-125_Resolution for Trails Inc Destination Iowa Pledge.pdf
    2022-05-09_2022-125_Memo for Trails Inc Destination Iowa Pledge.pdf

14. RESOLUTION 2022-126 AUTHORIZING THE REQUEST OF CERTAIN DELINQUENT PROPERTIES BE DESIGNATED FOR

THE 2022 PUBLIC NUISANCE TAX SALE

Documents:

2022-05-09_2022-126_Resolution Designating Properties for 2022 Public Nuisance Tax Sale.pdf
2022-05-09_2022-126_Memo Designating Properties for 2022 Public Nuisance Tax Sale.pdf

F. **RESOLUTIONS**

1. RESOLUTION 2022-127 ACCEPTING BID AND AUTHORIZING THE AWARD OF CONTRACT FOR THE DEMOLITION OF 101 WEST MAIN STREET TO LANSING BROTHERS CONSTRUCTION INC. FOR A COST OF $228,200

   Documents:

   2022-05-09_2022-127_Resolution Awarding Demo 101 W Main St.pdf
   Memo - Demo Contract 101 W Main.pdf
   Bid Tab-Marshalltown 101 W Main St Demolition Project.pdf

2. RESOLUTION 2022-128 ACCEPTING BID AND AUTHORIZING THE AWARD OF CONTRACT FOR THE EDGEWOOD STREET EXTENSION PROJECT #STR19003 IN THE CITY OF MARSHALLTOWN, IOWA IN THE AMOUNT OF $6,088,627.50

   Documents:

   2022-05-09_2022-128_Resolution Accepting Bid Edgewood STR19003.pdf
   Memo - Award Edgewood 22 05 09 v2.pdf
   Edgewood - Bid Tab.pdf

3. PUBLIC HEARING AND RESOLUTION 2022-129 PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 308 SOUTH 7TH AVENUE FROM THE CITY OF MARSHALLTOWN, IOWA TO DUANE E. YILEK

   Documents:

   2022-05-09_2022-129_Resolution Approving Sale of Vacant Lot 308 S 7th Ave.pdf

4. PUBLIC HEARING AND RESOLUTION 2022-130 APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST FOR THE STATE STREET RECONSTRUCION PROJECT, IN THE CITY OF MARSHALLTOWN, IOWA, BEING PROJECT NO. STR21004

   Documents:

   2022-05-09_2022-130_Resolution Approve Plans, Specs STR21004.pdf

2022-05-09_2022-130_Memo - Accept Plans - State Street 22 05 09 (1).pdf
2022-05-09_2022-130_STR21004_State St Notice 22 04 20.pdf
2022-05-09_2022-130_STR21004_State St OPC 22 04 20.pdf
2022-05-09_2022-130_STR21004_State St Plans 22 04 20.pdf
2022-05-09_2022-130_STR21004_State St Project Manual 22 04 20.pdf

5. PUBLIC HEARING AND RESOLUTION 2022-131 APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST FOR THE 2020 SANITARY SEWER REHABILITATION – CIPP PROJECT, IN THE CITY OF MARSHALLTOWN, IOWA, BEING PROJECT NO. SAN21001

   Documents:

   2022-05-09_2022-131_Resolution Approve Plans, Specs SAN21001.pdf
   2022-05-09_2022-131_Memo Approve Plans SanSewCIPP.pdf
   2022-05-09_2022-131_SAN21001 - SanSew CIPP Official Notice.pdf
   2022-05-09_2022-131_SAN21001 - SanSew CIPP OPC.pdf
   2022-05-09_2022-131_SAN21001 - SanSew CIPP Plans.pdf
   2022-05-09_2022-131_SAN21001 - SanSew CIPP Project Manual.pdf

G. **ORDINANCES**

1. ORDINANCE 15040 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA, REPEALING CODE SECTION 130.003 ASSEMBLIES, PARADES AND DEMONSTRATIONS AND ADOPTING A NEW CODE SECTION 130.003 PUBLIC USE AND SPECIAL EVENT PERMITS

   3RD READING

   Documents:

   2022-05-09_ORD 15040_Public Use and Special Events Permits (3rd reading).pdf
   2022-05-09_ORD 15040_Memo Chapter 130 Public Use Permits.pdf

2. ORDINANCE 15041 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA CHAPTER 118 PEDDLERS, SOLICITORS, TRANSIENT MERCHANTS

2ND READING

Documents:

2022-05-09_ORD 15041 Amend Chapter 118 Peddlers, Solicitors, and Transient Merchants (2nd reading).pdf
2022-05-09_ORD 15041_Memo Chapter 118 Peddler, Solicitor, Transient Merchants.pdf

3. ORDINANCE 15042 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA, REPEALING CHAPTER 58: VEGETATION AND ENACTING AND ADOPTING A NEW CHAPTER 58: VEGETATION

   1ST READING

   Documents:

   2022-05-09_ORD 15042_Repealing Chapter 58 and Adopting New Chapter 58 Vegetation.pdf

4. ORDINANCE 15043 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA BY REPEALING CODE SECTION 90.036 DOGS AT PUBLIC EVENTS

   1ST READING

   Documents:

   2022-05-09_ORD 15043_Repealing Code Section 90.036 Dogs at Public Events.pdf
   2022-05-09_ORD 15043_Memo Dogs at Public Events.pdf

H. **DISCUSSION**

1. DISCUSSION - Public Safety Camera Program

   Documents:

   Public Safety Camera Program.pdf
   2022 Camera Costs RACOM.pdf

2. DISCUSSION - Sale Of Vacant Lots

   Documents:

   Memo on Sale of Vacant Lots.pdf

I. **PUBLIC COMMENT**

Members of the public may make comments on any item which was not on the agenda during this time. The speaker shall approach the microphone, and state his or her name and address. Comments shall be limited to three minutes, unless a longer comment is authorized by the Mayor. The

speaker shall direct comments to the Mayor and to the Council as a whole. The Mayor and Councilors shall not engage in discussion or debate on items raised by members of the public, and no action may be taken on items raised in public comments in order to comply with open meetings laws.

J. **ADJOURNMENT**

MISSION STATEMENT

The City of Marshalltown collaborates to provide a welcoming, safe, vibrant, and growing community.

Please visit the City's website for the complete agenda packet and to subscribe to agenda notices and department news. www.marshalltown-ia.gov

COUNCIL PROCEEDINGS
APRIL 25, 2022

Mayor Greer called the meeting to order at 5:30 PM, April 25, 2022, at the City Hall Council Chambers, 10 W State Street, and led the pledge of allegiance. Roll call–Present: Hoop, Isom, Kell, Ladehoff, Schneider, Thompson, Walker. Chief Tupper presented Detective Dane Bowermaster with his 10 years of service and Deputy Chief Cross presented Firefighter Jeremy Weiermann with his 5 years of service. Councilor Schneider encouraged everyone to participate in Cleaniac clean-up 5/7. City Administrator Kinser announced the city clean-up day will be 5/21 with dumpsters in the JBS lot for resident drop off. Mayor Greer congratulated the Night of Stars event for raising $81,000 for Iowa River Hospice and the American Cancer Society.

CONSENT AGENDA

Motion by Isom, second by Schneider to adopt the consent agenda less items 11 and 14: APPROVE MINUTES 04/11/22 MEETING AND BILL LIST $1,705,105.72; APPROVE LIQUOR LICENSE RENEWALS FOR ZENO'S, 109 E MAIN ST, FIDDLE & WHISTLE, 20 W MAIN ST, CITY OF MARSHALLTOWN (VMC), 20 W STATE ST, CENTER STREET STATION, 19 N CENTER ST, THE SPOT, 217 ½ N 13TH ST; APPROVE MARCH 2022 FINANCIAL STATEMENTS; RESOLUTION 2022-105 AUTHORIZING THE USE OF COUNCIL-DESIGNATED LOCAL OPTION SALES TAX FOR CIVIC PLUS WEBSITE ENHANCEMENTS; RESOLUTION 2022-106 AUTHORIZING THE USE OF COUNCIL-DESIGNATED LOCAL OPTION SALES TAX FOR THE PRODUCTION OF A POLICE/FIRE RECRUITMENT VIDEO FOR THE CITY OF MARSHALLTOWN; RESOLUTION 2022-107 TO CERTIFY THE SCHEDULE OF ASSESSMENTS AGAINST PROPERTIES WITH UNPAID BILLS FOR COLLECTION WITH TAXES; RESOLUTION 2022-108 TRANSFERRING FUNDS FOR FISCAL YEAR 2022 THROUGH MARCH 31, 2022; RESOLUTION 2022-109 APPROVING CONTRACT CHANGE ORDER #1 FOR THE STATE STREET STORM SEWER REPAIR PROJECT #SMW21003, AN INCREASE OF $53,485.00; RESOLUTION 2022-110 ORDERING CONSTRUCTION OF THE STATE STREET RECONSTRUCTION PROJECT STR21004, SETTING PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, FORM OF CONTRACT AND ESTIMATED COST AND DIRECTING PUBLICATION OF NOTICE TO BIDDERS; RESOLUTION 2022-111 REJECTING ALL BIDS FOR THE SEWER CLEANING CONTRACT PROJECT IN THE CITY OF MARSHALLTOWN, IOWA; RESOLUTION 2022-113 ORDERING CONSTRUCTION OF THE 2020 SANITARY SEWER REHABILITATION-CIPP PROJECT SAN21001, SETTING PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, FORM OF CONTRACT AND ESTIMATED COST AND DIRECTING PUBLICATION OF NOTICE TO BIDDERS; RESOLUTION 2022-114 APPROVING AN AGREEMENT WITH MARSHALL COUNTY RELATED TO REIMBURSEMENT OF SURVEY COSTS FOR THE SALE OF PROPERTY. Motion carried 7-0.

Motion by Isom, second by Schneider to adopt RESOLUTION 2022-112 SETTING A PUBLIC HEARING FOR THE CONVEYANCE AND TRANSFER OF TITLE OF CITY OWNED LOT AT 308 S 7TH AVE. Motion carried 6-1, Thompson dissenting.

Motion by Isom, second by Ladehoff to adopt RESOLUTION 2022-117 APPROVING RELEASE AND SETTLEMENT AGREEMENT WITH CORRADO HOMES LLC DBA CORRADO CONSTRUCTION. Motion carried 6-1, Thompson dissenting.

MOTIONS

Motion by Ladehoff, second by Thompson to APPROVE NEW CLASS C LIQUOR LICENSE FOR ADELINA'S GRILL, 101 N CENTER ST. Motion carried 6-1, Hoop dissenting.

Motion by Walker, second by Schneider to APPROVE NEW CLASS C BEER PERMIT FOR FAMILY DOLLAR STORE #22186, 327 S 3RD AVE. Motion carried 6-1, Hoop dissenting.

Motion by Ladehoff, second by Schneider to APPROVE OUTDOOR SERVICE AREA FOR MIDNIGHT BALLROOM LLC AT 1501 S 17TH AVE. Motion carried 6-1, Hoop dissenting.

RESOLUTIONS

Motion by Ladehoff, second by Isom to adopt RESOLUTION 2022-115 APPROVING THE PURCHASE OF .6 ACRES OF 1314 SUMMIT STREET AT A COST OF $15,000. Geoff Hubbard, Parks and Recreation Director advised this land will be used for phase II renovations at West End Park to add a restroom/concession building and additional parking. Motion carried 7-0.

Mayor Greer opened a public hearing at 5:50 pm for APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST FOR THE EDGEWOOD STREET EXTENSION PROJECT, PROJECT NO. STR19003. Mayor Greer closed the public hearing at 5:52 pm. Motion by Ladehoff, second by Schneider to adopt RESOLUTION 2022-116 APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST FOR THE EDGEWOOD STREET EXTENSION PROJECT, PROJECT NO. STR19003. Motion carried 7-0.

ORDINANCES

Motion by Isom, second by Kell to adopt the second reading of ORDINANCE 15040 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA, REPEALING CODE SECTION 130.003 ASSEMBLIES, PARADES AND DEMONSTRATIONS AND ADOPTING A NEW CODE SECTION 130.003 PUBLIC USE AND SPECIAL EVENT PERMITS. Motion carried 7-0.

Motion by Thompson, second by Schneider to adopt the first reading of ORDINANCE 15041 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA CHAPTER 118 PEDDLERS, SOLICITORS, TRANSIENT MERCHANTS. Motion carried 7-0.

DISCUSSION

Casey Byers with Bolton & Menk gave a presentation on the Riverview Park Master Plan which includes an expanded pond with a pedestrian bridge, a community festival area, campsite renovation, dog park improvements, pickleball courts, new shelter facilities, playground, and trailhead improvements. Public comment: Linda Clark, 306 S 2nd Ave, suggested looking at ways to utilize the Iowa River as other communities have.

Jessica Kinser, City Administrator requested the council support the Trails Inc. application for a Destination Iowa Grant by committing $250,000 in Council-Designated LOST to the project. The grant requires 60% funding secured to apply for the remaining 40%. The estimated cost to pave the trail between bridges 2 and 5 is $1.4 million. Councilor Schneider will represent Trails Inc and request the Marshall County Board of Supervisors commit funding to the project also. Public comment: Mark Eaton, 1007 S 10th Ave, asked why funding would not be requested from non-profit organizations instead of the taxpayers and also if the city is accounting for staff time spent on engineering services for the project and how those will be reimbursed. Linda Clark, 306 S 2nd Ave, suggested users of the trail system pay for the use. Motion by Ladehoff, second by Isom to commit $250,000 in Council-Designated LOST to the project if the grant funding is awarded. Motion carried 5-2, Hoop and Thompson dissenting.

Michelle Spohnheimer, Housing and Community Development Director requested approval to fund the Planner position, which is currently open, from the general fund. The position is currently partially funded 40% with the Lead Grant. The grant can still be utilized for applicable staff time. Motion by Schneider, second by Thompson to fully fund the position from the general fund. Motion carried 7-0.

Michael Tupper, Police Chief requested the council repeal the rules pertaining to Dogs at Public Events and allow event organizers to decide to allow them and leave it to them to enforce instead of the police department. Ordinances will remain in effect that require dog owners to have their animals under control and on a leash. Public comment: Linda Clark, 306 S 2nd Ave, reminded we need to maintain leashing for safety. Wendy Resigner, 507 Woodbury St, would like to see dogs allowed at public events with responsible owners and noted laws regarding therapy dogs. The council was in support of moving forward with repealing the resolution and ordinance for Dogs at Public Events.

Jessica Kinser, City Administrator advised the Urban Tree Management Fee previously discussed would have to be approved by the residents through a public vote. A vote is not necessary to move forward with the $1.50 Compost Fee because it is an established enterprise fund. Motion by Thompson, second by Isom to put the Urban Tree Fee on the November general election ballot. Motion failed 1-6, Hoop, Isom, Kell, Ladehoff, Schneider, Walker dissenting. Motion by Walker, second by Kell to bring forward a revised Chapter 58 Vegetation ordinance keeping the responsibility of the owner to trim public trees. Motion carried 6-1, Thompson dissenting.

PUBLIC COMMENT

Monica Guzman, from Los Angeles, CA, spoke of her visit to learn the history of Henry Anson and Cap Anson and visit the site of Cap Anson's make-shift baseball field. She encouraged city officials to lean on the history of our town and not the culture that is currently happening across the nation.

Linda Clark, 306 S 2nd Ave, wanted to notify city officials that the street overlay on S 2nd Ave is washed away down to the bricks.

Dean Vaughn, 1712 W Lincolnway, owner of a financial services business at 104 S 1st St, reported some issues with flooding in his business that he would like the city to address. City Administrator Kinser will follow up with Mr. Vaughn.

The meeting adjourned at 7:31 pm.

Respectfully Submitted,

Alicia Hunter

Alicia Hunter, City Clerk

CITY OF MARSHALLTOWN, IOWA

Joel Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

BILL LIST 05/09/22

Advertising	
Great.Wstrn.Bnk/14	674.86
Lynch.Dallas.PC/1	73.34
Trending.Media/2	296.00
Buildings/Improvements	
Great.Wstrn.Bnk/8	822.02
Menards/1	173.16
Consulting & Professional Fees	
AHLERS.COONEY/1	1,420.20
Allender.Butzke/1	8,490.12
Bernie.Lowe/2	86.08
Bolton&Menk.Inc/10	64,268.00
Calhoun-Burns/1	3,164.70
CottinghamButle/1	275.00
Dorsey&Whitney/3	31,331.50
Great.Wstrn.Bnk/2	367.10
GRIMES.BUCK.SCH/1	3,000.00
I.L.E.A./2	200.00
Iowa.One.Call/1	27.00
Lynch.Dallas.PC/5	3,756.00
Mediacom Broad/5	1,529.00
Ryden,Nathan/2	2,500.00
WHKS.Co/3	25,142.11
YSS Grants Bill/7	11,787.25
Contracts	
A-1.Pest/2	65.00
ARL/1	4,333.33
Availa Bank/1	46,746.46
BDH/13	6,841.24
BG.HVAC.INC/1	105.00
Calhoun-Burns/1	1,493.50
Controlled.Acce/2	79.00
Ed.M.Feld.Eq/1	3,206.60
Fisher.Comm.Ctr/1	8,333.33
Garling.Constr/1	53,503.17
Great.Wstrn.Bnk/8	1,309.05
IA Div of Labor/1	100.00
Jets Inc/1	1,248.75
Menards/1	45,119.62
Midwest Office/1	68.66
Nagle,Signs/1	4,244.29
Pillar Inc/1	78,636.21
Plumb.Supply/1	3,341.54
Premier.Equip/1	53.24
RICOH.USA.INC/6	195.08
SAFETY.KLEEN/1	417.85
Schendel.Pest.C/1	49.05
Schumacher.Elev/1	450.00
Sterling.Fire/6	1,626.75
Stone.Sanit/8	2,092.18
Stucky.Vacuum.S/1	105.20
Teamwork1/1	6,536.95
Tyler.Technolog/2	2,700.00
VCA.Animal.Hosp/1	84.80
Veenstra&Kimms/1	2,652.44
Walton, Mike/1	1,650.00
Watchguard.Vide/1	8,937.50
Debt Service	
UMB.Bank.NA/32	6,064,997.05
Land & Improvements	
Feras, Gaston/1	1,414.00
Library Books	
Great.Wstrn.Bnk/6	190.05
Medical	
Bernie.Lowe/2	506.74
HARTFORD.ACCTS/1	6,811.24
Hunter Lane LLC/2	160.63
Payroll.Deductions	
IA.Workforce/2	953.35
Refund/Reimbursed	
Alliant.Energy/53	-1,220.27
Alvarez,Natalie/1	7.00
Brycon,LLC/1	3,128.66
Camacho,Israel/1	7.00
Great.Wstrn.Bnk/18	562.52
Guevara, Ana/1	214.59
NunezLopez,Mari/1	7.00
Rents/Leases	
Ackley.Housing/2	278.00
ALCALA,R/1	343.00
Alejo, Jerry/1	183.00
AMES,STEVEN/26	7,515.00
Barnes,L/1	239.00
BJ&J.LLC/1	279.00
BLOOD,A/3	1,193.00
Borota,K/3	898.00
BOULDER.COOP.HS/3	953.00
Brodin,C/1	114.00
Buckaroo.LLC/2	816.00
Bunch, John/1	275.00
Burr,Robert/3	629.00
Charlier,Q/1	129.00
Chedester,James/1	400.00
Chilton,M/1	450.00
CIRSI/9	768.00
CMHC.INVEST/1	244.00
Colson, Mary/1	209.00
D.D.Rentals/1	311.00
DC Brown Rental/2	702.00
ECKLOR,S/3	1,084.00
Elwayne.Inc./4	1,498.00
Engel, Drew/1	184.00
EPM IA LLC/1	272.00
Etter, W/1	482.00
Eubanks,C/1	284.00
Ferneau, Gary/2	985.00
Friendly.Valley/2	263.00
Gonzales,G/1	551.00
Gonzalez, Pat/1	144.00
Gorrell, Joseph/1	430.00

BILL LIST 05/09/22

Gossard.Mobile/1	270.00
Grant.Park.LLC/23	5,359.00
Gray,D/3	1,566.00
Hala,J/5	2,294.00
HARRIS,T/1	324.00
Hatch,R/4	1,946.00
Hilltop.Village/6	970.00
Hodges,K/1	507.00
HUBBARD.MAPLE/1	171.00
JBI.COOP.Assn/4	1,366.00
Judge,M/5	1,557.00
Klinefelter,R/1	450.00
Kramer,M/1	218.00
LAWSON,R/1	49.00
Lawthers.Prop.M/1	222.00
LBO Investments/1	442.00
Lopez, Jaime/1	395.00
LUENSE,B/7	2,898.00
Mansager, C/1	301.00
Marion.Manor2/1	559.00
Marshalltown.Sr/9	2,931.00
Moore, Michelle/1	426.00
Mtwn/Westown/24	6,264.00
Nelson,L/1	288.00
North.Tama.Hsg/2	285.00
Oetker,D/2	414.00
Optimal Life/1	39.00
Palisade.Holdng/1	206.00
Pilot.Creek/1	120.00
Pizano, Serio/1	151.00
Premier.RE.Mgmt/7	3,537.00
PremierIowaCity/7	2,545.00
RA.Rental.Prop/1	478.00
RD.Toledo,LLP/2	728.00
Reed,T/6	2,451.00
River.Birch/7	2,806.00
River.Oaks/9	3,471.00
S.E.Invst/1	418.00
Schmidt,M/1	400.00
SCOTT,L/1	434.00
SESKER,R/1	189.00
Squire,B/1	191.00
Steelsmith,G/3	1,008.00
Sunrise.Apt/1	116.00
Swiff, Scott/1	370.00
Switzer,T/1	555.00
Tacoma Housing/1	901.00
Tallcorn.Tower/25	7,137.00
TOWN.APARTMENT/2	210.00
VC.Investment/6	1,324.00
Walker, Angela/1	282.00
Weatherly.Erin/1	663.00
Worent.Inc/2	616.00
Worsfold Farm/1	364.00
Service/Repairs	
Advance.Garage./1	215.00
Alliant.Energy/1	535.62
Aponte,M/1	27.00
Burgess, Jessie/1	100.00
Century.Link/54	909.34
Ferneau Heavy/1	335.00
Great.Wstrn.Bnk/39	6,330.43
Hidalgo,Yesenia/1	13.00
I.C.A.P./1	2,905.44
IA Div of Labor/1	75.00
Johnson,Alesha/1	31.00
LARRY'S.TOWING/1	75.00
Macqueen.Equip/1	605.69
McAtee.Tire/5	391.50
McMaster.Carr/1	103.07
Motion.Picture./1	123.55
Mtwn.Wtrwrks/3	8,918.93
Perez, Eliva/1	31.00
Racom.Corp/1	157.50
Raven Creek/1	85.00
Richey,Jennifer/1	32.00
Samuel,Twyna/1	136.00
Scharnweber.Wtr/1	27.00
Schmudlach,Cody/1	10.00
Sharma, Micap/1	39.75
Shattuck,Tracy/1	10.00
ShoBiz,Minutema/1	14.94
Squires,Chris/1	40.00
Tacoma Housing/1	43.18
Teledyn.Instr/1	4,181.40
Verizon.Wireles/3	93.40
Werner,Jessica/1	13.00
Wilson, Ranae/1	13.00
Ziegler/1	14,589.03
Supplies/Parts	
Advance.Garage./3	490.00
AHLERS.COONEY/1	75.00
AJ.BODY.SHOP/1	1,501.00
Arnold.Motor.Su/13	285.02
Barco.MuniProd/2	1,057.27
BDH/2	1,708.68
Bitumnous/1	486.24
Bobcat.Ames/1	333.43
Burgess, Jessie/1	4.00
Cessford.Constr/4	2,507.30
City.Laundering/9	616.64
Cntrl.IA.Farm/2	251.20
Cummins.Service/2	2,277.47
Environ.Resourc/1	605.29
Eurolins.Test/1	132.30
Fastenal.Co/4	1,623.96
Fire Serv Trn/2	1,250.00
Galls.LLC/2	114.99
Gillig.LLC/1	75.16
Great.Wstrn.Bnk/172	35,548.70

BILL LIST 05/09/22

Grimes.Asphalt/1	3,861.70
HandcuffWarehou/1	145.60
IA.D.O.T/1	190.80
IA.Prison.Ind/1	8,295.80
Interstate Batt/3	862.65
Keystone.Lab/1	74.00
Kieslers/1	973.80
Macqueen.Equip/3	595.36
Martin.Marietta/2	790.31
McAtee.Tire/4	634.60
Menards/16	1,102.95
Midland.Scienti/4	1,903.37
MW Motor Supply/2	467.14
Napa.Auto/10	345.76
Northern.Lights/1	136.95
Northern.Tool.E/2	939.98
Nutrien.Ag.Sol/3	3,567.00
Oreilly.Automot/1	24.99
Plumb.Supply/1	410.10
Putze Ink/1	380.00
Quality.Srvcs.C/1	104.00
Racom.Corp/1	46.00
Raven Creek/1	40.00
SE.Jones.Indust/1	296.75
Shetler,D/2	16.00
ShoBiz,Minutema/3	54.62
Star.Equipmt/3	1,985.51
Thiesens.Supply/15	1,497.91
Tri.State.Lock/2	38.00
Vajgrt.R/1	183.18
Vanwall Equip/2	348.13
Willco.Inc/1	1,100.00
Travel/Training	
GonzalezRoberto/1	742.56
Great.Wstrn.Bnk/13	391.60
Hy-Vee,Johnston/1	4,242.24
Thant, Aung/1	696.15
Utilities	
Alliant.Energy/53	16,236.94
I.R.U.A./1	158.00
WoodRiver.Enrgy/3	3,428.79
Wage Assignment	
Alvarez,Natalie/1	133.00
American.Educa./1	64.41
Camacho,Israel/1	90.00
Collection.Svs./5	1,441.11
Colonial.Life/2	496.09
Family Sup Pay/1	138.46
Fidelity.Securt/2	456.05
Great.Wstrn.Bnk/8	14.05
I.P.E.R.S./7	80,134.23
I.R.S./6	86,070.95
IA.Treasurer/2	18,057.01
ICMA457Mission/11	14,867.43
Linn.Co.Sheriff/1	301.02
M.F.P.R.S.I./4	129,243.17
NunezLopez,Mari/1	75.00
Payroll/1	311,104.05
TotalAdmin.Serv/5	7,205.94
United.Way/4	1,567.76
Total/1137	**7,411,659.18**

BILL LIST 05/09/22

Account Number	Vendor Name	Description (Item)	Amount
001.1010.5132.000	GREAT WESTERN BANK	Pistol taco	$ 31.00
001.1010.5132.000	GALLS LLC	PD employee clothing	$ 51.00
001.1010.5132.000	GALLS LLC	PD Employee clothing	$ 63.99
001.1010.5132.000	Handcuff Warehouse	Ultra hinged Handfuffs	$ 145.60
001.1010.5132.000	Shetler, Dennis	PD patches	$ 8.00
001.1010.5132.000	Shetler, Dennis	PD chevrons	$ 8.00
001.1010.5192.020	IOWA WORKFORCE DEVELOPMENT	reimburseable benefit charges	$ 191.00
001.1010.5230.000	GREAT WESTERN BANK	Records request for detectives	$ 292.10
001.1010.5230.000	GREAT WESTERN BANK	Intel requests	$ 75.00
001.1010.5230.000	Cottingham & Butler Insurance Services Inc	Civil service review- Police Lieutenant	$ 275.00
001.1010.5230.000	ILEA	Office Investigation class 4/14/22	$ 50.00
001.1010.5230.000	ILEA	Eval of MMPI-2	$ 150.00
001.1010.5230.000	YSS Grants Billing	YSS MPACT agreement City funded March Services	$ 2,893.93
001.1010.5321.000	VCA Animal Hospital- The Vet	KP exam/ well patient	$ 84.80
001.1010.5342.000	GREAT WESTERN BANK	Key made	$ 8.00
001.1010.5342.000	SCHENDEL PEST CONTROL INC	PD monthly service	$ 49.05
001.1010.5342.000	STUCKYS VACUUM STORE	PD Vacuum serviced	$ 105.20
001.1010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup 4500 Veeam backup/ recovery -PD	$ 38.80
001.1010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Block time of hours - PD 20 hrs/mo	$ 1,266.25
001.1010.5347.000	BDH INFORMATION TECHNOLOGY LLC	PD Covert internet service	$ 79.34
001.1010.5359.000	LARRYS TOWING & TIRE SERVICE	PD #527 tow	$ 75.00
001.1010.5360.000	GREAT WESTERN BANK	Postage/Shipping	$ 5.11
001.1010.5360.000	GREAT WESTERN BANK	Postage/Shipping	$ 17.99
001.1010.5360.000	GREAT WESTERN BANK	Postage/Shipping	$ 14.29
001.1010.5360.000	GREAT WESTERN BANK	Postage/Shipping	$ 8.96
001.1010.5360.000	Sharma, Micap dba UPS STORE	PD internatoinal pkg from Canada	$ 39.75
001.1010.5370.000	Sho Biz Inc dba Minuteman	Map laminations	$ 12.00
001.1010.5410.000	GREAT WESTERN BANK	Tire repair	$ 22.00
001.1010.5410.000	Burgess, Jessie	PD Ford Edge wheel alignment	$ 100.00
001.1010.5410.000	MCATEE TIRE SALES & SERVICE INC	PD vehicle tire repair	$ 30.00
001.1010.5410.000	MCATEE TIRE SALES & SERVICE INC	PD #511 tire repair	$ 135.00
001.1010.5410.000	MCATEE TIRE SALES & SERVICE INC	PD #513 tires and repairs	$ 66.50
001.1010.5410.000	MCATEE TIRE SALES & SERVICE INC	PD Van tires and repairs	$ 73.00
001.1010.5450.000	GREAT WESTERN BANK	TELEPHONES/AIR CARDS	$ 189.12
001.1010.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$ 54.57
001.1010.5450.000	CENTURYLINK	ALL PHONE LINES	$ 106.15
001.1010.5451.000	GREAT WESTERN BANK	TELEPHONES/AIR CARDS	$ 839.92
001.1010.5460.000	GREAT WESTERN BANK	Registration for training for Officer Allen	$ 100.00
001.1010.5460.000	GREAT WESTERN BANK	refund for Registration for training	$ (100.00)
001.1010.5460.000	GREAT WESTERN BANK	Registration for training for Officer Speirs	$ 249.00
001.1010.5460.000	GREAT WESTERN BANK	Cancellation of a training for Sgt Cole	$ (359.00)
001.1010.5460.000	GREAT WESTERN BANK	Canceled registration	$ (150.00)
001.1010.5460.000	GREAT WESTERN BANK	Training for Officer Shelangoski	$ 495.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 7.35
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 9.94
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Garland	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meal during instructor day for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meal during instructor day for Officer Shelangoski	$ 10.00
001.1010.5464.000	GREAT WESTERN BANK	Meals during training for Officer Garland	$ 9.63
001.1010.5465.000	GREAT WESTERN BANK	Lodging during training for Svoboda	$ 179.20
001.1010.5465.000	GREAT WESTERN BANK	Lodging during training for Det Lampe	$ 105.48
001.1010.5470.000	Johnston Hy-Vee	301&302 Basic Academy meals - thant and Gonzalez	$ 4,242.24
001.1010.5472.000	Gonzalez, Roberto	ILEA mileage	$ 742.56
001.1010.5472.000	Thant, Aung	ILEA mileage 01/04-4/16/22	$ 696.15
001.1010.5565.000	ARNOLD MOTOR SUPPLY LLP	PD Van oil plug/ filter	$ 7.06
001.1010.5565.000	Burgess, Jessie	PD Ford Edge wheel alignment	$ 4.00
001.1010.5565.000	MCATEE TIRE SALES & SERVICE INC	PD #511 tire repair/ alignment	$ 8.40
001.1010.5565.000	MCATEE TIRE SALES & SERVICE INC	PD #513 tires and repairs	$ 160.60
001.1010.5565.000	MCATEE TIRE SALES & SERVICE INC	PD Van tires and repairs	$ 222.24
001.1010.5570.000	GREAT WESTERN BANK	Fuel for travel to/from training	$ 66.06
001.1010.5570.000	GREAT WESTERN BANK	Fuel for travel to/from training	$ 22.45
001.1010.5570.000	GREAT WESTERN BANK	Fuel for travel to/from training for Det Lampe	$ 20.50
001.1010.5570.000	GREAT WESTERN BANK	Fuel for travel	$ 13.37
001.1010.5600.000	GREAT WESTERN BANK	Lights for rifles	$ 605.00

001.1010.5600.000	GREAT WESTERN BANK	3-ring binder	$	37.99
001.1010.5600.000	GREAT WESTERN BANK	large totes with wheels	$	70.79
001.1010.5600.000	GREAT WESTERN BANK	Refund for 3-ring binder	$	(37.99)
001.1010.5600.000	GREAT WESTERN BANK	3-ring binder	$	37.99
001.1010.5600.000	GREAT WESTERN BANK	Firearm parts	$	320.70
001.1010.5600.000	GREAT WESTERN BANK	Picture frame for training room	$	8.55
001.1010.5600.000	GREAT WESTERN BANK	Radio equipment	$	60.50
001.1010.5600.000	GREAT WESTERN BANK	ink & trash bags	$	77.53
001.1010.5600.000	GREAT WESTERN BANK	door stopper	$	5.29
001.1010.5600.000	GREAT WESTERN BANK	small rolling cart	$	40.49
001.1010.5600.000	GREAT WESTERN BANK	battery charger	$	34.99
001.1010.5600.000	GREAT WESTERN BANK	extension cord, batteries	$	22.97
001.1010.5600.000	IOWA DEPT OF TRANSPORTATION	thermal paper	$	190.80
001.1010.5600.000	KIESLER'S	night sight equipment for Glocks	$	973.80
001.1010.5600.000	Putze Ink	You are Destined for Greatness books	$	380.00
001.1010.5600.000	RACOM CORPORATION	surveillance earpiece	$	46.00
001.1010.5601.000	GREAT WESTERN BANK	Logo'd post-it notes for outreach	$	387.94
001.1030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.1030.5481.000	ALLIANT ENERGY	25 N Center St Civil Defense Sirens	$	100.00
001.1030.5481.000	ALLIANT ENERGY	Tornado siren	$	22.95
001.1050.5344.000	ED M FELD EQUIPMENT CO INC	Contract maintenance	$	3,206.60
001.1050.5344.000	Midwest Office Technology	FD base charge and overage fees	$	68.66
001.1050.5347.000	BDH INFORMATION TECHNOLOGY LLC	FD NetCloud through 6-15-2023	$	720.00
001.1050.5360.000	GREAT WESTERN BANK	postage	$	69.60
001.1050.5410.000	RACOM CORPORATION	Fd service labor	$	157.50
001.1050.5450.000	GREAT WESTERN BANK	Fire Dept cell phones	$	489.81
001.1050.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	19.84
001.1050.5450.000	CENTURYLINK	ALL PHONE LINES	$	38.60
001.1050.5460.000	GREAT WESTERN BANK	Water based fire protection training	$	20.00
001.1050.5460.000	GREAT WESTERN BANK	truck company operations training	$	127.20
001.1050.5460.000	Fire Services Training Bureau	driver operator pumper certification	$	50.00
001.1050.5460.000	Fire Services Training Bureau	Basic fire investigation course	$	1,200.00
001.1050.5570.000	GREAT WESTERN BANK	fuel for small engines	$	82.94
001.1050.5600.000	GREAT WESTERN BANK	response and planning guides	$	196.00
001.1050.5600.000	GREAT WESTERN BANK	memory cards	$	19.99
001.1050.5600.000	GREAT WESTERN BANK	amount should've been 18.99, 19.99 posted	$	(1.00)
001.1050.5600.000	MENARDS	metal cutting blade and square	$	7.91
001.1050.5718.000	GREAT WESTERN BANK	Fire Dept cameras	$	319.97
001.1050.5718.000	GREAT WESTERN BANK	Electronic storage cabinet	$	674.02
001.1050.5718.000	MENARDS	trenching shovel	$	32.98
001.1070.5342.000	Veenstra & Kimms Inc	Building Official/Engineer	$	2,652.44
001.1070.5450.000	GREAT WESTERN BANK	TELEPHONE	$	21.34
001.1070.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.1070.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.1071.5450.000	GREAT WESTERN BANK	TELEPHONE	$	55.99
001.1071.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.1071.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.1071.5600.000	GREAT WESTERN BANK	CANNED SMOKE	$	237.99
001.1075.5230.000	Bolton & Menk Inc	EnerGov services	$	535.00
001.1075.5450.000	GREAT WESTERN BANK	TELEPHONE	$	48.78
001.1075.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.1075.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.1090.5331.000	ANIMAL RESCUE LEAGUE	May 2022	$	4,333.33
001.1099.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.1099.5342.000	B&G HVAC INC	Comm center AC repair	$	105.00
001.1099.5342.000	STONE SANITATION	Police & Fire Bldg	$	118.78
001.1099.5342.000	Walton, Mike	Fire station front lobby	$	1,650.00
001.1099.5410.000	GREAT WESTERN BANK	PD Evidence room 2x8'	$	40.95
001.1099.5410.000	Advance Garage Doors Inc	Fire dept 2nd East door service call	$	215.00
001.1099.5450.000	GREAT WESTERN BANK	Internet Services	$	395.98
001.1099.5481.000	ALLIANT ENERGY	909 S 2nd St Fire & Police Bldg	$	5,155.87
001.1099.5482.000	ALLIANT ENERGY	909 S 2nd St Fire & Police Bldg	$	356.45
001.1099.5482.000	WoodRiver Energy LLC	Police & Fire Bldg 11672	$	2,536.39
001.1099.5611.000	PLUMB SUPPLY	PD bldg evidence rm- humidifier filter	$	410.10
001.2060.5344.000	RICOH USA INC	Engineering BW copies	$	3.51
001.2060.5344.000	RICOH USA INC	Engineering color copies	$	21.94
001.2080.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.2080.4875.000	ALLIANT ENERGY	tax credits	$	(1.45)
001.2080.5230.000	Bolton & Menk Inc	EnerGov services	$	360.00
001.2080.5481.000	ALLIANT ENERGY	2651 170th St Runway lights	$	117.12
001.2080.5483.000	Iowa Regional Utilities Association	Airport water usage	$	158.00
001.2080.5565.000	ARNOLD MOTOR SUPPLY LLP	Airport tractor/ lawnmower oil	$	111.70
001.2080.5565.000	CENTRAL IOWA FARM STORE INC	Airport tractor/ lawnmower oil filters	$	85.25

001.2080.5565.000	CENTRAL IOWA FARM STORE INC	Airport tractor air filters & mower blades	$	165.95
001.2080.5718.000	GREAT WESTERN BANK	Airport air compressor connection	$	41.85
001.2090.5220.000	MARSHALLTOWN WATER WORKS	LANDFILL BILLS	$	247.50
001.4010.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(289.27)
001.4010.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.4010.5210.000	GREAT WESTERN BANK	advertising - Holocaust Program	$	25.00
001.4010.5280.000	GREAT WESTERN BANK	American Library Assoc. membership - K. Fink	$	228.00
001.4010.5342.000	GREAT WESTERN BANK	Shredding services - January	$	48.15
001.4010.5342.000	GREAT WESTERN BANK	Shredding services - February	$	48.15
001.4010.5344.000	STERLING FIRE & SAFETY INC	Annual fire extinguisher inspection Library	$	30.00
001.4010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Block time of hours - Library 10 hrs/mo	$	633.13
001.4010.5450.000	GREAT WESTERN BANK	Sarah's cell phone	$	33.52
001.4010.5450.000	GREAT WESTERN BANK	Library internet	$	310.09
001.4010.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	9.92
001.4010.5450.000	CENTURYLINK	Library Analog Backup Lines	$	79.08
001.4010.5450.000	CENTURYLINK	ALL PHONE LINES	$	19.30
001.4010.5460.000	GREAT WESTERN BANK	conference registration	$	380.00
001.4010.5481.000	ALLIANT ENERGY	Library - 105 W Boone St	$	2,822.68
001.4010.5482.000	WoodRiver Energy LLC	Library gas #7078	$	807.19
001.4010.5600.000	GREAT WESTERN BANK	supplies - limescale remover	$	8.98
001.4010.5600.000	GREAT WESTERN BANK	supplies - toner cartridge	$	96.89
001.4010.5600.000	GREAT WESTERN BANK	supplies - bowls, plates, cleansers, towels	$	81.41
001.4010.5600.000	GREAT WESTERN BANK	batteries, cord covers, cleaning supplies	$	120.03
001.4010.5600.000	GREAT WESTERN BANK	supplies - DVD cleaner	$	162.20
001.4010.5601.000	GREAT WESTERN BANK	program supplies - books	$	119.90
001.4010.5601.000	GREAT WESTERN BANK	program supplies - map, push pins	$	33.98
001.4010.5601.000	GREAT WESTERN BANK	program supply - button making kit	$	90.61
001.4010.5601.000	GREAT WESTERN BANK	program supply - Pokemon	$	41.40
001.4010.5601.000	GREAT WESTERN BANK	program supply - prize books	$	58.60
001.4010.5601.000	GREAT WESTERN BANK	program supply - pizza	$	30.58
001.4010.5605.000	GREAT WESTERN BANK	office supplies - rulers	$	6.99
001.4010.5605.000	GREAT WESTERN BANK	office supplies - markers	$	28.19
001.4010.5605.000	GREAT WESTERN BANK	office supplies - book tape	$	28.84
001.4010.5605.000	GREAT WESTERN BANK	office supplies - bottled water	$	6.95
001.4010.5730.000	GREAT WESTERN BANK	reference book	$	510.00
001.4010.5731.000	GREAT WESTERN BANK	Des Moines Register subscription	$	785.06
001.4010.5732.000	GREAT WESTERN BANK	DVDs	$	16.99
001.4010.5732.000	GREAT WESTERN BANK	juvenile books	$	25.60
001.4010.5732.000	GREAT WESTERN BANK	juvenile books	$	27.79
001.4010.5732.000	GREAT WESTERN BANK	juvenile book	$	(6.00)
001.4010.5732.000	GREAT WESTERN BANK	juvenile books	$	25.75
001.4010.5732.000	GREAT WESTERN BANK	Youth other - balance walker	$	99.92
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced book	$	9.89
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	16.99
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	7.99
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	26.38
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	77.28
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	7.99
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	5.21
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	8.46
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	13.98
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	12.47
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	179.68
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	16.27
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	17.22
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced DVDs	$	7.50
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	30.32
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	59.14
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	25.40
001.4010.5734.000	GREAT WESTERN BANK	lost and replaced books	$	40.35
001.4030.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(2.93)
001.4030.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(7.37)
001.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(2.93)
001.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(2.93)
001.4030.4875.000	ALLIANT ENERGY	tax credits	$	(1.45)
001.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.4030.5132.000	GREAT WESTERN BANK	Gloves	$	25.98
001.4030.5342.000	STONE SANITATION	roll off	$	252.68
001.4030.5344.000	STERLING FIRE & SAFETY INC	Annual fire extinguisher insp Parks	$	993.00
001.4030.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96

001.4030.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.4030.5481.000	ALLIANT ENERGY	407 Marion St	$	27.12
001.4030.5481.000	ALLIANT ENERGY	108 N 2nd Ave Alley - Farmers Market	$	22.97
001.4030.5481.000	ALLIANT ENERGY	311 E ANSON ST PARK	$	45.78
001.4030.5481.000	ALLIANT ENERGY	BROADMORE Assistance League	$	14.99
001.4030.5481.000	ALLIANT ENERGY	HIGHLAND ACRES RD	$	24.65
001.4030.5481.000	ALLIANT ENERGY	500 Plaza Hts Rd	$	26.83
001.4030.5481.000	ALLIANT ENERGY	KIWANIS PARK	$	25.24
001.4030.5481.000	ALLIANT ENERGY	Arnolds Park	$	13.51
001.4030.5481.000	ALLIANT ENERGY	220 N 13th St Rest room	$	51.73
001.4030.5562.000	GREAT WESTERN BANK	Weed Killer	$	579.25
001.4030.5565.000	ARNOLD MOTOR SUPPLY LLP	air filters	$	25.66
001.4030.5565.000	ARNOLD MOTOR SUPPLY LLP	Kubota mower air filters	$	28.17
001.4030.5565.000	ARNOLD MOTOR SUPPLY LLP	air filters	$	87.04
001.4030.5565.000	MENARDS	Air filters, heat gun	$	6.49
001.4030.5565.000	VANWALL EQUIPMENT INC	snap ring, bushing, cam, clip	$	103.64
001.4030.5600.000	GREAT WESTERN BANK	Paint supplies	$	2.64
001.4030.5611.000	GREAT WESTERN BANK	Graffiti paint	$	118.59
001.4030.5611.000	GREAT WESTERN BANK	Graffiti remover	$	32.91
001.4030.5611.000	GREAT WESTERN BANK	Drill bits	$	16.90
001.4030.5611.000	GREAT WESTERN BANK	Anson Shelter house exhaust motor	$	61.26
001.4030.5611.000	Advance Garage Doors Inc	Car wash west door serviced	$	49.00
001.4030.5611.000	MENARDS	light bulbs, stake flags	$	36.60
001.4030.5718.000	MENARDS	62" LED indoor celiing fans, 16' extension handle	$	(517.92)
001.4040.5280.000	GREAT WESTERN BANK	Domain Name Renewal	$	63.34
001.4040.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.4040.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.4041.5216.000	GREAT WESTERN BANK	Background Checks	$	155.35
001.4041.5216.000	GREAT WESTERN BANK	IDPH Licensing & Regulatory Program	$	175.00
001.4041.5251.000	MOTION PICTURE LICENSE	Community gym summer day 6/6/22-6/6/23	$	123.55
001.4041.5342.000	GREAT WESTERN BANK	Mobile DJ & Photo Booth	$	672.75
001.4041.5600.000	NORTHERN LIGHTS DISTRIBUTING	Parks resale product	$	136.95
001.4041.5601.000	GREAT WESTERN BANK	Program equipment/supplies	$	349.99
001.4041.5601.000	GREAT WESTERN BANK	Program equipment/supplies	$	2,753.11
001.4041.5601.000	GREAT WESTERN BANK	White Board Dry Erase Board	$	137.78
001.4041.5601.000	GREAT WESTERN BANK	Program equipment/supplies	$	3,062.97
001.4041.5601.000	GREAT WESTERN BANK	Program equipment/supplies	$	275.60
001.4041.5601.000	GREAT WESTERN BANK	Special Needs Activities Supplies	$	583.70
001.4041.5601.000	GREAT WESTERN BANK	Program eqipment/supplies	$	76.59
001.4041.5601.000	GREAT WESTERN BANK	Program eqipment/supplies	$	78.75
001.4041.5601.000	GREAT WESTERN BANK	Program eqipment/supplies	$	34.81
001.4041.5601.000	GREAT WESTERN BANK	Program eqipment/supplies	$	7.50
001.4041.5601.000	GREAT WESTERN BANK	Program snacks	$	15.95
001.4045.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	9.92
001.4045.5450.000	CENTURYLINK	ALL PHONE LINES	$	19.30
001.4045.5482.000	WoodRiver Energy LLC	SWIMMING POOL 7077	$	85.21
001.4045.5600.000	GREAT WESTERN BANK	Lifeguard attire	$	1,514.16
001.4060.5331.000	FISHER COMMUNITY CENTER	May 2022	$	8,333.33
001.4065.4875.000	ALLIANT ENERGY	sales tax	$	(1.45)
001.4065.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(20.66)
001.4065.5251.000	GREAT WESTERN BANK	Liquor License fees	$	2,078.70
001.4065.5251.000	Iowa Division of Labor - Elevator Safety	Annual elevator permit & inspection at Coliseum	$	75.00
001.4065.5344.000	Iowa Division of Labor - Elevator Safety	Annual elevator permit & inspection at Coliseum	$	100.00
001.4065.5344.000	SCHUMACHER ELEVATOR COMPANY	Coliseum elevator inspection	$	450.00
001.4065.5344.000	STERLING FIRE & SAFETY INC	Annual fire extinguisher inspection Coliseum	$	33.75
001.4065.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.4065.5450.000	CENTURYLINK	Coliseum Backup Analog Lines	$	79.08
001.4065.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.4065.5481.000	ALLIANT ENERGY	10 W State St COLISEUM	$	2,743.67
001.4065.5482.000	ALLIANT ENERGY	10 W State St COLISEUM	$	629.30
001.4065.5600.000	GREAT WESTERN BANK	White Board Dry Erase Board	$	44.58
001.4066.5251.000	GREAT WESTERN BANK	License	$	411.50
001.4066.5613.000	GREAT WESTERN BANK	Concession items for resale	$	45.32
001.5010.5342.000	STONE SANITATION	Central Business District	$	200.00
001.5020.5230.000	Bolton & Menk Inc	EnerGov services	$	1,542.00
001.5020.5234.000	DORSEY & WHITNEY LLP	URA4 Amendment & Willard/Hopkins Dev Agreements	$	7,737.50
001.5020.5234.000	DORSEY & WHITNEY LLP	URA 2 Amendment & Dev Agreement Marshalltown Co	$	7,594.00
001.5040.5210.000	GREAT WESTERN BANK	Planning & Zoning	$	24.57
001.5040.5230.000	Bolton & Menk Inc	EnerGov services	$	1,935.00
001.6010.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.6010.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.6011.5331.000	GREAT WESTERN BANK	Go To meeting	$	14.00
001.6011.5331.000	GREAT WESTERN BANK	Go To meeting	$	14.00

001.6012.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.6012.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.6012.5460.000	GREAT WESTERN BANK	IA Muni Management Institute conf	$	350.00
001.6020.5210.000	GREAT WESTERN BANK	Capital improvement plan notice	$	11.13
001.6020.5210.000	GREAT WESTERN BANK	Box culvert repair notice	$	18.04
001.6020.5210.000	GREAT WESTERN BANK	PH OHV lease agreement notice	$	9.59
001.6020.5210.000	GREAT WESTERN BANK	2/28/22 council proceedings	$	231.50
001.6020.5210.000	GREAT WESTERN BANK	Ordinance 15038	$	9.22
001.6020.5210.000	GREAT WESTERN BANK	18th Ave Bridge approach notice	$	22.79
001.6020.5210.000	GREAT WESTERN BANK	3/14 council proceedings	$	246.45
001.6020.5210.000	GREAT WESTERN BANK	public hearing notice 4/11/22	$	13.16
001.6020.5210.000	GREAT WESTERN BANK	18th Ave Bridge slab repair notice	$	25.58
001.6020.5344.000	RICOH USA INC	City Clerk color copies	$	109.89
001.6020.5344.000	RICOH USA INC	City Clerk BW copies	$	34.30
001.6020.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.6020.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.6020.5605.000	GREAT WESTERN BANK	ink cartridge	$	41.29
001.6020.5980.000	Alvarez, Natalie	Reimburse for tax offset	$	7.00
001.6020.5980.000	Camacho, Israel	Reimburse for tax offset	$	7.00
001.6020.5980.000	Nunez Lopez, Maria G	Reimburse for tax offset	$	7.00
001.6021.5210.000	GREAT WESTERN BANK	Finance monthly fund summary	$	8.45
001.6021.5210.000	GREAT WESTERN BANK	Finance monthly fund summary	$	8.45
001.6021.5347.000	TYLER TECHNOLOGIES INC	Court online main fee 6/1/22-5/31/23	$	900.00
001.6021.5347.000	TYLER TECHNOLOGIES INC	Acct rec online main fee 6/1/22-5/31/23	$	1,800.00
001.6021.5410.000	MCMASTER-CARR SUPPLY COMPANY	Furniture repair for finance desk	$	103.07
001.6021.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	19.86
001.6021.5450.000	CENTURYLINK	ALL PHONE LINES	$	38.61
001.6021.5605.000	GREAT WESTERN BANK	flash drives and toner cartridge	$	111.77
001.6025.5360.000	GREAT WESTERN BANK	commercial mailing	$	11.91
001.6025.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
001.6025.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
001.6025.5460.000	AHLERS & COONEY	Employment law webinar	$	75.00
001.6025.5605.000	GREAT WESTERN BANK	compact first aid kit	$	30.35
001.6040.5234.000	GRIMES BUCK SCHOELL BEACH & HITCHINS	Services 03/22-04/18/22	$	3,000.00
001.6040.5234.000	LYNCH DALLAS PC	Orinances/ resolutions	$	449.50
001.6040.5234.000	LYNCH DALLAS PC	Zoning	$	201.50
001.6040.5234.000	LYNCH DALLAS PC	General matters 3/14-4/5/22	$	329.50
001.6040.5236.000	AHLERS & COONEY	labor relations	$	1,420.20
001.6050.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(20.66)
001.6050.5342.000	STONE SANITATION	City Hall	$	118.78
001.6050.5481.000	ALLIANT ENERGY	24 N Center St Municipal Bldg	$	87.37
001.6050.5600.000	GREAT WESTERN BANK	YSS elevator room gap filler	$	17.98
001.6051.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
001.6051.5481.000	ALLIANT ENERGY	36 N Center St- Carnegie Bldg	$	1,190.90
001.6051.5482.000	ALLIANT ENERGY	36 N Center St- Carnegie Bldg	$	479.55
001.6051.5600.000	GREAT WESTERN BANK	mouse traps	$	39.93
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Block time of hours 50/month	$	3,165.52
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Veeam monthly subscription for Tyler servers	$	116.40
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Mailfilter Spam/Virus email filtering	$	75.00
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	OpenDNS Ent Monthly subscription-Website security	$	313.60
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Remote monitoring, desktop service, patches	$	375.00
030.1010.5565.000	GREAT WESTERN BANK	Storage for new vehicles	$	754.40
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel electrical supplies	$	266.07
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel HVAC supplies	$	196.65
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel exit light	$	9.99
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel electrical supplies	$	12.49
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel electrical supplies	$	10.89
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel electrical supplies	$	18.98
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel HVAC supplies	$	172.32
031.6050.5776.000	GREAT WESTERN BANK	Finance remodel HVAC supplies	$	134.63
110.2010.5132.000	GREAT WESTERN BANK	Street employee shoes	$	192.60
110.2010.5132.000	GREAT WESTERN BANK	Street employee shoes-Ted Smith	$	180.00
110.2010.5132.000	GREAT WESTERN BANK	Street employee shoes	$	(192.60)
110.2010.5132.000	CITY LAUNDERING COMPANY	Street dept uniform cleaning	$	149.89
110.2010.5132.000	CITY LAUNDERING COMPANY	Street dept uniform cleaning	$	66.12
110.2010.5132.000	CITY LAUNDERING COMPANY	Street dept uniform cleaning	$	149.89
110.2010.5132.000	THEISENS SUPPLY INC	bug killer spray, employee clothing	$	145.96
110.2010.5132.000	THEISENS SUPPLY INC	Street dept employee clothing	$	55.98
110.2010.5342.000	SAFETY KLEEN SYSTEMS INC	solvent removals	$	417.85
110.2010.5342.000	STONE SANITATION	Street Dept	$	118.78
110.2010.5342.000	STONE SANITATION	Bullpen Woodland Dr	$	95.00
110.2010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup Veaam & Recovery PW	$	19.40
110.2010.5410.000	MACQUEEN EQUIPMENT	Street sweeper solenoid valve and repair	$	605.69

110.2010.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
110.2010.5450.000	CENTURYLINK	PW Analog 752-4388	$	47.45
110.2010.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
110.2010.5450.000	VERIZON WIRELESS	Street and Sewer Dept cell services	$	51.78
110.2010.5565.000	ARNOLD MOTOR SUPPLY LLP	brake chamber	$	(36.84)
110.2010.5565.000	ARNOLD MOTOR SUPPLY LLP	engine oil filter	$	(3.86)
110.2010.5565.000	ARNOLD MOTOR SUPPLY LLP	engine oil filter	$	(3.49)
110.2010.5565.000	ARNOLD MOTOR SUPPLY LLP	fuel filter correction on Invoice 10NV114948/1	$	0.86
110.2010.5565.000	ARNOLD MOTOR SUPPLY LLP	took wrong amount for credit-Engine mount	$	37.73
110.2010.5565.000	BOBCAT OF AMES	edge cutting blade	$	333.43
110.2010.5565.000	Interstate Batteries of Upper Iowa	#59 battery	$	126.95
110.2010.5565.000	Interstate Batteries of Upper Iowa	Street dept #43 and #33 batteries	$	471.80
110.2010.5565.000	Interstate Batteries of Upper Iowa	2 battereis 31-WHD	$	263.90
110.2010.5565.000	MACQUEEN EQUIPMENT	Street sweeper solenoid valve and repair	$	218.69
110.2010.5565.000	QUALITY SERVICES CORPORATION	Battery core charge	$	104.00
110.2010.5565.000	STAR EQUIPMENT LTD	aggregate hoes, connectors and filters	$	1,247.91
110.2010.5565.000	VANWALL EQUIPMENT INC	Street - wiper arm and motor	$	244.49
110.2010.5600.000	GREAT WESTERN BANK	hydraulic shut off ball valve-sign shop	$	49.98
110.2010.5600.000	GREAT WESTERN BANK	time recorder printer ribbon-sign shop	$	8.99
110.2010.5600.000	GREAT WESTERN BANK	hook magnets, supplies	$	43.96
110.2010.5600.000	GREAT WESTERN BANK	oil rack- City Barn	$	14.99
110.2010.5600.000	ARNOLD MOTOR SUPPLY LLP	50# sweep compound	$	31.35
110.2010.5600.000	FASTENAL COMPANY	epoxy adhesive	$	(26.35)
110.2010.5600.000	MENARDS	HDWeld on forged grabhook	$	7.99
110.2010.5600.000	MENARDS	deck box 83 gallon	$	69.99
110.2010.5600.000	MENARDS	18" power auger extension	$	44.99
110.2010.5600.000	Midwest Motor Supply Co	grease, super lube, lock nuts, spray paint	$	468.66
110.2010.5600.000	Midwest Motor Supply Co	items shorted	$	(1.52)
110.2010.5600.000	NORTHERN TOOL & EQUIPMENT CO	2x12 3000lb ratchet and transfer tank	$	39.99
110.2010.5600.000	NORTHERN TOOL & EQUIPMENT CO	2x12 3000lb ratchet and transfer tank	$	899.99
110.2010.5600.000	NUTRIEN AG SOLUTIONS INC	Street dept mobil fluid and windshield	$	1,778.00
110.2010.5600.000	NUTRIEN AG SOLUTIONS INC	Mobil super synthetic oil	$	659.00
110.2010.5600.000	OREILLY AUTOMOTIVE INC	window tint	$	24.99
110.2010.5600.000	THEISENS SUPPLY INC	bug killer spray, employee clothing	$	3.99
110.2010.5600.000	THEISENS SUPPLY INC	cold weather cord, straps and oil filter wrench	$	59.96
110.2010.5600.000	THEISENS SUPPLY INC	fiberglass scoop, ball mount, hitch pins	$	155.85
110.2010.5600.000	THEISENS SUPPLY INC	Fuel kit assy, fuel transfer hose, 15GPM pump	$	548.96
110.2010.5600.000	TRI STATE LOCK SERVICE	Street dept keys	$	18.00
110.2010.5600.000	Vajgrt, Roger	100lb LP	$	183.18
110.2010.5611.000	Advance Garage Doors Inc	Car wash west door serviced	$	245.00
110.2010.5611.000	TRI STATE LOCK SERVICE	PWB keys	$	20.00
110.2010.5612.000	BDH INFORMATION TECHNOLOGY LLC	Street dept new NUC + set up	$	854.34
110.2010.5617.000	Bitumnous Materials & Supply	emulsified asphalt	$	486.24
110.2010.5618.000	GRIMES ASPHALT AND PAVING CORP.	Street dept cold mix	$	3,861.70
110.2010.5620.000	CESSFORD CONSTRUCTION COMPANY	road stone	$	487.81
110.2010.5620.000	CESSFORD CONSTRUCTION COMPANY	road stone	$	214.41
110.2010.5620.000	CESSFORD CONSTRUCTION COMPANY	roadstone	$	1,482.49
110.2010.5620.000	CESSFORD CONSTRUCTION COMPANY	Road stone	$	322.59
110.2010.5620.000	MARTIN MARIETTA MATERIALS	dura patch rock	$	634.59
110.2010.5621.000	MARTIN MARIETTA MATERIALS	Street dept fill sand	$	155.72
110.2010.5626.000	IOWA PRISON INDUSTRIES	Street dept sign sheeting	$	8,295.80
110.2010.5627.000	BARCO MUNICIPAL PRODUCTS INC	18" cones, orange	$	957.37
110.2010.5627.000	BARCO MUNICIPAL PRODUCTS INC	channelizer drums	$	99.90
110.2010.5718.000	GREAT WESTERN BANK	Street dept tool box	$	269.99
110.2010.5718.000	MENARDS	Air filters, heat gun	$	69.99
110.2010.5718.000	SE Jones Industries Inc	used tools, spark plug socket sets	$	296.75
110.2010.5718.000	THEISENS SUPPLY INC	cold weather cord, straps and oil filter wrench	$	12.99
110.2010.5776.000	MENARDS	Street dept-	$	173.16
110.2011.5342.000	Pillar Inc	SDW20001 2020 ADA Sidewalk Repair	$	78,636.21
110.2012.5349.000	CALHOUN-BURNS AND ASSOCIATES, INC	2021 Bridge Inspection & Rating increase	$	1,493.50
110.2012.5600.000	GREAT WESTERN BANK	tank heater	$	209.87
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
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110.2030.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional tranmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	sales tax credits	$	(1.45)

110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2030.5481.000	ALLIANT ENERGY	407 Player St Bridge Light	$	91.20
110.2030.5481.000	ALLIANT ENERGY	17 N Center St metered	$	28.96
110.2030.5481.000	ALLIANT ENERGY	220 E MAIN ST ALLEY	$	43.95
110.2030.5481.000	ALLIANT ENERGY	404 1/2 S Center St Viaduct	$	82.94
110.2030.5481.000	ALLIANT ENERGY	36 E Main St Alley	$	43.97
110.2030.5481.000	ALLIANT ENERGY	120 E MAIN ST ALLEY	$	47.60
110.2030.5481.000	ALLIANT ENERGY	MARKET ST BRIDGE LIGHTS	$	73.95
110.2030.5481.000	ALLIANT ENERGY	3098 LINCOLN WAY SIGN	$	31.43
110.2030.5481.000	ALLIANT ENERGY	6 S 2nd St Alley	$	37.89
110.2030.5481.000	ALLIANT ENERGY	106 S CENTER ST METERED	$	37.74
110.2030.5481.000	ALLIANT ENERGY	N CENTER ST & CHURCH ST	$	34.57
110.2030.5481.000	ALLIANT ENERGY	NE corner S 1st Ave / Church St parking lot	$	317.28
110.2030.5481.000	ALLIANT ENERGY	36 W MAIN ST ALLEY	$	38.99
110.2030.5481.000	ALLIANT ENERGY	S 6TH ST	$	50.28
110.2030.5481.000	ALLIANT ENERGY	1707 Laurel Dr Viaduct Light	$	31.78
110.2030.5481.000	ALLIANT ENERGY	N 13th Street lights	$	119.76
110.2030.5481.000	ALLIANT ENERGY	25 N 13th St	$	56.42
110.2040.4875.000	ALLIANT ENERGY	219 Westwood flashing light	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	E Anson St Cnr 4th Ave	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	reginal transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
110.2040.5132.000	CITY LAUNDERING COMPANY	uniform cleaning Utility Dept.	$	50.10
110.2040.5132.000	CITY LAUNDERING COMPANY	uniform cleaning Utility Dept.	$	59.78
110.2040.5132.000	CITY LAUNDERING COMPANY	uniform cleaning Utility Dept.	$	46.03
110.2040.5230.000	IOWA ONE CALL	Utility div - one call charges	$	27.00
110.2040.5280.000	GREAT WESTERN BANK	IAEI membership 3yr-Rick E	$	336.00
110.2040.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
110.2040.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
110.2040.5460.000	GREAT WESTERN BANK	Conf for Rick E and Jesus	$	275.00
110.2040.5481.000	ALLIANT ENERGY	219 Westwood flashing lights	$	23.12
110.2040.5481.000	ALLIANT ENERGY	E Anson St cnr 4th Ave	$	23.12
110.2040.5481.000	ALLIANT ENERGY	5 N 5th St cnr State St	$	23.12
110.2040.5481.000	ALLIANT ENERGY	S CENTER ST CNR BOONE	$	45.71
110.2040.5481.000	ALLIANT ENERGY	S CENTER ST CNR LINN	$	36.69
110.2040.5481.000	ALLIANT ENERGY	S 3RD AVE CNR LINN	$	93.65
110.2040.5481.000	ALLIANT ENERGY	E ANSON ST CNR 3RD AVE	$	59.37
110.2040.5481.000	ALLIANT ENERGY	S CENTER ST CNR ANSON	$	62.09
110.2040.5481.000	ALLIANT ENERGY	S 1ST AVE & E ANSON	$	65.10
110.2040.5481.000	ALLIANT ENERGY	S 6TH ST CNR OLIVE	$	34.63
110.2040.5481.000	ALLIANT ENERGY	W Meadowlane cnr Center	$	37.23
110.2040.5481.000	ALLIANT ENERGY	Westwood Dr cnr Center	$	31.38
110.2040.5600.000	GREAT WESTERN BANK	Utility electricstock	$	131.30
110.2040.5600.000	GREAT WESTERN BANK	Utility electricstock	$	57.46
110.2060.5230.000	Bolton & Menk Inc	Services through 4/1/22	$	450.00
110.2060.5344.000	RICOH USA INC	Engineering color copies	$	21.93
110.2060.5344.000	RICOH USA INC	Engineering BW copies	$	3.51
110.2060.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup Veaam & Recovery PW	$	19.40
110.2060.5360.000	GREAT WESTERN BANK	certified letter for State St project	$	7.58
110.2060.5360.000	GREAT WESTERN BANK	Stormwater DNR report	$	29.99
110.2060.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
110.2060.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
121.1010.5230.000	Ryden, Nathan	Advertising for PD and FD	$	1,250.00
121.1050.5230.000	Ryden, Nathan	Advertising for PD and FD	$	1,250.00
121.5900.5230.000	Mediacom Broadband LLC	TV	$	766.00
121.5900.5230.000	Mediacom Broadband LLC	TV	$	200.00
121.5900.5230.000	Mediacom Broadband LLC	OTT	$	126.00
121.5900.5230.000	Mediacom Broadband LLC	TV	$	403.00
121.5900.5230.000	Mediacom Broadband LLC	TV	$	34.00
125.5020.5331.000	Availa Bank	TIF Agreement Marshallgaam Lodging Holiday Inn	$	46,746.46

125.5020.5331.000	MENARDS	TIF Agreement for Menards / 18th Ave	$	45,119.62
125.5020.5331.000	PLUMB SUPPLY	TIF Agreement for Plumb Supply	$	3,341.54
125.5020.5331.000	Teamwork 1 LLC	TIF Agreement for Teamwork 1 LLC /Bobcat Academy	$	6,536.95
130.1010.5260.000	ICAP	Refund ICAP for Krull accident 2017Explorer bumper	$	2,905.44
130.1010.5410.000	TELEDYNE INSTRUMENTS INC	R60 Aircraft body	$	4,181.40
130.1050.5413.000	A&J BODY SHOP	FD -2018 Druango insurance repairs	$	1,501.00
130.1099.5342.000	Jets Inc	Repaint out training facility- FD	$	1,248.75
130.2080.5342.000	Garling Construction Inc	Airport Metal Building Storm repair	$	53,503.17
140.4030.5450.000	GREAT WESTERN BANK	Internet	$	129.95
140.4030.5600.000	GREAT WESTERN BANK	concession containers	$	72.38
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	99.99
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	379.98
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	1,539.97
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	149.99
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	89.90
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	87.95
140.4030.5600.000	GREAT WESTERN BANK	4 step folding step ladder	$	105.92
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	124.99
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	50.00
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	158.00
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	12.99
140.4030.5600.000	GREAT WESTERN BANK	Program eqipment	$	462.85
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	53.58
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	547.98
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	531.90
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	15.45
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	52.00
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	46.23
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	92.43
140.4030.5600.000	GREAT WESTERN BANK	Program equipment/supplies	$	155.58
140.4030.5600.000	GREAT WESTERN BANK	First Aid Safety Supplies	$	28.20
140.4030.5600.000	GREAT WESTERN BANK	First Aid Safety Supplies	$	803.15
140.4030.5600.000	GREAT WESTERN BANK	First Aid Safety Supplies	$	516.00
140.4030.5600.000	GREAT WESTERN BANK	Aqua Fitness Slip-Resistant Mat	$	372.98
140.4030.5611.000	GREAT WESTERN BANK	No Swimming Signs	$	204.70
140.4030.5611.000	GREAT WESTERN BANK	Tax Credit	$	(10.48)
140.4030.5611.000	GREAT WESTERN BANK	No Swimming Signs	$	109.48
140.4030.5611.000	GREAT WESTERN BANK	Tax Credit	$	(7.16)
140.4030.5611.000	MENARDS	Parks dept doors	$	973.00
142.4030.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
142.4030.5481.000	ALLIANT ENERGY	800 S 6TH ST	$	84.87
142.4030.5562.000	MENARDS	Ball Mount Trailer Hitch, bent pin	$	25.98
142.4030.5611.000	MENARDS	stake flags, cable ties, tarp straps, marking pain	$	56.78
142.4030.5611.000	MENARDS	Solftball complex mulch	$	8.43
142.4030.5718.000	MENARDS	mini culitvator with wheels	$	179.76
148.6025.5600.000	GREAT WESTERN BANK	anti-bacterial hand soap	$	253.20
148.6025.5600.000	GREAT WESTERN BANK	vinyl exam gloves	$	37.29
148.6025.5600.000	GREAT WESTERN BANK	disposable face masks	$	100.86
151.1010.5230.000	YSS Grants Billing	Benefits	$	1,103.06
151.1010.5230.000	YSS Grants Billing	Community Advocates	$	4,412.22
151.1010.5230.000	YSS Grants Billing	Cell Phone Reimbursement	$	77.52
152.1010.5230.000	YSS Grants Billing	Two full time employees	$	2,057.09
152.1010.5230.000	YSS Grants Billing	Benefits	$	660.10
152.1010.5230.000	YSS Grants Billing	Supervisor	$	583.33
152.1010.5280.000	GREAT WESTERN BANK	GoToMeeting	$	16.00
152.1010.5750.000	WATCHGUARD VIDEO	PD In-Car cameras	$	8,937.50
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	24.59
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	75.96
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	26.99
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	20.00
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	32.99
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	20.00
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	31.97
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	37.97
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	13.60
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	50.69
153.1010.5600.000	GREAT WESTERN BANK	Donated Hospitality	$	10.30
170.4010.5601.000	GREAT WESTERN BANK	gift - program supply - portable cases	$	169.86
184.5030.5238.000	Tacoma Housing Authority	Housing Assistance Payment	$	43.18
184.5030.5242.000	ACKLEY HOUSING INC	Housing Assistance Payment	$	225.00
184.5030.5242.000	ACKLEY HOUSING INC	Housing Assistance Payment	$	53.00
184.5030.5242.000	Alcala, Rigoberto	Housing Assistance Payment	$	343.00
184.5030.5242.000	Alejo, Jerry	Housing Assistance Payment	$	183.00

184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	241.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	326.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	189.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	281.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	297.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	307.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	174.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	106.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	89.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	60.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	243.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	308.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	327.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	318.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	323.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	327.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	341.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	347.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	342.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	341.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	341.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	347.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	330.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	347.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	515.00
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	$	348.00
184.5030.5242.000	Barnes, Lonnie	Housing Assistance Payment	$	239.00
184.5030.5242.000	BJ&J LLC	Housing Assistance Payment	$	279.00
184.5030.5242.000	BLOOD, ALEX	Housing Assistance Payment	$	360.00
184.5030.5242.000	BLOOD, ALEX	Housing Assistance Payment	$	420.00
184.5030.5242.000	BLOOD, ALEX	Housing Assistance Payment	$	413.00
184.5030.5242.000	Borota, Kent	Housing Assistance Payment	$	308.00
184.5030.5242.000	Borota, Kent	Housing Assistance Payment	$	272.00
184.5030.5242.000	Borota, Kent	Housing Assistance Payment	$	318.00
184.5030.5242.000	BOULDER COOPERATIVE HOUSING ASSN	Housing Assistance Payment	$	625.00
184.5030.5242.000	BOULDER COOPERATIVE HOUSING ASSN	Housing Assistance Payment	$	194.00
184.5030.5242.000	BOULDER COOPERATIVE HOUSING ASSN	Housing Assistance Payment	$	134.00
184.5030.5242.000	BRODIN, CHRIS	Housing Assistance Payment	$	114.00
184.5030.5242.000	Buckaroo LLC	Housing Assistance Payment	$	443.00
184.5030.5242.000	Buckaroo LLC	Housing Assistance Payment	$	373.00
184.5030.5242.000	Bunch, John	Housing Assistance Payment	$	275.00
184.5030.5242.000	Burr, Robert	Housing Assistance Payment	$	374.00
184.5030.5242.000	Burr, Robert	Housing Assistance Payment	$	140.00
184.5030.5242.000	Burr, Robert	Housing Assistance Payment	$	115.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	99.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	99.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	118.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	98.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	46.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	66.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	73.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	76.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	$	93.00
184.5030.5242.000	Charlier, Quinten	Housing Assistance Payment	$	129.00
184.5030.5242.000	Chedester, James	Housing Assistance Payment	$	400.00
184.5030.5242.000	CHILTON, Michael	Housing Assistance Payment	$	450.00
184.5030.5242.000	CMHC Investments LLC	Housing Assistance Payment	$	244.00
184.5030.5242.000	Colson, Mary	Housing Assistance Payment	$	209.00
184.5030.5242.000	D & D RENTALS INC	Housing Assistance Payment	$	311.00
184.5030.5242.000	DC Brown Rentals	Housing Assistance Payment	$	500.00
184.5030.5242.000	DC Brown Rentals	Housing Assistance Payment	$	202.00
184.5030.5242.000	Ecklor, Shane	Housing Assistance Payment	$	487.00
184.5030.5242.000	Ecklor, Shane	Housing Assistance Payment	$	434.00
184.5030.5242.000	Ecklor, Shane	Housing Assistance Payment	$	163.00
184.5030.5242.000	ELWAYNE INC	Housing Assistance Payment	$	295.00
184.5030.5242.000	ELWAYNE INC	Housing Assistance Payment	$	176.00
184.5030.5242.000	ELWAYNE INC	Housing Assistance Payment	$	514.00
184.5030.5242.000	ELWAYNE INC	Housing Assistance Payment	$	513.00
184.5030.5242.000	Engel, Drew	Housing Assistance Payment	$	184.00
184.5030.5242.000	EPM Iowa LLC	Housing Assistance Payment	$	272.00
184.5030.5242.000	ETTER, WILLIAM	Housing Assistance Payment	$	482.00
184.5030.5242.000	EUBANKS, CHAD	Housing Assistance Payment	$	284.00
184.5030.5242.000	Ferneau, Gary	Housing Assistance Payment	$	568.00

184.5030.5242.000	Ferneau, Gary	Housing Assistance Payment	$	417.00
184.5030.5242.000	FRIENDLY VALLEY APARTMENTS INC	Housing Assistance Payment	$	120.00
184.5030.5242.000	FRIENDLY VALLEY APARTMENTS INC	Housing Assistance Payment	$	143.00
184.5030.5242.000	Gonzales, Gilbert	Housing Assistance Payment	$	551.00
184.5030.5242.000	Gonzalez, Patricia	Housing Assistance Payment	$	144.00
184.5030.5242.000	Gorrell, Joseph	Housing Assistance Payment	$	430.00
184.5030.5242.000	GOSSARD MOBILE HOMES INC	Housing Assistance Payment	$	270.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	111.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	20.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	120.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	136.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	142.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	137.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	215.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	191.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	185.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	175.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	166.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	146.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	313.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	313.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	289.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	252.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	247.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	516.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	368.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	343.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	335.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	327.00
184.5030.5242.000	GRANT PARK LLC	Housing Assistance Payment	$	312.00
184.5030.5242.000	GRAY, DENNIS	Housing Assistance Payment	$	550.00
184.5030.5242.000	GRAY, DENNIS	Housing Assistance Payment	$	603.00
184.5030.5242.000	GRAY, DENNIS	Housing Assistance Payment	$	413.00
184.5030.5242.000	HALA, JANET	Housing Assistance Payment	$	357.00
184.5030.5242.000	HALA, JANET	Housing Assistance Payment	$	358.00
184.5030.5242.000	HALA, JANET	Housing Assistance Payment	$	647.00
184.5030.5242.000	HALA, JANET	Housing Assistance Payment	$	722.00
184.5030.5242.000	HALA, JANET	Housing Assistance Payment	$	210.00
184.5030.5242.000	HARRIS, TOM	Housing Assistance Payment	$	324.00
184.5030.5242.000	HATCH, Roger	Housing Assistance Payment	$	167.00
184.5030.5242.000	HATCH, Roger	Housing Assistance Payment	$	313.00
184.5030.5242.000	HATCH, Roger	Housing Assistance Payment	$	591.00
184.5030.5242.000	HATCH, Roger	Housing Assistance Payment	$	875.00
184.5030.5242.000	HILLTOP VILLAGE INC	Housing Assistance Payment	$	105.00
184.5030.5242.000	HILLTOP VILLAGE INC	Housing Assistance Payment	$	231.00
184.5030.5242.000	HILLTOP VILLAGE INC	Housing Assistance Payment	$	202.00
184.5030.5242.000	HILLTOP VILLAGE INC	Housing Assistance Payment	$	190.00
184.5030.5242.000	HILLTOP VILLAGE INC	Housing Assistance Payment	$	126.00
184.5030.5242.000	HILLTOP VILLAGE INC	Housing Assistance Payment	$	116.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	257.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	189.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	173.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	136.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	271.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	277.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	248.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	241.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	261.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	228.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	219.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	316.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	331.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	364.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	133.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	248.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	82.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	44.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	382.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	388.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	439.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	486.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	549.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	625.00

184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	$	250.00
184.5030.5242.000	Hodges, Kristin	Housing Assistance Payment	$	507.00
184.5030.5242.000	HUBBARD MAPLE ST APTS, LLC	Housing Assistance Payment	$	171.00
184.5030.5242.000	JBI COOP ASSOCIATION	Housing Assistance Payment	$	180.00
184.5030.5242.000	JBI COOP ASSOCIATION	Housing Assistance Payment	$	276.00
184.5030.5242.000	JBI COOP ASSOCIATION	Housing Assistance Payment	$	370.00
184.5030.5242.000	JBI COOP ASSOCIATION	Housing Assistance Payment	$	540.00
184.5030.5242.000	JUDGE, MIKE	Housing Assistance Payment	$	581.00
184.5030.5242.000	JUDGE, MIKE	Housing Assistance Payment	$	359.00
184.5030.5242.000	JUDGE, MIKE	Housing Assistance Payment	$	332.00
184.5030.5242.000	JUDGE, MIKE	Housing Assistance Payment	$	117.00
184.5030.5242.000	JUDGE, MIKE	Housing Assistance Payment	$	168.00
184.5030.5242.000	Klinefelter, Richard J	Housing Assistance Payment	$	450.00
184.5030.5242.000	KRAMER, Marsha	Housing Assistance Payment	$	218.00
184.5030.5242.000	LAWSON, RODNEY W	Housing Assistance Payment	$	49.00
184.5030.5242.000	LAWTHERS PROPERTY MANAGEMENT	Housing Assistance Payment	$	222.00
184.5030.5242.000	LBO INVESTMENTS	Housing Assistance Payment	$	442.00
184.5030.5242.000	Lopez, Jaime	Housing Assistance Payment	$	395.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	525.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	498.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	498.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	489.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	352.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	272.00
184.5030.5242.000	Luense, Brant	Housing Assistance Payment	$	264.00
184.5030.5242.000	Mansager, Cynthia	Housing Assistance Payment	$	301.00
184.5030.5242.000	Marion Manor 2	Housing Assistance Payment	$	559.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	566.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	494.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	421.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	396.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	260.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	253.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	208.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	65.00
184.5030.5242.000	MARSHALLTOWN SENIOR RESIDENCES LLC	Housing Assistance Payment	$	268.00
184.5030.5242.000	Moore, Michelle	Housing Assistance Payment	$	426.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	273.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	233.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	232.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	230.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	211.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	204.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	196.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	189.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	273.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	183.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	120.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	81.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	157.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	274.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	276.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	289.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	446.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	423.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	399.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	327.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	322.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	315.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	307.00
184.5030.5242.000	MTOWN/WESTOWN LLLP	Housing Assistance Payment	$	304.00
184.5030.5242.000	Nelson, LaNeal	Housing Assistance Payment	$	288.00
184.5030.5242.000	NORTH TAMA HOUSING, INC	Housing Assistance Payment	$	145.00
184.5030.5242.000	NORTH TAMA HOUSING, INC	Housing Assistance Payment	$	140.00
184.5030.5242.000	OETKER, DEBRA	Housing Assistance Payment	$	162.00
184.5030.5242.000	OETKER, DEBRA	Housing Assistance Payment	$	252.00
184.5030.5242.000	Optimal Life Services	Housing Assistance Payment	$	39.00
184.5030.5242.000	PALISADE HOLDING CO	Housing Assistance Payment	$	206.00
184.5030.5242.000	Pilot Creek Properties	Housing Assistance Payment	$	120.00
184.5030.5242.000	Pizano, Sergio	Housing Assistance Payment	$	151.00
184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	701.00
184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	478.00
184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	477.00

184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	348.00
184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	268.00
184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	45.00
184.5030.5242.000	Premier Iowa City IA LLC	Housing Assistance Payment	$	228.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	691.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	567.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	558.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	536.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	491.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	451.00
184.5030.5242.000	Premier Real Estate Mgmnt	Housing Assistance Payment	$	243.00
184.5030.5242.000	R & A RENTAL PROPERTIES LLC	Housing Assistance Payment	$	478.00
184.5030.5242.000	RD TOLEDO LLP	Housing Assistance Payment	$	724.00
184.5030.5242.000	RD TOLEDO LLP	Housing Assistance Payment	$	4.00
184.5030.5242.000	REED, TONY	Housing Assistance Payment	$	560.00
184.5030.5242.000	REED, TONY	Housing Assistance Payment	$	530.00
184.5030.5242.000	REED, TONY	Housing Assistance Payment	$	409.00
184.5030.5242.000	REED, TONY	Housing Assistance Payment	$	408.00
184.5030.5242.000	REED, TONY	Housing Assistance Payment	$	291.00
184.5030.5242.000	REED, TONY	Housing Assistance Payment	$	253.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	700.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	463.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	386.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	346.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	207.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	29.00
184.5030.5242.000	RIVER BIRCH APTS	Housing Assistance Payment	$	675.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	26.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	88.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	145.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	377.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	427.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	485.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	530.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	638.00
184.5030.5242.000	RIVER OAKS APARTMENTS	Housing Assistance Payment	$	755.00
184.5030.5242.000	S & E INVESTMENT LLC	Housing Assistance Payment	$	418.00
184.5030.5242.000	SCHMIDT, Michael T	Housing Assistance Payment	$	400.00
184.5030.5242.000	SCOTT, LESLIE	Housing Assistance Payment	$	434.00
184.5030.5242.000	SESKER, RICK	Housing Assistance Payment	$	189.00
184.5030.5242.000	Squire, Bert	Housing Assistance Payment	$	191.00
184.5030.5242.000	STEELSMITH, GREG	Housing Assistance Payment	$	328.00
184.5030.5242.000	STEELSMITH, GREG	Housing Assistance Payment	$	326.00
184.5030.5242.000	STEELSMITH, GREG	Housing Assistance Payment	$	354.00
184.5030.5242.000	SUNRISE APARTMENTS, INC	Housing Assistance Payment	$	116.00
184.5030.5242.000	Swift, Scott	Housing Assistance Payment	$	370.00
184.5030.5242.000	SWITZER, TOM	Housing Assistance Payment	$	555.00
184.5030.5242.000	Tacoma Housing Authority	Housing Assistance Payment	$	901.00
184.5030.5242.000	Town Apartments Corporation	Housing Assistance Payment	$	82.00
184.5030.5242.000	Town Apartments Corporation	Housing Assistance Payment	$	128.00
184.5030.5242.000	V&C INVESTMENTS LC	Housing Assistance Payment	$	142.00
184.5030.5242.000	V&C INVESTMENTS LC	Housing Assistance Payment	$	281.00
184.5030.5242.000	V&C INVESTMENTS LC	Housing Assistance Payment	$	282.00
184.5030.5242.000	V&C INVESTMENTS LC	Housing Assistance Payment	$	291.00
184.5030.5242.000	V&C INVESTMENTS LC	Housing Assistance Payment	$	295.00
184.5030.5242.000	V&C INVESTMENTS LC	Housing Assistance Payment	$	33.00
184.5030.5242.000	Walker, Angela	Housing Assistance Payment	$	282.00
184.5030.5242.000	WEATHERLY, ERIN & BOB	Housing Assistance Payment	$	663.00
184.5030.5242.000	Worent Inc	Housing Assistance Payment	$	345.00
184.5030.5242.000	Worent Inc	Housing Assistance Payment	$	271.00
184.5030.5242.000	Worsfold Farm LLC	Housing Assistance Payment	$	364.00
184.5030.5246.000	Aponte, Miguel	Housing Assistance Payment	$	27.00
184.5030.5246.000	Hidalgo, Yesenia	Housing Assistance Payment	$	13.00
184.5030.5246.000	Johnson, Alesha	Housing Assistance Payment	$	31.00
184.5030.5246.000	Perez, Eliva Mejia	Housing Assistance Payment	$	31.00
184.5030.5246.000	Richey, Jennifer	Housing Assistance Payment	$	32.00
184.5030.5246.000	Samuel, Twyna	Housing Assistance Payment	$	136.00
184.5030.5246.000	Schmudlach, Cody	Housing Assistance Payment	$	10.00
184.5030.5246.000	Shattuck, Tracy	Housing Assistance Payment	$	10.00
184.5030.5246.000	Squires, Christina	Housing Assistance Payment	$	40.00
184.5030.5246.000	Werner, Jessica	Housing Assistance Payment	$	13.00
184.5030.5246.000	Wilson, Ranae	Housing Assistance Payment	$	13.00
184.5030.5344.000	PREMIER OFFICE EQUIPMENT	Housing base coverage and contract copies	$	53.24

184.5030.5360.000	GREAT WESTERN BANK	Endicia	$	9.95
184.5030.5360.000	GREAT WESTERN BANK	POSTAGE	$	300.00
184.5030.5450.000	GREAT WESTERN BANK	TELEPHONE	$	68.99
184.5030.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	9.92
184.5030.5450.000	CENTURYLINK	ALL PHONE LINES	$	19.30
184.5030.5605.000	Sho Biz Inc dba Minuteman	two hole punch & asst tabs	$	15.67
184.5030.5605.000	Sho Biz Inc dba Minuteman	White envelopes	$	26.95
189.3040.5251.000	GREAT WESTERN BANK	NOTARY LICENSE	$	30.00
189.3040.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
189.3040.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
200.7010.5810.000	UMB Bank NA	GO Corp Bond Series 2012A	$	425,000.00
200.7010.5810.000	UMB Bank NA	GO Refunding bond series 2012B	$	320,000.00
200.7010.5810.000	UMB Bank NA	GO Corp bond series 2013, dtd 3/12/13	$	1,000,000.00
200.7010.5810.000	UMB Bank NA	GO Corp Purpose bond series 2015, dtd 11/24/15	$	350,000.00
200.7010.5810.000	UMB Bank NA	GO Corp Purpose bonds series 2016A	$	175,000.00
200.7010.5810.000	UMB Bank NA	STORM GO Corp Purpose bonds series 2016A	$	165,000.00
200.7010.5810.000	UMB Bank NA	GO Municipal Bldg bond sereis 2016B	$	260,000.00
200.7010.5810.000	UMB Bank NA	GO Bond Municipal Bldg series 2017	$	100,000.00
200.7010.5810.000	UMB Bank NA	GO Corp Purpose & Rfdg bond series 2019	$	370,000.00
200.7010.5810.000	UMB Bank NA	Sewer GO Corp Purpose & Rfdg bond series 2019	$	445,000.00
200.7010.5810.000	UMB Bank NA	Storm GO Corp Purpose Refdg Bond series 2020A	$	315,000.00
200.7010.5810.000	UMB Bank NA	GO Corp Purpose Refdg Bond series 2020A	$	445,000.00
200.7010.5820.000	UMB Bank NA	GO Corp Bond Series 2012A	$	17,781.25
200.7010.5820.000	UMB Bank NA	GO Refunding bond series 2012B	$	6,012.50
200.7010.5820.000	UMB Bank NA	GO Corp bond series 2013, dtd 3/12/13	$	8,750.00
200.7010.5820.000	UMB Bank NA	GO Corp Purpose bond series 2015, dtd 11/24/15	$	11,443.75
200.7010.5820.000	UMB Bank NA	STORM GO Corp Purpose bonds series 2016A	$	19,100.00
200.7010.5820.000	UMB Bank NA	GO Corp Purpose bonds series 2016A	$	14,400.00
200.7010.5820.000	UMB Bank NA	GO Municipal Bldg bond sereis 2016B	$	30,350.00
200.7010.5820.000	UMB Bank NA	GO Bond Municipal Bldg series 2017	$	172,575.00
200.7010.5820.000	UMB Bank NA	GO Corp Purpose bonds series 2018	$	36,000.00
200.7010.5820.000	UMB Bank NA	Sewer GO Corp Purpose & Rfdg bond series 2019	$	23,750.00
200.7010.5820.000	UMB Bank NA	GO Corp Purpose & Rfdg bond series 2019	$	53,500.00
200.7010.5820.000	UMB Bank NA	Storm GO Corp Purpose Refdg Bond series 2020A	$	15,175.00
200.7010.5820.000	UMB Bank NA	GO Corp Purpose Refdg Bond series 2020A	$	28,750.00
200.7010.5820.000	UMB Bank NA	Taxable GO Airport Improve bond seires 2020B	$	11,112.50
311.2012.5233.000	Bolton & Menk Inc	increase	$	6,117.00
311.2012.5233.000	Bolton & Menk Inc	Storm Water Planning, Analysis & Design	$	1,837.00
311.2012.5233.000	Bolton & Menk Inc	Project Coordination	$	390.50
311.2012.5233.000	Bolton & Menk Inc	Preliminary Plat	$	104.50
312.2080.5342.000	Nagle Signs Inc	Airport Monument Sign, Runway logo & letters	$	4,244.29
312.2080.5348.000	ALLIANT ENERGY	new electrical service ductwork @ Airport	$	535.62
340.4030.5233.000	CALHOUN-BURNS AND ASSOCIATES, INC	TRL17002 Iowa River's Edge Trail	$	3,164.70
355.1075.5210.000	LYNCH DALLAS PC	Nuisance/ Enforcements	$	73.34
355.1075.5230.000	LYNCH DALLAS PC	Nuisance/ Enforcements	$	75.00
355.1075.5230.000	WHKS & Co	Amendment	$	15,282.92
355.1075.5230.000	WHKS & Co	Engineering services 1/15-3/11/22	$	208.64
355.1075.5230.000	WHKS & Co	Demolition plan and specifications	$	9,650.55
355.1075.5234.000	LYNCH DALLAS PC	Nuisance/ Enforcements	$	2,700.50
355.1075.5781.000	Feras, Gaston	309 W Boone St	$	1,414.00
363.2012.5233.000	Bolton & Menk Inc	Professional Services - State Street Reconstructio	$	50,997.00
363.6021.5234.000	DORSEY & WHITNEY LLP	Legal fees for 2021 GO Bond	$	16,000.00
610.8015.5132.000	GREAT WESTERN BANK	EMPLOYEE CLOTHING ALLOW.	$	1,052.35
610.8015.5132.000	GREAT WESTERN BANK	LAB COATS	$	113.86
610.8015.5132.000	GREAT WESTERN BANK	LAB COATS	$	227.72
610.8015.5132.000	GREAT WESTERN BANK	EMPLOYEE CLOTHING ALLOW.	$	93.75
610.8015.5132.000	GREAT WESTERN BANK	EMPLOYEE CLOTHING ALLOW.	$	57.98
610.8015.5220.000	MARSHALLTOWN WATER WORKS	Sanitary Collections Costs	$	7,995.43
610.8015.5280.000	GREAT WESTERN BANK	IDNR OPER. CERT. FEE	$	32.29
610.8015.5280.000	GREAT WESTERN BANK	IAWEA ANNUAL MMBRSHIPS	$	60.00
610.8015.5280.000	GREAT WESTERN BANK	WEF MEMBERSHIP-GREAZEL	$	160.00
610.8015.5342.000	STONE SANITATION	April 2022 Grit/ Screening removal	$	1,049.38
610.8015.5342.000	STONE SANITATION	Waste Plant	$	138.78
610.8015.5344.000	Controlled Access	April 2022 Liftmaster capxl subscription	$	39.50
610.8015.5344.000	STERLING FIRE & SAFETY INC	2022 annual fire exp inspections	$	517.50
610.8015.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup Veeam & recovery WPCP	$	19.40
610.8015.5360.000	GREAT WESTERN BANK	SHIPPING CHARGES	$	18.10
610.8015.5380.000	SCHARNWEBER WATER CONDITIONING INC	April 2022-water softner lease	$	27.00
610.8015.5410.000	ZIEGLER INC	CG132 Arc Flash Repair	$	14,589.03
610.8015.5450.000	GREAT WESTERN BANK	APRIL 2022 MEDIACOM ONLINE	$	75.00
610.8015.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	14.88
610.8015.5450.000	CENTURYLINK	ALL PHONE LINES	$	28.95
610.8015.5460.000	GREAT WESTERN BANK	IAEI SPRING CONF REGISTRATN	$	300.00

610.8015.5460.000	GREAT WESTERN BANK	IAEI SPRING CONF REGISTRATN	$	375.00
610.8015.5460.000	GREAT WESTERN BANK	2022 BIOSOLIDS CONF REGTRN	$	120.00
610.8015.5565.000	GREAT WESTERN BANK	AUTO ELEC WIRE, CONNTRS	$	278.71
610.8015.5565.000	GREAT WESTERN BANK	2011 F250 RUNNING BOARDS	$	259.29
610.8015.5600.000	GREAT WESTERN BANK	SHOP TORCH COMPR OXYGEN	$	36.08
610.8015.5600.000	GREAT WESTERN BANK	VACUUM CLEANER FILTERS	$	22.98
610.8015.5600.000	GREAT WESTERN BANK	CRIMPING TOOLS	$	50.78
610.8015.5600.000	GREAT WESTERN BANK	NORSOLV,DIRECT CONN BLADE	$	78.65
610.8015.5600.000	GREAT WESTERN BANK	ELEC SUPP-FUSES,WIRE,BLBS	$	2,358.26
610.8015.5600.000	GREAT WESTERN BANK	4 EXPANSION JOINT	$	161.30
610.8015.5600.000	GREAT WESTERN BANK	CLEANING & LAUNDRY SUPP.	$	117.71
610.8015.5600.000	GREAT WESTERN BANK	RATCHET TIE DOWNS	$	71.82
610.8015.5600.000	GREAT WESTERN BANK	PLUMBING SUPPLIES	$	67.87
610.8015.5600.000	GREAT WESTERN BANK	GATE PULLS,MACHINE SCREWS	$	10.27
610.8015.5600.000	GREAT WESTERN BANK	HINGES, ANCHOR, DRILL BITS	$	98.54
610.8015.5600.000	GREAT WESTERN BANK	SCREW PUMP BELTS	$	360.84
610.8015.5600.000	GREAT WESTERN BANK	SOFTENER SALT	$	358.47
610.8015.5600.000	NUTRIEN AG SOLUTIONS INC	Pegasus 610- 55 gal	$	1,130.00
610.8015.5600.000	WILLCO, INC	Gas comp #1-2 replacement sleeves	$	1,100.00
610.8015.5603.000	GREAT WESTERN BANK	LAB SAFETY GLASSES	$	26.84
610.8015.5603.000	GREAT WESTERN BANK	AA SYSTEM TRANSFORMER	$	407.21
610.8015.5603.000	GREAT WESTERN BANK	LAB STILL SOLENOID VALVE	$	467.53
610.8015.5603.000	GREAT WESTERN BANK	LAB DISHWSHR SLIDE ASSMBY	$	290.12
610.8015.5603.000	GREAT WESTERN BANK	CONDUCTIVITY STANDARD	$	25.26
610.8015.5603.000	ENVIRONMENTAL RESOURCE ASSOC INC	Qrtly lab testing-nutrients, DMRQA, metals	$	605.29
610.8015.5603.000	Eurofins TestAmerica	lab analysis - SBR #1- EColi	$	132.30
610.8015.5603.000	KEYSTONE LAB INC	lab analysis - dig #3	$	74.00
610.8015.5603.000	MIDLAND SCIENTIFIC INC	lab supplies - 50L carboy container	$	256.91
610.8015.5603.000	MIDLAND SCIENTIFIC INC	WPC lab supplies-pipets, solutions, pH probe	$	612.17
610.8015.5603.000	MIDLAND SCIENTIFIC INC	Lab Supplies - pH probe	$	739.21
610.8015.5603.000	MIDLAND SCIENTIFIC INC	lab supplies - nitric acid	$	295.08
610.8015.5605.000	GREAT WESTERN BANK	OFFICE SUPPLIES	$	45.70
610.8015.5612.000	GREAT WESTERN BANK	WIRELESS MOUSE	$	37.25
610.8015.5703.000	BDH INFORMATION TECHNOLOGY LLC	WPCP custom mini PC Admin office	$	854.34
610.8015.5980.000	BRYCON LLC	Sewer refund 2022- water pipe break	$	3,128.66
610.8015.5980.000	Guevara, Ana	Sewer refund 2022- water pipe break	$	214.59
610.8016.5132.000	THEISENS SUPPLY INC	Sewer dept new employee clothing	$	35.10
610.8016.5132.000	THEISENS SUPPLY INC	Sewer dept new employee clothing	$	251.32
610.8016.5210.000	GREAT WESTERN BANK	Sanitary sewer rehab notice	$	20.93
610.8016.5342.000	A-1 PEST CONTROL	Sewer dept Spring service	$	39.00
610.8016.5344.000	STERLING FIRE & SAFETY INC	Annual fire extinguisher inspection Sewer Barn	$	31.50
610.8016.5360.000	GREAT WESTERN BANK	certified letter to Johnston IA	$	4.33
610.8016.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	5.95
610.8016.5450.000	CENTURYLINK	ALL PHONE LINES	$	11.58
610.8016.5450.000	VERIZON WIRELESS	Street and Sewer Dept cell services	$	24.97
610.8016.5481.000	ALLIANT ENERGY	S 2nd St cnr Player	$	382.66
610.8016.5481.000	ALLIANT ENERGY	N 22nd St	$	81.84
610.8016.5565.000	FASTENAL COMPANY	bolts, washers, nuts for Vactor	$	27.50
610.8016.5565.000	MENARDS	trailer wheel	$	59.99
610.8016.5565.000	NAPA AUTO PARTS	starter switch for 6" pump trailer	$	9.81
610.8016.5565.000	NAPA AUTO PARTS	battery for 6' pump trailer	$	94.07
610.8016.5600.000	MACQUEEN EQUIPMENT	vacuum butterfly valve seal & actuator kit	$	226.00
610.8016.5600.000	NAPA AUTO PARTS	misc parts for pump repairs	$	43.71
610.8016.5600.000	STAR EQUIPMENT LTD	swivel and nut, o-rings, collar locks	$	442.56
610.8016.5600.000	THEISENS SUPPLY INC	shut off valve	$	14.92
610.8016.5600.000	THEISENS SUPPLY INC	safety eyewear for new employee	$	7.19
610.8016.5810.000	UMB Bank NA	Sewer Rev bond series 2013, dtd 6/1/13	$	130,000.00
610.8016.5810.000	UMB Bank NA	Sewer Rev Rfdg series 2020, dtd 1/8/20	$	510,000.00
610.8016.5810.000	UMB Bank NA	Sewer Rev Rfdg bond series 2021 dtd 4/1/21	$	524,000.00
610.8016.5820.000	UMB Bank NA	Sewer Rev bond series 2013, dtd 6/1/13	$	18,789.10
610.8016.5820.000	UMB Bank NA	Sewer Rev Rfdg series 2020, dtd 1/8/20	$	39,935.00
610.8016.5820.000	UMB Bank NA	Sewer Rev Rfdg bond series 2021 dtd 4/1/21	$	23,572.95
611.8016.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
611.8016.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
615.8015.5233.000	ALLENDER BUTZKE ENGINEERS INC	WPC21001 services	$	8,490.12
690.8050.5132.000	CITY LAUNDERING COMPANY	uniform cleaning-Transit dept	$	31.61
690.8050.5132.000	CITY LAUNDERING COMPANY	uniform cleaning-Transit dept	$	31.61
690.8050.5132.000	CITY LAUNDERING COMPANY	uniform cleaning-Transit dept	$	31.61
690.8050.5210.000	Trending Media Inc	Transit advertising	$	240.00
690.8050.5210.000	Trending Media Inc	Transit advertising	$	56.00
690.8050.5342.000	GREAT WESTERN BANK	GPS service-February	$	252.00
690.8050.5342.000	GREAT WESTERN BANK	GPS service-March	$	252.00
690.8050.5360.000	Sho Biz Inc dba Minuteman	Transit shipped package	$	14.94

690.8050.5410.000	Ferneau Heavy Duty Truck Repair	2019 Chevy equipment alignment	$	335.00
690.8050.5410.000	MCATEE TIRE SALES & SERVICE INC	Bus #191 wheels balanced	$	87.00
690.8050.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
690.8050.5450.000	CENTURYLINK	PW Analog 752-4388	$	31.63
690.8050.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
690.8050.5565.000	GREAT WESTERN BANK	extension spring bus #131	$	9.18
690.8050.5565.000	ARNOLD MOTOR SUPPLY LLP	return coolant	$	(17.99)
690.8050.5565.000	ARNOLD MOTOR SUPPLY LLP	Transit #011 coolant leak repair	$	17.63
690.8050.5565.000	CUMMINS Sales & Service	air compressor kit	$	2,547.47
690.8050.5565.000	CUMMINS Sales & Service	air compressor head kit	$	(270.00)
690.8050.5565.000	GILLIG LLC	Bus #131 air restriction indicator	$	75.16
690.8050.5565.000	MCATEE TIRE SALES & SERVICE INC	Bus #191 wheels balanced	$	243.36
690.8050.5565.000	NAPA AUTO PARTS	Bus #013 halogen beams	$	24.48
690.8050.5565.000	NAPA AUTO PARTS	Bus #191 synthetic oil	$	82.84
690.8050.5611.000	Advance Garage Doors Inc	Car wash west door serviced	$	196.00
690.8050.5718.000	GREAT WESTERN BANK	flood mounting light	$	99.99
690.8050.5718.000	FASTENAL COMPANY	Transit safety cabinet	$	1,604.47
690.8050.5718.000	NAPA AUTO PARTS	also paid as 162779	$	(19.99)
690.8050.5718.000	NAPA AUTO PARTS	scraper gasket	$	12.43
740.8065.4875.000	ALLIANT ENERGY	regional transmission service credit	$	(20.66)
740.8065.5132.000	THEISENS SUPPLY INC	Sewer dept new employee clothing	$	23.40
740.8065.5132.000	THEISENS SUPPLY INC	Sewer dept new employee clothing	$	167.55
740.8065.5192.070	IOWA WORKFORCE DEVELOPMENT	reimburseable benefit charges	$	762.35
740.8065.5220.000	MARSHALLTOWN WATER WORKS	Storm Sewer Collection Services	$	676.00
740.8065.5342.000	A-1 PEST CONTROL	Sewer dept Spring service	$	26.00
740.8065.5344.000	STERLING FIRE & SAFETY INC	Annual fire extinguisher inspection Sewer Barn	$	21.00
740.8065.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	3.97
740.8065.5450.000	CENTURYLINK	ALL PHONE LINES	$	7.72
740.8065.5450.000	VERIZON WIRELESS	Street and Sewer Dept cell services	$	16.65
740.8065.5481.000	ALLIANT ENERGY	N 3rd Ave - WPCP	$	24.97
740.8065.5565.000	FASTENAL COMPANY	bolts, washers, nuts for Vactor	$	18.34
740.8065.5565.000	MENARDS	trailer wheel	$	39.99
740.8065.5565.000	NAPA AUTO PARTS	starter switch for 6" pump trailer	$	6.55
740.8065.5565.000	NAPA AUTO PARTS	battery for 6' pump trailer	$	62.72
740.8065.5600.000	MACQUEEN EQUIPMENT	vacuum butterfly valve seal & actuator kit	$	150.67
740.8065.5600.000	NAPA AUTO PARTS	misc parts for pump repairs	$	29.14
740.8065.5600.000	STAR EQUIPMENT LTD	swivel and nut, o-rings, collar locks	$	295.04
740.8065.5600.000	THEISENS SUPPLY INC	shut off valve	$	9.95
740.8065.5600.000	THEISENS SUPPLY INC	safety eyewear for new employee	$	4.79
741.8065.5251.000	GREAT WESTERN BANK	Storm water project fees	$	180.00
750.8070.5344.000	Controlled Access	April 2022 Liftmaster capxl subscription	$	39.50
750.8070.5360.000	GREAT WESTERN BANK	Street dept office chair-shipping	$	24.92
750.8070.5410.000	Raven Creek Repair	leaf mulcher tire repair	$	85.00
750.8070.5450.000	CENTURYLINK	Non published direct dial lines fees 9853	$	4.96
750.8070.5450.000	CENTURYLINK	ALL PHONE LINES	$	9.65
750.8070.5565.000	Raven Creek Repair	leaf mulcher tire repair	$	40.00
750.8070.5702.000	GREAT WESTERN BANK	Street dept office chair	$	79.99
760.8080.5600.000	GREAT WESTERN BANK	Dispensers & covers	$	17.99
881.1010.5230.000	BERNIE LOWE & ASSOC Inc	paid medical claims	$	73.56
881.1010.5339.000	BERNIE LOWE & ASSOC Inc	paid medical claims	$	335.82
881.1010.5339.000	Hunter Lane LLC	April 1-15 paid claims	$	26.08
881.1050.5230.000	BERNIE LOWE & ASSOC Inc	paid medical claims	$	12.52
881.1050.5339.000	BERNIE LOWE & ASSOC Inc	paid medical claims	$	170.92
881.1050.5339.000	Hunter Lane LLC	April 1-15 paid claims	$	134.55
884.7010.5337.000	HARTFORD- PRIORITY ACCTS	May insurance premium	$	6,811.24
999.1101.000	INTERNAL REVENUE SERVICE	Bi-Weekly Federal Taxes	$	26,472.69
999.1101.000	INTERNAL REVENUE SERVICE	Bi-Weekly Federal Taxes	$	15,185.22
999.1102.000	TREASURER STATE OF IOWA	Bi-Weekly Payroll SIT	$	11,884.01
999.1102.000	TREASURER STATE OF IOWA	Bi-Weekly Payroll SIT	$	6,173.00
999.1103.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Social Security	$	26,633.00
999.1103.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Social Security	$	4,861.60
999.1105.000	MUNICIPAL FIRE & POLICE RETIREMENT	PRIOR MONTH MFPRSI CONTRIBUTIONS	$	29,652.83
999.1105.000	MUNICIPAL FIRE & POLICE RETIREMENT	PRIOR MONTH MFPRSI CONTRIBUTIONS	$	35,036.25
999.1105.000	MUNICIPAL FIRE & POLICE RETIREMENT	PRIOR MONTH MFPRSI CONTRIBUTIONS	$	29,684.46
999.1105.000	MUNICIPAL FIRE & POLICE RETIREMENT	PRIOR MONTH MFPRSI CONTRIBUTIONS	$	34,869.63
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	PRIOR MONTH IPERS CONTRIBUTIONS	$	33,516.68
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	PRIOR MONTH IPERS CONTRIBUTIONS	$	199.45
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	PRIOR MONTH IPERS CONTRIBUTIONS	$	5,720.30
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	PRIOR MONTH IPERS CONTRIBUTIONS	$	34,119.59
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	PRIOR MONTH IPERS CONTRIBUTIONS	$	199.45
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	PRIOR MONTH IPERS CONTRIBUTIONS	$	6,378.80
999.1106.000	IOWA PUBLIC EMPLOYEE'S RETIREMENT SYSTEM	ROUNDING	$	(0.04)
999.1107.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Medicare	$	8,559.40

999.1107.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Medicare	$	4,359.04
999.1112.000	UNITED WAY	UNITED WAY	$	700.88
999.1112.000	UNITED WAY	UNITED WAY	$	83.00
999.1112.000	UNITED WAY	UNITED WAY	$	700.88
999.1112.000	UNITED WAY	UNITED WAY	$	83.00
999.1121.000	American Education Services	PR WITHHOLDING	$	64.41
999.1121.000	COLLECTION SERVICES CENTER	CHILD SUPPORT	$	139.77
999.1121.000	COLLECTION SERVICES CENTER	CHILD SUPPORT	$	423.86
999.1121.000	COLLECTION SERVICES CENTER	CHILD SUPPORT	$	313.84
999.1121.000	COLLECTION SERVICES CENTER	CHILD SUPPORT	$	102.11
999.1121.000	COLLECTION SERVICES CENTER	CHILD SUPPORT	$	461.53
999.1121.000	Family Support Payment Center	CHILD SUPPORT	$	138.46
999.1121.000	LINN COUNTY SHERIFF	PR WITHHOLDING	$	301.02
999.1125.000	FIDELITY SECURITY LIFE INSURANCE CO	VISION INSURANCE	$	348.29
999.1125.000	FIDELITY SECURITY LIFE INSURANCE CO	VISION INSURANCE	$	107.76
999.1128.000	TOTAL ADMINISTRATIVE SERVICE CORP.	ROUNDING	$	(0.20)
999.1128.000	TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX HEALTH BENEFITS	$	5,122.01
999.1128.000	TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX HEALTH BENEFITS	$	891.63
999.1129.000	TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX DEP CARE BENEFITS	$	915.83
999.1129.000	TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX DEP CARE BENEFITS	$	276.67
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	$	683.19
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	$	4,928.23
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEFERRED COMP	$	935.10
999.1131.000	ICMA 457-Mission Square Retirement	ICMA LOAN REPAYMENT	$	352.68
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	$	230.76
999.1131.000	ICMA 457-Mission Square Retirement	ROTH < 50	$	1,589.23
999.1131.000	ICMA 457-Mission Square Retirement	ROTH > 50	$	2,661.73
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	$	1,075.00
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	$	269.23
999.1131.000	ICMA 457-Mission Square Retirement	ROTH < 50	$	1,267.28
999.1131.000	ICMA 457-Mission Square Retirement	ROTH > 50	$	875.00
999.1133.000	COLONIAL LIFE	COLONIAL LIFE INSURANCE	$	466.83
999.1133.000	COLONIAL LIFE	COLONIAL LIFE INSURANCE	$	29.26
999.1164.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$	2.84
999.1164.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$	1.07
999.1164.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$	1.12
999.1164.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$	0.80
999.1164.000	GREAT WESTERN BANK	Meals during training for Officer Garland	$	4.81
999.1164.000	GREAT WESTERN BANK	Meals during training for Officer Shelangoski	$	2.50
999.1164.000	GREAT WESTERN BANK	Meal during instructor day for Officer Shelangoski	$	0.65
999.1164.000	GREAT WESTERN BANK	Meal during instructor day for Officer Shelangoski	$	0.26
999.1166.000	Alvarez, Natalie	Reimburse for tax offset	$	133.00
999.1166.000	Camacho, Israel	Reimburse for tax offset	$	90.00
999.1166.000	Nunez Lopez, Maria G	Reimburse for tax offset	$	75.00
Payroll	Payroll	Payroll #9	$	311,104.05
TOTAL			**$**	**7,411,659.18**

BUILDING REPORT FOR THE MONTH OF APRIL 2022

MARSHALLTOWN
IOWA

PERMIT NUMBER	OWNER OF IMPROVEMENT	LOCATION OF IMPROVEMENT	TYPE OF IMPROVEMENT	NEW DWELLING	ALTER DWELLING	MINOR RES. BUILDING	COMMERCIAL IMPROVEMENT	FEE
BLDR-007496-2022	Clare Willsher	506 S 6th St	Residential Addition		$54,916.68			$668.00
BLDR-007393-2022	J.R. Cooper	1401 E Anson St	Addition to Acc Bldg.				$2,520.00	$75.00
BLDR-007460-2022	Swift Pork Company	1101 E Southridge Rd	New SF Dwelling	$198,701.61				$1,577.00
BLDR-007458-2022	Swift Pork Company	1009 E Southridge Rd	New SF Dwelling	$198,701.61				$1,577.00
BLDR-007459-2022	Swift Pork Company	1011 E Southridge Rd	New SF Dwelling	$196,495.30				$1,565.00
BLDR-007456-2022	Swift Pork Company	1007 E Southridge Rd	New SF Dwelling	$196,495.30				$1,565.00
DEMO-007506-2022	City of Marshalltown	102-110 W Main St & 15 S 1st St	Demo - Commercial					$0.00
DEMO-007507-2022	City of Marshalltown	308 S 7th Ave	Demo - SF Dwelling					$0.00
DEMO-007508-2022	City of Marshalltown	105 W Webster St	Demo - SF Dwelling					$0.00
DEMO-007509-2022	Rachel Smith	11 ValleyView Rd	Demo - Acc. Bldg.					$25.00
BLDR-007484-2022	Mike Benson	1213 W Anson St	New Acc. Bldg.			$7,000.00		$131.00
BLDR-007468-2022	Guillermo Sanchez	207 S 4th St	New Acc. Bldg.			$20,160.00		$327.00
DEMO-007550-2022	Josue Alvarez	304 Jerome St	Demo - Acc. Bldg.					$25.00
BLDR-007519-2022	Jack Tompkins	105 S 4th St	Demo Acc. Bldg. & Rebuild			$14,490.00		$268.00
BLDR-007518-2022	Alfredo Mucino	1412 W Linn St	Demo Acc. Bldg. & Rebuild			$9,240.00		$198.00
BLDR-007497-2022	Gary Kelley	114 Bohen St	New Acc. Bldg.			$27,720.00		$413.00
DEMO-007560-2022	Karla Andrews	808 N Center St	Demo - SF Dwelling					$25.00
BLDC-007596-2022	Genoa Healthcare Pharmacy	3809 S Center St	Commercial Alteration				$35,599.76	$493.00
BLDR-007425-2022	Capital Homes	2621 S 8th St	New SF Dwelling	$291,342.80				$2,632.00
BLDR-007429-2022	Orton Homes	2613 S 8th St	New SF Dwelling	$310,999.22				$2,249.00
BLDR-007426-2022	Orton Homes	2617 S 8th St	New SF Dwelling	$302,749.29				$2,201.00
BLDR- 007554-2022	Tom & Kary Welter	519 N 15th St	New Acc. Bldg.			$23,520.00		$369.00
BLDC-007599-2022	Kentucky Fried Chicken	3007 S Center St	Commercial Alteration				$137,856.60	$1,211.00
BLDC-007559-2022	MCSD	1602 S 2nd Ave	New Acc. Bldg. (Shade)				$2,400.00	$75.00
BLDR-007611-2022	Jeff Chesick	513 N 3rd St	Demo Acc. Bldg. & Rebuild			$23,520.00		$394.00
BLDR-007592-2022	Orton Homes	2625 S 8th St	New SF Dwelling	$354,348.34				$2,513.00
BLDR-007615-2022	Steve Ames	202 N 2nd Ave	Enclose Gazebo*			$12,084.00		$430.00
BLDC-007561-2022	Robert Olson	1308 S 12th Ave	New Commercial Bldg				$159,182.40	$1,343.00
			TOTALS:	**$2,049,833.47**	**$54,916.68**	**$137,734.00**	**$337,558.76**	**$22,349.00**
			TOTAL IMPROVEMENT AMOUNT:	**$2,580,042.91**				
				Units	Permits	Permits	Permits	Permits	Demo Permits
**Work started without a permit - fee is doubled*			**# OF PERMITS:**	**8**	**8**	**1**	**8**	**5**	**6**

MARSHALLTOWN
IOWA

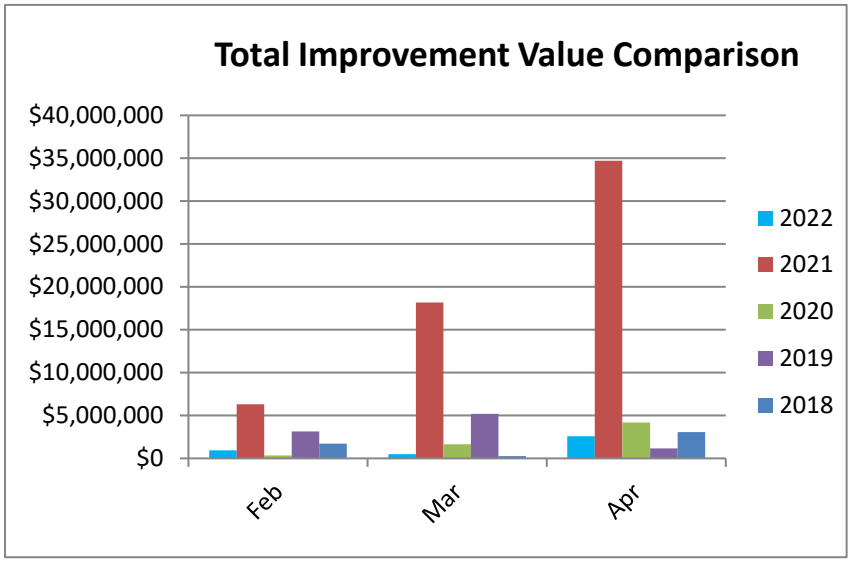
Building Division Improvement Value & Fee Summary - April 2022

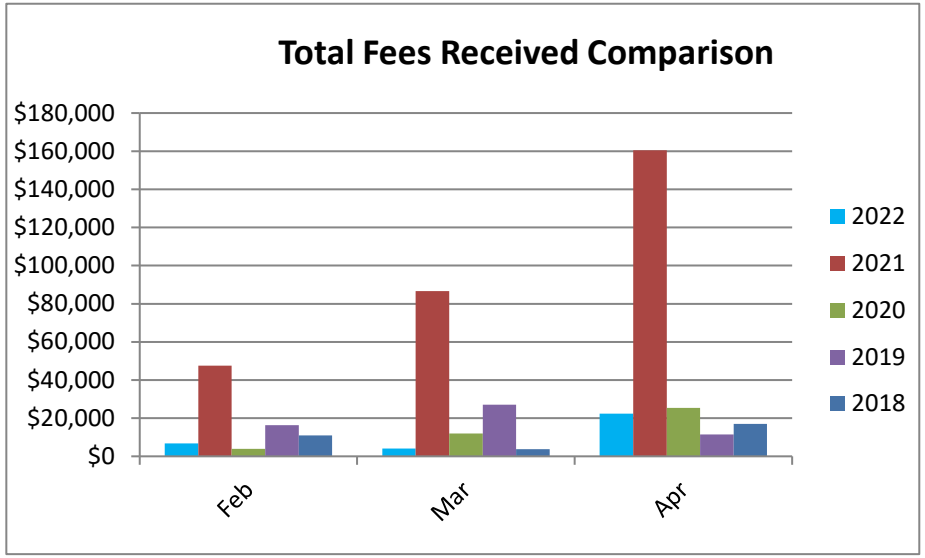
Total Improvement Value Comparison

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2022	$2,912,000	$937,862	$494,839	$2,580,043									**$6,924,745**
2021	$6,335,000	$6,324,000	$18,194,000	$34,700,000									**$65,553,000**
2020	$1,921,000	$339,000	$1,660,000	$4,186,000									**$8,106,000**
2019	$903,000	$3,132,000	$5,177,000	$1,176,000									**$10,388,000**
2018	$205,000	$1,722,000	$271,000	$3,050,000									**$5,248,000**

Total Fees Received Comparison

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2022	$13,584	$6,803	$4,081	$22,349									**$46,817**
2021	$48,028	$47,605	$86,696	$160,445									**$342,774**
2020	$11,506	$3,879	$11,942	$25,465									**$52,792**
2019	$6,828	$16,366	$27,102	$11,467									**$61,763**
2018	$1,114	$10,996	$3,815	$17,067									**$32,992**





2022-118

RESOLUTION ALLOWING OPEN CONTAINERS ON PUBLIC WAYS FOR A NEIGHBORHOOD BLOCK PARTY

WHEREAS, the City of Marshalltown Code of Ordinances 130.030(1) states that "it shall be unlawful for any person to possess an open or unsealed bottle, can, jar or other receptacle containing an alcoholic beverage on any public sidewalk, street, alley or parking lot, or within a motor vehicle; and

WHEREAS, Section 130.030(2) grants the City Council the power to grant exceptions to Section 130.030(B) for special events and activities; and

WHEREAS, Willie Spencer has requested the ability to have a neighborhood block party in the 500 block of North 1st Avenue from East Marion to East North Street on Saturday, May 14, 2022, and be able to bring your own alcoholic beverages in the barricaded area from 12:00 pm to 11:30 pm; and

WHEREAS, staff has reviewed the request and recommend approval of the special event exception for this neighborhood block party;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, that the Neighborhood Block Party in the 500 block of North 1st Avenue from East Marion to East North Street on Saturday, May 14, 2022, from 12:00 pm to 11:30 pm is granted an exemption to allow for open containers in a public way.

Passed this 9th day of May 2022 and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

Online Form Submission #2560 for Special Events Application

From : noreply@civicplus.com
Subject : Online Form Submission #2560 for Special Events Application
To : clerk@marshalltown-ia.gov

Tue, Apr 26, 2022 02:23 PM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dept Requirements:
FD - emer access
PD - N/A
PW - no requirements
Trailer $150

Special Events Application

Governor's Proclamation on Gatherings
All gathering organizers or hosts are strongly encouraged to take reasonable measures under the circumstances to ensure the health of participants and members of the public, including social distancing practices, increased hygiene practices, and other public health measures to reduce the risk of transmission of COVID-19 consistent with guidance issued by the Iowa Department of Public Health. (Issued 4/2/21)

Event planning assistance	I could use planning assistance from the Marshalltown Chamber of Commerce to help with big or small ideas or details

Do you need to rent a park shelter?
Please rent park shelters separately.

	Field not completed.
Start Date	5/14/2022
End Date	5/14/2022
Event Start and End Times	12:00 PM - 11:30 PM
Activity Name	Neighborhood Get-together
Describe event, add multiple dates and times here	Neighborhood block party Bouncy House and fun exciting games. Barbeque grill-out that will knock your socks off. Music and dancing in the street for everyone!
Desired event location	512 1/2 North1st Avenue Marshalltown, IA. North street and 1st Avenue.
Type of Event	Neighborhood block party
Park location request, if requesting a park	*Field not completed.*
Park Amenities	Park Amenities
Upload event summary, if you have one	*Field not completed.*
Upload google map of area	*Field not completed.*
Upload certificate of insurance holding the City of Marshalltown harmless. Not generally required for small events or local gatherings.	*Field not completed.*
Sponsoring Organization	*Field not completed.*
Type of Organization	Individual
Contact Name	Willie Spencer

Contact Phone	
Email	

(Section Break)

Special Events Trailer

Effective 7/1/21 the City of Marshalltown is utilizing a Special Events Trailer when barricades, cones, and channelizers are requested for use. There is a required fee of $150 for the delivery and pickup of the stocked trailer. For a fee of $300 barricades and cones can be delivered and picked up from specific locations. Keys for the trailer will be provided to the organizer prior to the event. All equipment must be returned as provided.

Are you requesting street closure?	Yes
Will you need barricades?	Yes
Do you need...	*Field not completed.*
Barricade Begin and End Time	11:00 AM - 12:30 PM
Enter number of barricades, cones, and channelizers needed:	~~3~~ 6 barricades, no cones,
Required Fee	$150 for delivery and pickup of trailer with equipment
Attach Sketch Showing Desired Traffic Control	*Field not completed.*
Barricade layout instructions	Barricade Layout (PDF)

Park trailer at corner 1st Ave & Marion on same side as 512 1/2 N. 1st Ave.

(Section Break)

Will the event allow consumption of beer, wine, or other alcoholic beverages?	No
How will alcoholic beverages be served?	Bring your own*
City areas allowing alcohol consumption with approval:	City street, alley, or sidewalk
Additional alcohol beverage comments or questions:	*Field not completed.*

The city usually requires two officers to be present at events allowing consumption of alcoholic beverages.

The minimum fee is $220 for two officers, billed for two hours. If officers are needed for more than two hours, the rate is $55 per hour per officer, or $110 per hour.

Alcohol permission. Questions? Contact the city clerk.

A Council Resolution is required to allow consumption of alcohol on public property, which includes beer gardens and street parties. A valid liquor license is required to serve or sell alcohol to the public. Alcohol licenses generally require 30-45 days to be approved, depending on the council meeting schedule.

(Section Break)

Other considerations....

Food Vendors

Food Vendors are required to have Iowa State Food Licenses. A city permit is NOT required when selling with an approved Special Event. Food trucks must be inspected by the Fire Department to ensure fire code compliance.

Inflatables

Inflatables are not provided by the city and if hired, operator must submit certificate of insurance holding the CIty of Marshalltown harmless.

Electricity

Please provide your own generator. Contact the Fire Department for safety regulations.

Park items available for rent	*Field not completed.*
Other needs?	*Field not completed.*

(Section Break)

Agreement:
The applicant hereby states that he/she is authorized to represent the above named organization and agrees to accept responsibility for payment of repair of any damages to public or private property that may be incurred due to the applicant's activities under this permit. Any amount the permit fee is in excess of the damage cost shall be refunded to the applicant. The applicant also agrees that the regulations stated herewith shall govern activities under this permit.

Dogs are prohibited at most public events and event sponsors are responsible for noting on all advertising that the event is a dog-free event if attendance is expected to exceed 100 persons.

If permit requirements are not met, including advertisement of a dog-free event, the deposit will not be returned.

Applicant's E-Signature	willie spencer
Date	4/26/2022
Regulations	Regulations for Activities Requiring Use of Public Property (PDF)
Permit Details Map	Public Use Permit Details Map (PDF)
Letter to Holders	Letter to Public Use Permit Holders (PDF)

Dog Ordinance Compliant Advertising Language:
"No Dogs Allowed at This Event by Order of the City of Marshalltown"

Resolution	Resolution Amending Resolution 2008-040 and Further Designating Public Events at Which Dogs Are Prohibited (PDF)
Ordinance	Ordinance Relating to the Prohibition of Dogs at Public Events (PDF)

Email not displaying correctly? View it in your browser.

2022-119

RESOLUTION APPROVING CITY FEE SCHEDULE

WHEREAS, the City of Marshalltown has established various fees to cover the costs of issuing permits, inspections and other direct services; and

WHEREAS, the City Clerk has prepared an Exhibit of the updated fees which is attached to this Resolution; and

WHEREAS, these fees are authorized by law and have been previously established by the City of Marshalltown; and

WHEREAS, it is appropriate to review and confirm the fees.

THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. The fees are established as shown on the attached fee Exhibit are approved.

Section 2. Any proposed changes in fees as shown by the Exhibit are further approved.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN

_____

Joel Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Alicia Hunter
DATE: April 29, 2022
RE: Revision of Fee Schedule

Policy Issue: Council approval is required for fee changes.

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Review City-Issued Licenses and Permits for necessity.

Recommendation: Update fee schedule per council discussion.

Budget Impact: N/A

Description/Background: Council approved fee revisions for the Public Use and Special Event Permit. This revision removes the $100 deposit for barricades due to the implementation of the Special Events Trailer. It also eliminates the $100 for fee for alcohol where a liquor license is not obtained. This would only occur with small scale neighborhood events which require the rental fee of the trailer.

Council also approved fee revisions for the Peddler, Solicitor, and Transient Merchants Licenses. This revision eliminates weekly, monthly, annual fees for peddlers and solicitors and changes the daily rate from $6 to $10. It also eliminates the weekly and monthly fees for transient merchants. The annual fee remains $200. If a transient merchant also operates a brick and mortar they are eligible for an annual license at a reduce annual fee of $25. The daily fee is now for operation on private or public property at $25 for 24-hours.

The schedule includes public works revisions of the discussed electrical permit fee changes along with the addition of a fee for public works to charge $75 for the delivery/pick of 1 or 2 barricades for events that do not require the use of the special events trailer.

With the previous changes to the Fire Department permit fees, there was a need to add a fee type for liquor license/mercantile inspections at $70.

Finance is also added a $30 Returned Item Overdraft Fee (NSF).

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Admin	Collections	Accounts Receivable - Admin Fee - Collection		Resolution	15.00	annual
Admin	Collections	Assessments fee general		Resolution	45.00	per property tax assessment filing for unpaid property related charges
Admin	Collections	Income/offset filing with the state (annual fee)		Resolution	15.00	per customer account processed for offset
Admin	Collections	Parking tickets overdue (annual fee) per ticket		Resolution	5.00	per ticket
Admin	FOIA	Nonroutine requests		Resolution		see policy
Admin	FOIA	Routine requests		Resolution		see policy
Admin	Lease	Parking Spaces in City Lots - policy establishing lease	Rent	Resolution	25.00	$25 per month per space for no longer than 3 year terms
Admin	Other	Alcohol >50% gross Sales	112.003	No Charge	-	food sales exceeding 60% gross sales allows minor in estab without parents
Admin	Other	Animal Rescue League - Kennel and Disposition Chgs	90.052	Ordinance	-	ARL administers
Admin	Permit	Cable Franchise Application Fee	114.002	Ordinance	100.00	
Admin	Permit	Cable Franchise Fee	114.002	Resolution	-	5% of revenue paid quarterly
Admin	Permit	Carnivals	113.006	Resolution	100.00	$100 first day, $50 additional days
Admin	Permit	Circuses Or menageries	113.002	Resolution	200.00	$200 per first day, $100 additional days
Admin	Permit	Hauler - Garbage & Refuse	50.020 - 50.026	Resolution	100.00	Annual
Admin	Permit	Hauler - Recycling	50.020 - 50.026	Resolution	25.00	Annual
Admin	Permit	Hauler - Yard Waste	50.020 - 50.026	Resolution	15.00	Annual
Admin	Permit	Junk - Dealers	117.002	Resolution	25.00	Annual
Admin	Permit	Junk - Yard	117.002	Resolution	26.00	Annual
Admin	Permit	Junk - Motor Vehicle Junk	117.020	Resolution	25.00	Annual
Admin	Permit	Junk - Scrap Metal Processor	117.002	Resolution	51.00	Annual
Admin	Permit	Junk - Wrecking Yard	117.002		55.00	Annual
Admin	Permit	License Required to Carry on Business	110.002		-	varies -

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Admin	Permit	Liquor Licensing	State N/A	State	-	Annual - see state's schedule
Admin	Permit	Pawn Broker	110.002	Resolution	100.00	Annual
Admin	Permit	Peddler or Solicitor (per person)	118.011	Resolution	10.00	Per day, per person
Admin	Permit	Tobacco/Nicotine/Vape	State N/A	State	100.00	Annual
Admin	Permit	Transient Merchant - annual	118.011	Resolution	200.00	Annual
Admin	Permit	Transient Merchant - annual (brick & mortar operation owner)			25.00	Annual
Admin	Permit	Transient Merchant - 24-hr license			25.00	Operation on private or public property
Admin	Permit	Vicious Animal	90.050	Resolution	15.00	Annual
Admin	Rent	Lease with School District	Rent	Resolution	1.00	$1.00 per year for ten years - Anson Parking Lot
Admin	Rent	Marshall County 911 Commission	Rent	Resolution	1.00	TBD ($228 per month estab 3/10/2003 Res 2003-046) - See New 28E Agreement
Admin	Rent	Marshall County Arts & Culture Alliance - ECHO	Rent	Resolution	1.00	1 per year - through 2038
Admin	Rent	Rent - Iowa River OHV Club	Rent	Resolution	1.00	1.00 per year for fifteen year lease - exp 4-25-2025
Admin	Rent	Rent - Marshalltown Football League	Rent	Resolution	1.00	1.00 per year for 3 years, payable in advance
Admin	Rent	Rent - Marshalltown Little League	Rent	Resolution	1.00	1.00 per year for 10 years
Admin	Rent	Rent - Marshalltown Softball Association	Rent	Resolution	1.00	1.00 per year for 3 years, exp 12/31/2020 softball complex
Admin	Rent	Rent - Radio Flyers	Rent	Resolution	100.00	in advance for ten years - $10 per year
Admin	Rent	Rent - American Legion	Rent	Resolution	2.50	$2.50 per year, payable in advance. Lease expires 12-15-2033
Admin	Rent	Rent - Central Iowa River Gun	Rent	Resolution	1.00	1.00 per year for 10 years
Admin	Rent	Rent - Community Theatre	Rent	Resolution	10.00	10 per year, 20 years, exp 1-1-2023
Admin	Rent	Rent - Great Western Bank - 113 E State St Parking lot 1/2	Rent	Resolution	600.00	per year
Admin	Rent	Rent - Marshall Gun Club	Rent	Resolution	75.00	$75 per acre, term of 3 years
Admin	Rent	Rent - Steve Ames - 113 E State St Parking lot 1/2	Rent	Resolution	600.00	per year

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Airport	Rent	Rent - Airport Lights	Rent	Resolution	420.00	Airport 6-1-2024
Airport	Rent	Rent - Aviation	Rent	Resolution	2,164.36	Airport 6-1-2024
Airport	Rent	Rent - Aviation Svc fee	Rent	Resolution	50.00	Airport 6-1-2024
Airport	REnt	Fixed-Base Operation Lease & Fuel Agreement	111.004	Resolution 2021-355	-	set by Management Contract
Airport	REnt	Airport Services	111-004	Resolution	-	set by Management Contract
Fire	Accident	Response Fee Non-Resident		Resolution	331.61	Hazmat fee sch - min 1 hr + materials
Fire	Accident	Response Fee Resident		Resolution	Materials	Cost of materials; over 1 hr bill 15 min increments per HAZMAT sch
Fire	Accident	Spill pad	OTHER FEES		3.50	
Fire	Accident	Oil dry	OTHER FEES		12.00	
Fire	Accident	Vehicle Leaking Fluid		Resolution	Materials	Cost of materials; over 1 hr bill 15 min increments per HAZMAT sch
Fire	HazMat	HazMat-Heavy Response Apparatus with 4 Personnel		Iowa Fire Service	331.61	per hour (minimum 1 hr, billed in 15 min increments after 1st hr)
Fire	HazMat	HazMat-Light Response Apparatus with 2 Personnel		Iowa Fire Service	264.28	per hour (minimum 1 hr, billed in 15 min increments after 1st hr)
Fire	HazMat	HazMat-Extra Response Personnel		Iowa Fire Service	25.56	per hour (minimum 1 hr, billed in 15 min increments after 1st hr)
Fire	HazMat	HazMat-Expended Materials (replacement cost including shipping)		Iowa Fire Service	cost+	actual cost, labor and shipping
Fire	HazMat	HazMat-Equipment Repair or Cleaning (cost plus labor including shipping)		Iowa Fire Service	cost+	actual cost, labor and shipping
Fire	HazMat	HazMat-Damaged Equipment/Property (replacement/repair cost including shipping		Iowa Fire Service	cost+	actual cost, labor and shipping
Fire	HazMat	HazMat-Other (Contracted services, contracted equip, evacuation of people, etc.)		Iowa Fire Service	Cost	Billed as used
Fire	IllegalBurn	Illegal Burn - 1st Offense	91.021	Resolution	110.00	
Fire	IllegalBurn	Illegal Burn - 2nd Offense	91.021	Resolution	210.00	
Fire	IllegalBurn	Illegal Burn - 3rd Offense	91.021	Resolution	310.00	
Fire	Annual Permit	Aerosol Products	IFC 105.6.1	Ordinance	65.00	
Fire	Annual Permit	Amusement Buildings	IFC 105.6.2	Ordinance	65.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Fire	Annual Permit	Assembly <50 occupants	IFC 105.6.36	ordinance	40.00	
Fire	Annual Permit	Assembly 50-100 occupants	IFC 105.6.36	Ordinance	50.00	
Fire	Annual Permit	Assembly 101-300 occupants	IFC 105.6.36	Ordinance	70.00	
Fire	Annual Permit	Assembly 301-500 occupants	IFC 105.6.36	Ordinance	90.00	
Fire	Annual Permit	Assembly 501+ occupants	IFC 105.6.36	Ordinance	110.00	
Fire	Annual Permit	Aviation Facilities	IFC 105.6.3	Ordinance	70.00	
Fire	Annual Permit	Carbon Dioxide Systems	IFC 105.6.4	Ordinance	70.00	
Fire	Annual Permit	Carnivals & Fairs	IFC 105.6.5	Ordinance	70.00	
Fire	Annual Permit	Cellulose Nitrate Film or Storage	IFC 105.6.6	Ordinance	70.00	
Fire	Annual Permit	Combustible Dust Producing Ops	IFC 105.6.7	ordinance	70.00	
Fire	Annual Permit	Combustible Fiber Storage Permit	IFC 105.6.8	Ordinance	70.00	
Fire	Annual Permit	Compressed Gases	IFC 105.6.9	Ordinance	70.00	
Fire	Annual Permit	Commercial Burn Permit	91.021	Resolution	225.00	
Fire	Annual Permit	Confined Space Response	OTHER FEES	Resolution	2,500.00	annual beginning 7/1/2011, three years
Fire	Annual Permit	Confined Space Permit- Lennox	OTHER FEES	Resolution	2,500.00	Annual
Fire	Annual Permit	Covered/Open Mall buildings	IFC 105.6.10	Ordinance	70.00	
Fire	Annual Permit	Cryogenic Fluids	IFC 105.6.11	Ordinance	70.00	
Fire	Annual Permit	Cutting/Welding	IFC 105.6.12	Ordinance	70.00	
Fire	Annual Permit	Dry Cleaning	IFC 105.6.13	Ordinance	70.00	
Fire	Annual Permit	Exhibits/Trade Shows	IFC 105.6.14	Ordinance	70.00	
Fire	Annual Permit	Explosives/Fireworks	IFC 105.6.15	Ordinance	85.00	
Fire	Annual Permit	Fire Excessive Alarm (6-9)	32.003	Ordinance	65.00	First 5 free, fee per alarm

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Fire	Annual Permit	Fire Excessive Alarm (10-14)	32.003	Ordinance	90.00	First 5 free, fee per alarm
Fire	Annual Permit	Fire Excessive Alarm (15+)	32.003	Ordinance	115.00	First 5 free, fee per alarm
Fire	Annual Permit	Fire Hydrants/Valves	IFC 105.6.16	Ordinance	70.00	
Fire	Annual Permit	Flammable/Combustible Liquids <1000 gal	IFC 105.6.17	Ordinance	70.00	
Fire	Annual Permit	Flammable/Combustible Liquids 1001-10,000 gal	IFC 105.6.17	Ordinance	90.00	
Fire	Annual Permit	Flammable/Combustible Liquids >10,001 gal	IFC 105.6.17	Ordinance	115.00	
Fire	Annual Permit	Floor Finishing >350 sq ft using class 1/2 liquids	IFC 105.6.18	Ordinance	70.00	
Fire	Annual Permit	Fruit/Crop Ripening	IFC 105.6.19	Ordinance	70.00	
Fire	Annual Permit	Fumigation/Insecticide Fogging	IFC 105.6.20	Ordinance	70.00	
Fire	Annual Permit	Hazardous Materials	IFC 105.6.21	Ordinance	80.00	
Fire	Annual Permit	HPM Facilities-Use/Storage (Hazardous Production Materials	IFC 105.6.22	Ordinance	70.00	
Fire	Annual Permit	High-Piles Storage	IFC 105.6.23	Ordinance	70.00	
Fire	Annual Permit	Hot Work Operations	IFC 105.6.24	Ordinance	70.00	
Fire	Annual Permit	Industrial Ovens	IFC 105.6.25	Ordinance	70.00	
Fire	Annual Permit	Liquid/Gas-Fueled Equipment in Assembly	IFC 105.6.27		70.00	
Fire	Annual Permit	LP Gas/Use/Storage/Dispensing <5,000 gal	IFC 105.6.28	Ordinance	70.00	
Fire	Annual Permit	LP Gas/Use/Storage/Dispensing 5-10,000 gal	IFC 105.6.28	Ordinance	90.00	
Fire	Annual Permit	LP Gas/Use/Storage/Dispensing 10,000+ gal	IFC 105.6.28	Ordinance	115.00	
Fire	Annual Permit	Lumber yard/Woodworking Plants	IFC 105.6.26	Ordinance	70.00	
Fire	Annual Permit	Magnesium Use	IFC 105.6.29	Ordinance	70.00	
Fire	Annual Permit	Misc Combustible Storage	IFC 105.6.30	Ordinance	70.00	
Fire	Annual Permit	Motor Fuel Dispensing Facilities 1-1,000 gal	IFC 105.6.31	Ordinance	70.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Fire	Annual Permit	Motor Fuel Dispensing Facilities 1,001-10,000 gal	IFC 105.6.31	Ordinance	90.00	
Fire	Annual Permit	Motor Fuel Dispensing Facilities 10,001+ gal	IFC 105.6.31	Ordinance	115.00	
Fire	Annual Permit	Open Flames & Torches	IFC 105.6.33	Ordinance	70.00	
Fire	Annual Permit	Open Flames & Candles	IFC 105.6.34	Ordinance	70.00	
Fire	Annual Permit	Organic Coatings	IFC 105.6.35	Ordinance	70.00	
Fire	Annual Permit	Pyrotechniques/Special Effects	IFC 105.6.38	Ordinance	265.00	
Fire	Annual Permit	Pyroxylin Plastics >25# storage, assembly, manufacturing	IFC 105.6.39	Ordinance	70.00	
Fire	Annual Permit	Refrigeration Equipment/Commercial	IFC 105.6.40	Ordinance	70.00	
Fire	Annual Permit	Repair Garages/Fuel Dispensing Facilities	IFC 105.6.41	Ordinance	70.00	
Fire	Annual Permit	Rooftop Heliports	IFC 105.6.42	Ordinance	70.00	
Fire	Annual Permit	Spraying and Dipping	IFC 105.6.43	Ordinance	70.00	
Fire	Annual Permit	Scrap Tire Storage	IFC105.6.44	Ordinance	70.00	
Fire	Annual Permit	Temporary Membrane/Tent Structures	IFC 105.6.45	Ordinance	70.00	
Fire	Annual Permit	Tire Rebuilding Plants	IFC 105.6.46	Ordinance	70.00	
Fire	Annual Permit	Waste Handling - wrecking & junk yards, waste handling facilities	IFC 105.6.47	Ordinance	70.00	
Fire	PlanReview	Plan Review - Alarm System		Resolution	110.00	*does not include 3rd party reviewer charges for factory, hazardous, educational, institutional, storage occupancy
Fire	PlanReview	Plan Review - Building		Resolution	110.00	
Fire	PlanReview	Plan Review - Sprinkler System		Resolution	110.00	
Fire	Biennial Permit	Commercial Space <3000 sq/ft (initial)		Resolution	100.00	
Fire	Biennial Permit	Commercial Space <3000 sq/ft (Reinspection)		Resolution	100.00	
Fire	Biennial Permit	Commercial Space 3001-6000 sq/ft (initial)		Resolution	200.00	
Fire	Biennial Permit	Commercial Space 3001-6000 sq/ft (Reinspection)		Resolution	200.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Fire	Biennial Permit	Commercial Space 6000-9000 sq/ft (initial)		Resolution	300.00	
Fire	Biennial Permit	Commercial Space 6000-9000 sq/ft (Reinspection)		Resolution	300.00	
Fire	Biennial Permit	Commercial Space 9000+ sq/ft (initial)		Resolution	400.00	
Fire	Biennial Permit	Commercial Space 9000+ sq/ft (Reinspection)		Resolution	400.00	
Housing	Building	Backflow Prevention	153.002	Ordinance	10.00	
Housing	Building	Building Investigation Fee		Resolution	-	
Housing	Building	Building Permit	Current Schedule	Resolution	-	Intl Code Council Building Valuation Data Table & Schedule
Housing	Building	Demolition Permit		Resolution	25.00	Each building
Housing	Building	Gas & Plumbing Permits - schedules of fees	115.003	Resolution	-	
Housing	Building	Plan Review Fees	151.002		-	
Housing	Building	Plumbing Permits -schedules of fees	153.002	Resolution	-	Schedule
Housing	Code Enf	Certified Mail Fee		Ordinance	cost	recoup actual cost for nuisance cleanup
Housing	Code Enf	Code Enforcement Admin Fee		Resolution	100.00	per cleanup
Housing	Code Enf	Landfill Fee - Nuisance		Ordinance	cost	recoup actual cost for nuisance cleanup
Housing	Code Enf	Nuisance Abatement Cleanup Fee		Ordinance	cost	recoup actual cost for nuisance cleanup
Housing	Code Enf	Nuisance Vehicle - Impound Fee	95.009	Resolution	cost	reasonable fee for less than 14 days storage
Housing	Code Enf	Towing Fee - Nuisance charges		Ordinance	cost	recoup actual cost for nuisance cleanup
Housing	Code Enf	Vacant Property Code Registration		Resolution	100.00	Annual Registration
Housing	Code Enf	Vacant Property Code Uninsured Property Fee		Resolution	3,000.00	
Housing	Gas	Gas Dealer		Ordinance/Resolution	-	Annual, expires 12/31
Housing	Gas	Gas Fitter		Resolution	50.00	Annual, expires 12/31
Housing	Gas	Gas Heating Contractor		Resolution	-	Annual, expires 12/31

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Housing	Gas	Gas-Utility Co Annual		Resolution	-	Annual, expires 12/31
Housing	Gas	Heating Contractor		Resolution	-	Annual, expires 12/31
Housing	Lead Program	Lead hazard Control Grant Program Subordination		Resolution	100.00	
Housing	Plumbing	JP JourneyPlumber		Resolution	-	Annual, expires 12/31
Housing	Plumbing	MP Master Plumber		Resolution	-	Annual, expires 12/31
Housing	Plumbing	PC Plumbing Contractor		Ordinance/Resolution	-	Annual, expires 12/31
Housing	Plumbing	Plumbing - Backflow Prevent		Water Works/Ordinance	10.00	Renewal
Housing	Plumbing	Plumbing Gas Fees 2012		Resolution	-	
Housing	Plumbing	Plumbing License (factory)		Resolution	25.00	Annual, expires 12/31
Housing	Plumbing	Plumbing Permits for Work	153.002	Resolution	-	See schedule
Housing	Rental	Application Fee - new rental properties		Resolution	50.00	
Housing	Rental	Assessment fee - rental housing	152.005	Resolution	25.00	per parcel item assessed to taxes
Housing	Rental	Complaint - Housing Advisory Board	152.008	Resolution	-	Per instance $100 deposit
Housing	Rental	Rental Property1-1st Unit	152.005	Resolution	40.00	
Housing	Rental	Rental Property2-2nd Unit	152.005	Resolution	32.00	
Housing	Rental	Rental Property3 3-12th units	152.005	Resolution	25.00	
Housing	Rental	Rental Property4-13 and more Units	152.005	Resolution	20.00	
Housing	Zoning	Annexation - Voluntary for non taxable property		Resolution	250.00	
Housing	Zoning	Final Subdivision Plat		Resolution	100 + 50/ac.	
Housing	Zoning	Home Occupation Special Use Permit		Resolution	50.00	
Housing	Zoning	Home Occupation Special Use Permit		Resolution	150.00	
Housing	Zoning	Ordinance change request		Resolution	500.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Housing	Zoning	Planned Unit Development Amendment (no requiring hearings)		Resolution	200.00	
Housing	Zoning	Planned Unit Development Amendment (requiring hearings)		Resolution	500.00	
Housing	Zoning	Planned Unit Development base fee		Resolution	300 + 50/ac	$300 base fee plus $50 per acre
Housing	Zoning	Rezoning Request		Resolution	500.00	
Housing	Zoning	Severance Fee		Resolution	250.00	
Housing	Zoning	Sidewalk Deferment Application	57.039	Resolution	250.00	
Housing	Zoning	Sign Permit		Resolution	50.00	
Housing	Zoning	Special Use Permit		Resolution	300.00	
Housing	Zoning	Subdivision Final Plat base fee		Resolution	100.00	
Housing	Zoning	Subdivision Final Plat per acre fee		Resolution	50.00	
Housing	Zoning	Subdivision Preliminary Plat Base fee		Resolution	250.00	
Housing	Zoning	Subdivision Preliminary Plat per acre fee		Resolution	50.00	
Housing	Zoning	Variance - any other building		Resolution	200.00	
Housing	Zoning	Variance - owner occupied dwelling		Resolution	150.00	
Housing	Zoning	Zoning Verification Letter (Multi-family, Commercial, Industrial, Non-SF)		Resolution	100.00	
Housing	Zoning	Zoning Verification Letter (Single Family Residential)		Resolution	25.00	
Parks	Aquatic	Adult/Tot Swim (T,Th, Sat) 15-pass scan card		Resolution	40.00	
Parks	Aquatic	Adult/Tot Swim (T,Th, Sat) daily		Resolution	3.00	
Parks	Aquatic	Aquatic center admission - 10-tickets sheet		Resolution	45.00	
Parks	Aquatic	Aquatic center admission - after 5 pm		Resolution	3.00	
Parks	Aquatic	Aquatic center admission - daily		Resolution	5.00	
Parks	Aquatic	Birthday Splash - 10 plus hot dog and drink		Resolution	50.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Parks	Aquatic	Birthday Splash - 10 plus pizza and drink		Resolution	60.00	
Parks	Aquatic	Birthday Splash - 10 plus small drink		Resolution	70.00	
Parks	Aquatic	Doggie Dip (per dog)		Resolution	5.00	
Parks	Aquatic	Rental - Entire aquatic center		Resolution	600.00	
Parks	Aquatic	Season Pass - 1-person		Resolution	110.00	
Parks	Aquatic	Season Pass - 2-person family		Resolution	180.00	
Parks	Aquatic	Season Pass - additional family members		Resolution	30.00	
Parks	Aquatic	Season Pass - nanny		Resolution	95.00	
Parks	Aquatic	Splash Dance		Resolution	3.00	
Parks	Aquatic	Swimming Lesson- indoor learn to swim		Resolution	40.00	
Parks	Aquatic	Swimming Lesson- indoor preschool		Resolution	40.00	
Parks	Aquatic	Swimming Lesson- outdoor learn to swim		Resolution	42.00	
Parks	Aquatic	Swimming Lesson- outdoor preschool		Resolution	32.00	
Parks	Aquatic	Water walking / lap swim - 15-pass scan card		Resolution	40.00	
Parks	Aquatic	Water walking / lap swim - daily		Resolution	3.00	
Parks	Campground	Camping - Electric only	93.001	Resolution	20.00	per day
Parks	Campground	Camping - Full Hookup	93.001	Resolution	25.00	per day
Parks	Campground	Camping - no electric	93.001	Resolution	15.00	per day
Parks	Dog Park	Dog Park Pass-Intact Animal		Resolution	25.00	ANNUAL
Parks	Dog Park	Dog Park Pass-Spayed or Neutered Animal		Resolution	20.00	ANNUAL
Parks	Memorial	Memorial Bench		Resolution	900.00	
Parks	Memorial	Memorial Plaque		Resolution	100.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Parks	Memorial	Memorial Tree		Resolution	300.00	
Parks	Shelter	Adding Alcohol to Rental		Resolution	30.00	Daily Rate
Parks	Shelter	Shelter - Anson (seasonal)		Resolution	80.00	Daily Rate
Parks	Shelter	Shelter - Riverview Community Bldg		Resolution	150.00	Daily Rate
Parks	Shelter	Shelter - Kiwanis (seasonal)		Resolution	70.00	Daily Rate
Parks	Shelter	Shelter - Riverview Log Cabin (seasonal)		Resolution	45.00	Daily Rate
Parks	Shelter	Shelter - Riverview Reunion Hall		Resolution	125.00	Daily Rate
Parks	Terrace	Tree Planting- terrace		Resolution	-	None issued - moratorium
PARKS	VMC	SUMMER BLAST			95.00	per child per week
Parks	VMC	Half Gym - 1 court (hourly/weekday)		Res 2020-360	25.00	Hourly/weekday
Parks	VMC	Half Gym - 1 court (all day/weekday)		Res 2020-360	300.00	Allday/weekday
Parks	VMC	Half Gym - 1 court (hourly/weekend)		Res 2020-360	50.00	Hourly/weekend
Parks	VMC	Half Gym - 1 court (hourly/weekend)		Res 2020-360	400.00	Allday/weekend
Parks	VMC	Whole Gym (hourly/weekday)		Res 2020-360	50.00	Hourly/weekday
Parks	VMC	Whole Gym (all day/weekday)		Res 2020-360	600.00	Allday/weekday
Parks	VMC	Whole Gym (hourly/weekend)		Res 2020-360	100.00	Hourly/weekend
Parks	VMC	Whole Gym (hourly/weekend)		Res 2020-360	800.00	Allday/weekend
Parks	VMC	Flex Rooms (hourly/weekday)		Res 2020-360	25.00	Hourly/weekday
Parks	VMC	Flex Rooms (all day/weekday)		Res 2020-360	300.00	Allday/weekday
Parks	VMC	Flex Rooms (hourly/weekend)		Res 2020-360	50.00	Hourly/weekend
Parks	VMC	Flex Rooms (hourly/weekend)		Res 2020-360	400.00	Allday/weekend
Parks	VMC	Multi-Room Discount (hourly/weekday)		Res 2020-360	5.00	Hourly/weekday

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Parks	VMC	Multi-Room Discount (all day/weekday)		Res 2020-360	50.00	Allday/weekday
Parks	VMC	Multi-Room Discount (hourly/weekend)		Res 2020-360	5.00	Hourly/weekend
Parks	VMC	Multi-Room Discount (hourly/weekend)		Res 2020-360	50.00	Allday/weekend
Parks	VMC	Conference Room (hourly/weekday)	*Free to non-profit/service clubs, M-F 7am-5pm	Res 2020-360	25.00	Hourly/weekday
Parks	VMC	Conference Room (all day/weekday)	*Free to non-profit/service clubs, M-F 7am-5pm	Res 2020-360	300.00	Allday/weekday
Parks	VMC	Conference Room(hourly/weekend)	*Free to non-profit/service clubs, M-F 7am-5pm	Res 2020-360	50.00	Hourly/weekend
Parks	VMC	Conference Room (hourly/weekend)	*Free to non-profit/service clubs, M-F 7am-5pm	Res 2020-360	400.00	Allday/weekend
Parks	VMC	Daily Drop-in Fee (Adults)		Res 2020-360	3.00	per hr
Parks	VMC	Bounce House		Res 2020-360	75.00	for 2 hours
Parks	VMC	Tournament Fee		Res 2020-360	200.00	Day
Parks	VMC	Large Event Fee (Setup, tear down, Fri setup, Sun cleanup)		Res 2020-360	600.00	per event
Parks	VMC	Deposit for all day events, large events, tournaments		Res 2020-360	500.00	
Police	Alarm	Alarm- failure to notify PD of service changes	33.024	Resolution	-	
Police	Alarm	Alarm Police - Failure to Notify PD Service Fee	33-024	Ordinance	25.00	
Police	Alarm	Alarm Police - False	33.022	Resolution	40.00	First two in calendar year are free
Police	Alarm	Malfunctioning Alarm - Service fee to disable	33.023		-	
Police	Noise Control	Noise Permit for 24 hours or less	134.006	Ordinance	25.00	Each
Police	Noise Control	Noise Permit for one to seven days	134.006	Ordinance	40.00	Each date
Police	Operations	Social Host Ordinance Enforcement fee	112.040	Ordinance	cost	Officers time on investigation
Police	Operations	X-duty Police Security Services		Resolution	55.00	per hour
Police	Operations	Towing Admin Fee		Ordinance	50.00	
Police	Parking	Parking - impounded pursuant to 72.071			50.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Police	Parking	Parking Violations	72.001	Ordinance	20.00	per ticket
Police	Parking	Parking Violations - Over 30 days	72.001	Ordinance	5.00	per ticket
Police	Parking	Parking Ticket - multiple offenses and charges	72.001, 72-002, 72.003 - 72.999	Ordinance	varies	
Police	Parking	Skof Tow Fee	72.070 - 72.0076		50.00	
Police	Records	Copying of Public Records		Resolution	-	Actual cost for providing digital media
Police	Records	Copying of Public Records		Resolution	0.25	per page (B&W)
Police	Records	Copying of Public Records		Resolution	0.50	per page (color)
Police	Records	Copying of Public Records		Resolution	1.00	per DVD/CD
Police	Records	Fingerprinting services		Resolution	20.00	No card limit, waive fee for MCSD staff
Police	Records	Local Criminal History		Resolution	13.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Kraft bag disposal	50.006	Resolution	1.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Resusable Container	50.006	Resolution	3.00	minimum
Public Works	Compost	Yard Waste and tree Debris Disposal - Car/Van/SUV	50.006	Resolution	6.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Pickup Truck Under 8' bed length	50.006	Resolution	10.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Pickup Truck 8' bed length	50.006	Resolution	15.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Pickup Truck Over 8' bed length	50.006	Resolution	20.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Dump Truck Small (1 ton)	50.006	Resolution	30.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Dump Truck Medium (single axle)	50.006	Resolution	50.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Dump Truck Large (tandem axle)	50.006	Resolution	75.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Semi-Truck & Trailer	50.006	Resolution	150.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Trailer Under 8' long	50.006	Resolution	10.00	
Public Works	Compost	Yard Waste and tree Debris Disposal - Trailer 8' to 10' long	50.006	Resolution	20.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Compost	Yard Waste and tree Debris Disposal - Trailer Over 10' long	50.006	Resolution	35.00	
Public Works	Compost	Loading Fee - Compost or Mulch/Wood Chips	50.006	Resolution	20.00	
Public Works	Compost	Sale of Compost - Reusable Container	50.006	Resolution	3.00	minimum
Public Works	Compost	Sale of Compost - Pickup Truck Under 8' bed length	50.006	Resolution	20.00	
Public Works	Compost	Sale of Compost - Pickup Truck 8' bed length	50.006	Resolution	30.00	
Public Works	Compost	Sale of Compost - Dump Truck Small (1 ton)	50.006	Resolution	50.00	
Public Works	Compost	Sale of Compost - Dump Truck Medium (single axle)	50.006	Resolution	90.00	
Public Works	Compost	Sale of Compost - Dump Truck Large (tandem axle)	50.006	Resolution	180.00	
Public Works	Compost	Sale of Mulch/Wood Chips (processed) - Reusable Container	50.006	Resolution	3.00	
Public Works	Compost	Sale of Mulch/Wood Chips (processed) - Pickup Truck 8' bed length	50.006	Resolution	30.00	
Public Works	Compost	Sale of Mulch/Wood Chips (processed) - Dump Truck Small (1 ton)	50.006	Resolution	40.00	
Public Works	Compost	Sale of Mulch/Wood Chips (processed) - Dump Truck Medium (single axle)	50.006	Resolution	80.00	
Public Works	Compost	Sale of Firewood (unprocessed) - Pickup Truck	50.006	Resolution	10.00	
Public Works	Compost	Sale of Firewood (unprocessed) - Dump Truck Small (1 ton)	50.006	Resolution	20.00	
Public Works	Compost	Sale of Firewood (unprocessed) - Dump Truck Medium (single axle)	50.006	Resolution	30.00	
Public Works	Compost	Access fee to compost in off season		Resolution	500.00	
Public Works	Electrical	New or Addition: Single-Family Residential (Whole House Inspection Lump Sum: up to 3 trips-1 temp service, 1 rough-in, 1 joint meter/final inspection, admin fee)	154.058	Resolution	125.00	
Public Works	Electrical	Modification: Single-Family Residential (Residential Base: 1 inspection trip, admin fee)	154.058	Resolution	55.00	
Public Works	Electrical	Modification: Single-Family Residential (fee per each applicable item modified or added)	154.058	Resolution	7.00	each
Public Works	Electrical	Solar: Single-Family Residential (Solar Base: simple plan review & 2 inspection trips, admin fee)	154.058	Resolution	95.00	
Public Works	Electrical	New, Major Remodel, or Addition: Multi-Family Residential, Commercial, or Industrial (MFR-C-I Base, admin fee)	154.058	Resolution	85.00	Fixture fee, electrical plan review fee additional to this fee
Public Works	Electrical	Modification: Multi-Family Residential, Commercial, or Industrial modification (MFR-C-I Base, admin fee)	154.058	Resolution	85.00	Fixture fee additional to this fee

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Electrical	Reinspection fees due to faulty construction or extra trip charges for single-family residential	154.058	Resolution	40.00	each
Public Works	Electrical	MFR-C-I Each Meter	154.058	Resolution	8.00	each
Public Works	Electrical	MFR-C-I Openings/Devices: Switches, Outlets, Fixtures (fee for each 25 rounded to the nearest whole number)	154.058	Resolution	10.00	each 25
Public Works	Electrical	MFR-C-I Fixed or Stationary Appliance	154.058	Resolution	5.00	each
Public Works	Electrical	MFR-C-I Central Air Conditioning & Motors over 1 Hp	154.058	Resolution	5.00	each
Public Works	Electrical	MFR-C-I Generators, Transformers, All Devices Rated in KVA or Watts: Sum is 0 - 5 KVA or KW	154.058	Resolution	10.00	lump sum
Public Works	Electrical	MFR-C-I Generators, Transformers, All Devices Rated in KVA or Watts: Sum is >5 - 20 KVA or KW	154.058	Resolution	15.00	lump sum
Public Works	Electrical	MFR-C-I Generators, Transformers, All Devices Rated in KVA or Watts: Sum is >20 KVA or KW	154.058	Resolution	30.00	lump sum
Public Works	Electrical	MFR-C-I Electrically Powered Outside Signs	154.058	Resolution	10.00	each
Public Works	Electrical	MFR-C-I Temporary Service	154.058	Resolution	10.00	each
Public Works	Electrical	MFR-C-I Solar Install	154.058	Resolution	50.00	each
Public Works	Electrical	MFR-C-I Maximum Fee for Each Building/Job	154.058	Resolution	915.00	max fee
Public Works	Electrical	MFR-C-I Electrical Plan Review Fee: 0 - 3,000 SF	154.058	Resolution	100.00	lump sum
Public Works	Electrical	MFR-C-I Electrical Plan Review Fee: 3,001 - 6,000 SF	154.058	Resolution	200.00	lump sum
Public Works	Electrical	MFR-C-I Electrical Plan Review Fee: 6,001 - 9,000 SF	154.058	Resolution	300.00	lump sum
Public Works	Electrical	MFR-C-I Electrical Plan Review Fee: more than 9,000 SF	154.058	Resolution	400.00	lump sum
Public Works	Electrical	MFR-C-I Electrical Plan Review Fee: extra plan review time charged by hour	154.058	Resolution	94.00	hour
Public Works	Electrical	Electrical Contractor License	154.085 - renewal 154.088	Ordinance	100.00	Annual, expires 12/31
Public Works	Electrical	Electrical exam fee	154.085	Ordinance	30.00	
Public Works	Electrical	Electrical exam fee - expedited	154.085	Ordinance	200.00	
Public Works	Electrical	Electrical License - Apprentice	154.058	Ordinance	20.00	Annual, expires 12/31
Public Works	Electrical	Electrical work by homeowner	154.058	Resolution	-	Annual, expires 12/31

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Electrical	Journeyman Electric License	154.085 - renewal 154.088	Ordinance	30.00	Annual, expires 12/31
Public Works	Electrical	Restricted Electrician	154.085 - renewal 154.088	Ordinance	70.00	Annual, expires 12/31
Public Works	Engineering	Construction Bond	57.023	Resolution	10,000.00	
Public Works	Engineering	Driveway Application Non-Standard	72.039	Resolution	31.00	EACH
Public Works	Engineering	Driveway Approach Inspection	72.039	Resolution	31.00	EACH
Public Works	Engineering	Driveway Approach Permit	72.039	Resolution	31.00	EACH
Public Works	Engineering	Driveway Approach Re-Inspection Fee	72.039	Resolution	24.00	EACH
Public Works	Engineering	Driveway Extension w/Authorization	72-039	Resolution	43.00	EACH
Public Works	Engineering	Driveway Extension w/o Authorization	72-039	Resolution	91.00	EACH
Public Works	Engineering	Entrance/Curb Cut	57.016	Resolution	24.00	EACH
Public Works	Engineering	Excavation Bond - Annual	57.023	Resolution	10,000.00	
Public Works	Engineering	Excavation Bond - Site Specific	57.023	Resolution	10,000.00	
Public Works	Engineering	Excavation Permit (Work with the ROW)	57.021	Resolution	21.00	EACH
Public Works	Engineering	Excavation Permit (Work within the ROW)	57.021	Resolution	21.00	EACH
Public Works	Engineering	Flood Plain Survey		Resolution	-	we do not perform surveys - requires licensed surveyor
Public Works	Engineering	Mailbox - max reimbursement for city-damaged post	59.007 - 59.008	Resolution	50.00	max reimb for replacement
Public Works	Engineering	Moving Building		Resolution	50.00	Each Building
Public Works	Engineering	Moving Building (loads exceeding vehicle weight limits)		Resolution	200.00	Each building
Public Works	Engineering	Public Works Sale of Asphalt Millings, per ton	OTHER FEES	Resolution	5.00	per ton
Public Works	Engineering	Sewer Cutoff			$28.00	
Public Works	Engineering	Sewer Repair			$28.00	
Public Works	Engineering	Sidewalk Inspection Fee (Full Sidewalk Construction)	57.042		41.00	EACH

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Engineering	Sidewalk Inspection Fee (Partial Construction)	57.042		31.00	EACH
Public Works	Engineering	Solid Waste Management Assessment- Commercial	51.001	Resolution	72.60	Annual - billed by waterworks
Public Works	Engineering	Solid Waste Management Assessment-Agricultural with a water meter	51.001	Resolution	8.40	Annual - billed by waterworks
Public Works	Engineering	Solid Waste Management Assessment-Industrial	51.001	Resolution	72.60	Annual - billed by waterworks
Public Works	Engineering	Solid Waste Management Assessment-Multiple Family Residential, per family unit	51.001	Resolution	8.40	Annual - billed by waterworks
Public Works	Engineering	Solid Waste Management Assessment-Single Family Residential	51.001	Resolution	8.40	Annual - billed by waterworks
Public Works	Engineering	Solid Waste Management Assessment-Trailer Court / each lot	51.001	Resolution	8.40	Annual - billed by waterworks
Public Works	Engineering	Street Patch Inspection			31.00	EACH
Public Works	Engineering	Tunneling Permit	57.017	Resolution	19.00	
Public Works	Sewer	Sewer Connection Fee(New Div)	52-007	Resolution	300.00	
Public Works	Sewer	Sewer Connection Fee(WPCP)	52-004	Resolution	3,200.00	
Public Works	Sewer	Sewer Cutoff		Resolution	28.00	
Public Works	Sewer	Sewer Repair		Resolution	28.00	
Public Works	Sewer	Sanitary Sewer Connection - after 1/1/1974	52.005	Ordinance	3,200.00	Each connection
Public Works	Sewer	Sanitary Sewer Connection - assessed	52.005	Ordinance	-	Each connection
Public Works	Sewer	Sanitary Sewer Connection - assessed - deferred	52.005	Ordinance	3,200.00	Each connection
Public Works	Sewer	Sanitary Sewer Connection - before 1/1/1974	52.005	Ordinance	-	Each connection
Public Works	Sewer	Sanitary Sewer connection fee - non assessed properties	52.005		-	
Public Works	Sewer	Sanitary Sewer Connection to existing line	52.007	Ordinanc	300.00	
Public Works	Sewer	Sanitary Sewer Utility Conn-City Constructed		Ordinance	3,200.00	Each connection
Public Works	Sewer	Sanitary Sewer Utility Conn-Developer Constructed		Ordinance	300.00	Each connection
Public Works	Sewer	Sanitary Sewer Utility Connection	52.007	Ordinance	3,200.00	Each connection

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Sewer	Sewer Deposit	52.006	Ordinance	40.00	
Public Works	Sewer	assessment of costs when required to make connection	52.004		-	
Public Works	Sewer	New Sewer Connection			28.00	EACH
Public Works	Sewer	Sewer Connection Fee(City Installed)			3,200.00	EACH
Public Works	Sewer	Sewer Connection Fee(Subdivision Installed)			300.00	EACH
Public Works	Sewer	Sewer Cutoff			28.00	EACH
Public Works	Sewer	Sewer Repair			28.00	EACH
Public Works	Sewer	Sewer Equip Chg 4" Pump (4 hour minimum)	52.074	Resolution	7.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg 6" Pump (4 hour minimum)	52.074	Resolution	13.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Air Compressor	52.074	Resolution	25.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Back Hoe	52.074	Resolution	50.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Back Hoe w/ Hammer or tamper	52.074	Resolution	65.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Concrete Saw	52.074	Resolution	45.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Dump Truck (2.5 ton)	52.074	Resolution	35.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg End loader	52.074	Resolution	65.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Hole Coring Saw	52.074	Resolution	20.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Jet Truck	52.074	Resolution	65.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Jet Vacuum truck	52.074	Resolution	90.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg One Ton Truck	52.074	Resolution	15.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Pickup Truck	52.074	Resolution	12.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Equip Chg Television truck	52.074	Resolution	90.00	Per hour. Note: All time for equipment shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Sewer Tap Charge 4" Service Lateral Connection	52.074	Resolution	136.00	(including labor, equipment & saddle)

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Sewer	Sewer Tap Charge 6" Service Lateral Connection	52.074	Resolution	157.00	(including labor, equipment & saddle)
Public Works	Sewer	Personnel Chgs Sewer Dept. Labor			36.00	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Personnel Chgs Sewer Dept. Labor Overtime			49.00	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	Sewer	Personnel Chgs Sewer Superintendent			44.00	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	Storm Sewer	COSESCO Permit - per acre plus $20 additional acre or portion thereof		Resolution	120.00	PER ACRE PLUS ADDL FEE $20 PER ACRE
Public Works	Storm Sewer	Major Erosion Control Permit	55.003-55.013	Resolution	-	based on parcel size 120 per acre + 20 addl acre
Public Works	Storm Sewer	Minor Erosion Control Permit	55.004 - 55.013	Resolution	-	based on parcel size 120 per acre + 20 addl acre
Public Works	Storm Sewer	Public Works Construction Site Erosion Sediment	55.013	Resolution	-	based on parcel size 120 per acre + 20 addl acre
Public Works	Storm Sewer	Storm Sewer Revision		Resolution	28.00	Each
Public Works	Storm Sewer	Storm Water Rate	53.006 - 55.013	Ordinance	4.00	per ERU (2800 aq ft)
Public Works	Storm Sewer	Storm water runoff - detention exception fee: commercial	53.026	Ordinance	13,500.00	per acre, $.90 runoff coefficient
Public Works	Storm Sewer	Storm water runoff - detention exception fee: industrial	53.026	Ordinance	12,000.00	per acre, $.80 runoff coefficient
Public Works	Storm Sewer	Storm water runoff - detention exception fee: low density and single/two family residential	53.026	Ordinance	6,000.00	per acre, $.40 runoff coefficient
Public Works	Storm Sewer	Storm water runoff - medium-high-density and multi-family residential	53.026	Ordinance	12,000.00	per acre, $.80 runoff coefficient
Public Works	Storm Sewer	Storm Water Utility rate - exemption and credit application fee	53.024	Resolution	100.00	100 for non residential and $50 for residential properties
Public Works	Storm Sewer	SUDAS - in lieu of Detention-Commercial	53.026	Ordinance	13,500.00	per acre
Public Works	Storm Sewer	SUDAS - in lieu of Detention-Industrial	53.026	Ordinance	12,000.00	per acre
Public Works	Storm Sewer	SUDAS - in lieu of Detention-Low Density	53.026	Ordinance	6,000.00	per acre
Public Works	Storm Sewer	SUDAS - in lieu of Detention-Medium High	53.026	Ordinance	12,000.00	per acre
Public Works	Storm Sewer	Utility Rate - per ERU	53.006	Ordinance	4.00	per month
Public Works	Street	Special Events Trailer (delivery/pickup)	130.003	Ordinance	150.00	
Public Works	Street	Special Events (delivery/pickup 2+ barricades at specific locations)	130.003	Ordinance	300.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	Street	Special Events (delivery/pickup 1 or 2 barricades)	130.003	Ordinance	75.00	
Public Works	WPCP	Annual Inspection	52.074	Resolution	47.00	per hour
Public Works	WPCP	Copies			0.25	per policy
Public Works	WPCP	Copies - min 15 minutes labor charge			-	per policy
Public Works	WPCP	Digestion (Emergency)	52.074	Resolution	20.00	
Public Works	WPCP	Digestion Fee (Metals)	52.074	Resolution	10.00	
Public Works	WPCP	Hourly pH	52.074	Resolution	15.00	
Public Works	WPCP	Investigation of Accidential Discharges/Slug Discharge	52.074	Resolution	62.00	per hour
Public Works	WPCP	Lab Analysis Alkalinity			9.00	
Public Works	WPCP	Lab Analysis Ammonia Nitrogen			12.00	
Public Works	WPCP	Lab Analysis Arsenic Furnace			19.00	
Public Works	WPCP	Lab Analysis BOD/CBOD			18.00	
Public Works	WPCP	Lab Analysis Cadmium Flame			12.00	
Public Works	WPCP	Lab Analysis Cadmium Furnace			19.00	
Public Works	WPCP	Lab Analysis Chromium (Hexavalent)			12.00	
Public Works	WPCP	Lab Analysis Chromium (Total) Flame			12.00	
Public Works	WPCP	Lab Analysis Chromium (Total) Furnace			19.00	
Public Works	WPCP	Lab Analysis COD			15.00	
Public Works	WPCP	Lab Analysis Copper Flame			12.00	
Public Works	WPCP	Lab Analysis Cyanide			28.00	
Public Works	WPCP	Lab Analysis Hach TKN			12.00	
Public Works	WPCP	Lab Analysis Lead Flame			12.00	

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	WPCP	Lab Analysis Molybdenum			19.00	
Public Works	WPCP	Lab Analysis Nickel Flame			12.00	
Public Works	WPCP	Lab Analysis Nitrogen (Nitrate)			13.00	
Public Works	WPCP	Lab Analysis Oil & Grease			15.00	
Public Works	WPCP	Lab Analysis pH			5.00	
Public Works	WPCP	Lab Analysis Potassium			12.00	
Public Works	WPCP	Lab Analysis Selenium			19.00	
Public Works	WPCP	Lab Analysis Settleable Solids			7.00	
Public Works	WPCP	Lab Analysis Silver Flame			12.00	
Public Works	WPCP	Lab Analysis TKN EPA Method			25.00	
Public Works	WPCP	Lab Analysis Total Phosphorus			14.00	
Public Works	WPCP	Lab Analysis Total Solids			9.00	
Public Works	WPCP	Lab Analysis Total Suspended Solids (TSS)			9.00	
Public Works	WPCP	Lab Analysis Total Volatile Solids			9.00	
Public Works	WPCP	Lab Analysis Vol. Suspended Solids			9.00	
Public Works	WPCP	Lab Analysis Volatile Acids			15.00	
Public Works	WPCP	Lab Analysis Zinc Flame			12.00	
Public Works	WPCP	Monthly Billing for Lab Analysis			10.00	per month
Public Works	WPCP	Mudpit Facility Registration			100.00	Annual
Public Works	WPCP	Personnel Charges - Administrative Secretary			39.18	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	WPCP	Personnel Charges - Director			65.48	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	WPCP	Personnel Charges - Lab Chemist			47.75	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.

Dept	Div.	License or Permit Type	Code Section	How Fee Set	Fee	License Term / per unit charge
Public Works	WPCP	Personnel Charges - Plant Maintenance Overtime			58.30	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	WPCP	Personnel Charges - Plant Maintenance Personnel			44.96	Per hour. Note: All time for personnel shall be charged a minimum of one hour unless otherwise noted.
Public Works	WPCP	Sample Handling	52.074	Resolution	20.00	
Public Works	WPCP	Sampling Equipment / per day	52.074	Resolution	40.00	per day
Public Works	WPCP	Waste Hauler	52.046	Ordinance	50.00	Annual - per vehicle
Public Works	WPCP	Waste Water Appeal Filing Fee	52.074		100.00	

2022-

RESOLUTION APPROVING CONTRACT CHANGE ORDER #1 FOR THE 2020 ADA SIDEWALK REPAIR PROJECT #SDW20001, AN INCREASE OF $15,680.97

WHEREAS, the City of Marshalltown, Iowa, has heretofore entered into a contract with Pillar, Inc., for the labor and material for the 2020 ADA Sidewalk Repair Project #SDW20001,

WHEREAS, an increase is requested for items to complete the project.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. That the contract Change Order #1 for the 2020 ADA Sidewalk Repair Project, in the increased amount of $15,680.97 is hereby accepted and approved.

Passed this 9th day of May 2022, and signed this _____ day of May, 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: May 9, 2022
RE: ADA Sidewalk Project – Change Order #1, SDW 20-001

Policy Issue:
Change orders must be approved by City Council if the change order increases the cost of the project by more than 10%.

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☒ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action:
Goal 2: Objective 2 – Design and construct capital projects which enhance the aesthetics of the community & Goal 3: Objective 2: Develop comprehensive plans for City infrastructure and improvements.

Recommendation:
Staff recommends approval of Change Order #1.

Budget Impact:
The project is funded through the City's Street Improvement Program with funds coming from budgeted FY22 & FY23. Revenue sources for the City's Street Improvement Program that are being used for this project are Fund 360 (2019 GO Bond) and Fund 363 (2021 GO Bond). The City's Street Improvement Program has sufficient funds to accommodate this increase.

Description/Background:
This change order adjusts quantities to account for field changes. Several of the sidewalk areas required additional R&R to get tied into good pavement and bring into ADA compliance. This change order also includes an increase as a result of discovering a large void that was discovered under the south abutment on the 3rd/6th Street bridge when sidewalk was removed. This void was filled with 8 CY of flowable mortar to protect the bridge abutment moving forward. We investigated the cause of the void and it appears is resulted from a bad expansion joint that allowed stormwater to enter. This joint was previously repaired; however, the void was not fully evident until the sidewalk work exposed the area.

Attachments: Tabulations of Proposals & Memo from 03/28/22 Council

i:\public works\council items\2022\ada sidewalk repair\memo - ada sidewalk repair_sdw 20 001_co 1.docx

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

CHANGE ORDER NO.: 1

Owner:	City of Marshalltown	Owner's Project No.:	SDW20-001
Engineer:	City of Marshalltown	Engineer's Project No.:	SDW20-001
Contractor:	Pillar, Inc.	Contractor's Project No.:	-
Project:	2020 ADA Sidewalk Repair		
Contract Name:	Base Bid		
Date Issued:	4/29/2022	Effective Date of Change Order:	5/9/2022

The Contract is modified as follows upon execution of this Change Order:
Description:

Adjustment of quantities to match in field as constructed quantities. Adjustments to quantities were made to make repairs due to existing conditions. Areas had deteriorated since original 2020 estimates and needed to be adjusted in the field. Also included an additional item for flowable mortar to be placed under the south abutment to the 3rd/6th Street bridge. A large void was uncovered when the sidewalk was removed. A total of 8 CY was needed to fill the void.

Attachments:

See attached summary

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**	
Original Contract Price:	**Original Contract Times:**	
	Substantial Completion:	May 15, 2022
$ 128,798.06	Ready for final payment:	June 15, 2022
[Increase] [Decrease] from previously approved Change Orders No. 0 to No. **0**:	**[Increase] [Decrease] from previously approved Change Orders No.0 to No. 0:**	
	Substantial Completion:	No Change
$ 0.00	Ready for final payment:	No Change
Contract Price prior to this Change Order:	**Contract Times prior to this Change Order:**	
	Substantial Completion:	May 15, 2022
$ 128,798.06	Ready for final payment:	June 15, 2022
[Increase] ~~**[Decrease]**~~ this Change Order:	**[Increase] [Decrease]** this Change Order:	
	Substantial Completion:	No Change
$ 15,680.97	Ready for final payment:	No Change
Contract Price incorporating this Change Order:	**Contract Times with all approved Change Orders:**	
	Substantial Completion:	May 15, 2022
$ 144,479.03	Ready for final payment:	June 15, 2022

Recommended by Engineer		**Accepted by Contractor**	
By:		**By:**	Matt Vlexas
Title:		**Title:**	C.E.O
Date:		**Date:**	4/29/2022

Authorized by Owner

By:	
Title:	Mayor
Date:	5/9/2022

Owner: City of Marshalltown
Engineer: City of Marshalltown
Contractor: Pillar, Inc.
Project: 2020 ADA Sidewalk Repair
Contract: Base Bid
Change Order No.: 1

Owner's Project No.: SDW20-001
Engineer's Project No.: SDW20-001
Contractor's Project No.: -

Bid Item No.	Description	Contract Information				Work Completed		Quantity and Value of	
		Item Quantity	Units	Unit Price	Value of Bid Item	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date	Change Order Quantity	Change Order Value
Original Contract									
1	Excavation, Class 13	145.00	CuYd	20.00	$2,900.00	133.15	$2,663.00	**(11.85)**	**($237.00)**
2	Subgrade Preparation	1,078.00	SqYd	7.00	$7,546.00	1,158.08	$8,106.56	**80.08**	**$560.56**
3	Subbase, Modified (Type)	1,078.00	SqYd	8.00	$8,624.00	1,158.08	$9,264.64	**80.08**	**$640.64**
4	Pavement PCC, 7" (Fillets)	169.70	SqYd	63.59	$10,791.22	101.10	$6,428.95	**(68.60)**	**($4,362.27)**
5	Curb and Gutter, 30" (Width), 7" (Thickness)	225.50	LF	48.43	$10,920.97	448.00	$21,696.64	**222.50**	**$10,775.68**
6	Removal of Sidewalk	715.20	SqYd	8.00	$5,721.60	821.40	$6,571.20	**106.20**	**$849.60**
7	Sidewalk, PCC 6"	262.60	SqYd	60.22	$15,813.77	252.32	$15,194.71	**(10.28)**	**($619.06)**
8	Sidewalk, PCC 4"	583.40	SqYd	48.97	$28,569.10	673.86	$32,998.92	**90.46**	**$4,429.83**
9	Detectable Warning	248.00	SqFt	40.00	$9,920.00	239.00	$9,560.00	**(9.00)**	**($360.00)**
10	Pavement Removal	169.70	SqYd	12.00	$2,036.40	108.70	$1,304.40	**(61.00)**	**($732.00)**
11	Curb and Gutter Removal	225.50	LF	10.00	$2,255.00	419.00	$4,190.00	**193.50**	**$1,935.00**
CO-1-1	Flowable Mortar for Void Under Bridge	-	CY	350.00	-	8.00	$2,800.00	**8.00**	**$2,800.00**
				Contract Totals	**$ 128,798.06**		**$ 141,679.02**		**$15,680.97**

2022-121

RESOLUTION TO NAME DEPOSITORIES, ESTABLISH MAXIMUM DEPOSIT AMOUNTS, AND IDENTIFY POSITIONS AUTHORIZED TO CONDUCT BUSINESS ON BEHALF OF THE CITY OF MARSHALLTOWN

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. That the City Council of Marshalltown, Iowa does hereby name the following as official depositories for City funds and sets the maximum amount of deposit opposite the name of each institution **effective May 23, 2022**:

DEPOSITORY NAME	MAXIMUM DEPOSIT
First Interstate Bank, Marshalltown, IA	$70,000,000
Home Federal Savings Bank, Marshalltown, IA	$25,000,000
US Bank, Marshalltown, IA	$25,000,000
Wells Fargo, Marshalltown, IA	$25,000,000
Pinnacle Bank, Marshalltown, IA	$25,000,000
Farmers Savings Bank, Marshalltown, IA	$25,000,000
United Bank & Trust, Marshalltown, IA	$25,000,000
Citizens Savings Bank, Marshalltown, IA	$25,000,000
Central State Bank, State Center, IA	$25,000,000
GNB Bank, Marshalltown, IA	$25,000,000
MidWestOne Bank, Melbourne & Conrad, IA	$25,000,000

Section 2. That the City Council of Marshalltown, Iowa does hereby name the following positions as having authority to invest funds: City Administrator, City Treasurer, City Accounting Manager.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Diana Steiner, Finance Director
DATE: May 4, 2022
RE: Resolution to Update Depositories

Policy Issue:

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Maintain a financially healthy organization

Recommendation: Staff recommend approving the updated Resolution to Name Depositories, Establish Maximum Deposit Amounts, and Identify Positions Authorized to Conduct Business on Behalf of the City of Marshalltown

Budget Impact: None

Description/Background: Great Western Bank will become First Interstate Bank on May 23, 2022. Therefore, the resolution to name depositories needed to be updated. In addition, we are requesting to increase the limit at that bank from $65 million to $70 million. When the semi-annual property tax dollars were received from the County April 15th, we were very close to the $65 million limit. The $25 million limit at the other banks can remain the same and may be used for Certificates of Deposits (CDs) when the CD rates exceed our checking account interest rates. As part of our audit, bank balances are reviewed to ensure we are within our Council approved limits.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

2022-122

RESOLUTION REPEALING RESOLUTION 2008-090 DESIGNATING PUBLIC EVENTS AT WHICH DOGS ARE PROHIBITED

WHEREAS, the City Council of the City of Marshalltown adopted Resolution 2008-090 on June 23, 2008, which set forth public events which dogs would be prohibited from, pending the adoption of an ordinance which occurred in 2009; and

WHEREAS, the current City Council has reviewed Chapter 95 of the Code of Ordinances and determined that a prohibition of dogs at public events is no longer warranted; and

WHEREAS, the need to identify events at which dogs are prohibited is moot once the ban is formally removed; and

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, that Resolution 2008-090 and any other conflicting resolutions are hereby repealed.

Passed this 9th day of May 2022, and signed this ____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Michael W. Tupper, Chief of Police
DATE: April 20, 2022
RE: Dogs At Public Events

Policy Issue: Council approval is required for resolution and ordinance revision.

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 1: Review policies, procedures, and ordinances for updates.

Recommendation: Staff recommends repealing Resolution 2008-090 Designating Public Events at Which Dogs are Prohibited and repealing Code of Ordinance section 90.036 Dogs at Public Events.

Budget Impact: N/A

Description/Background: In 2008 the City Council implemented an ordinance prohibiting dogs from the immediate vicinity of certain public events in the city. A resolution was then adopted establishing the specific events they were prohibited at.

Since 2008, communities throughout Central Iowa have adopted more lenient rules for public events as it relates to dogs being allowed to be present at public events while under the supervision of the pet owner. The current rule in Marshalltown is an outdated practice and has become difficult to enforce.

The use of service animals is also more common today than in 2008. Consequently, the current rule leads to confusion. We should not keep service dogs out of a public event. When people see a service dog, they may not understand the purpose of the service animal and they assume law enforcement is either ignoring the rule or picking and choosing who can or cannot have a dog at a public event.

Whether dogs are allowed at public events or not is not a matter of public safety and should not be a concern of government requiring police intervention. Asking law enforcement to enforce these minor rules is a poor use of law enforcement resources and can diminish the relationship law enforcement has with community members. Enforcement of these minor rules comes off as trivial and can lead to unnecessary confrontation between police and the community. There are already ordinances on the books that require dog owners to have their animal under control and on a leash. Further government restriction is unnecessary.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

For these reasons, staff recommends repealing the ordinance and resolution and allowing event organizers to determine if dogs are allowed at an event. The event organizer would then be responsible for enforcement.

Alliant Energy

TREET LIGHTING RE OLUTION

he following Resolution _____ was adopted by the City Council of the City of

_____ at a meeting held on _____ , 20 _____ .

Be it resolved by the City Council of the City of _____ , that Alliant Energy Inc. is hereby directed to make the following changes to the existing system, at the locations described below (or shown on an attached map made a part of this Resolution) according to the terms expressed in the IPL Tariff regarding street lights:

NEW INSTALLATION OR CHANGES IN EXISTING SYSTEM					
ADD NUMBER	DELETE NUMBER	WATTAGE	STYLE OF LUMINAIRE	TYPE AND HEIGHT OF POLE	WIRING *(check one)*
1. 2		45	LED	35- WOOD	❐ OH ☒ UG
2.					❐ OH ❐ UG
3.					❐ OH ❐ UG

LOCATION OF NEW INSTALLATION OR CHANGES
1. Knollway Dr and Woodside Dr
2. west end of Woodside Dr
3.

City Official _____

declared said Resolution duly passed and adopted the _____

day of _____ , 20 _____ .

Attest _____

Title _____

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: May 9, 2022
RE: Alliant Street Lighting – Glenwood Park 7th Addition

Policy Issue:

☒ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 4 – Proactively prepare for development of all types

Recommendation: Staff recommends approving resolution for street lighting.

Budget Impact:

In accordance with City Ordinance, City will assume responsibility for street light monthly cost which is funded through Road Use Tax dollars.

Description/Background:

A housing development is under construction in the southwest portion of town. The development is installing an extension of Knollway Drive to W Merle Hibbs Boulevard and also a Woodside Drive dead end. Street lights are proposed at the dead end of Woodside Drive and the intersection of Knollway Drive and Woodside Drive (exhibit attached).

Cost of installation of street lighting is being covered by the Developer in the amount of $1,175.42.

Attachments: Exhibit – Glenwood Park 7th Addition Street Light Install exhibit.

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CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

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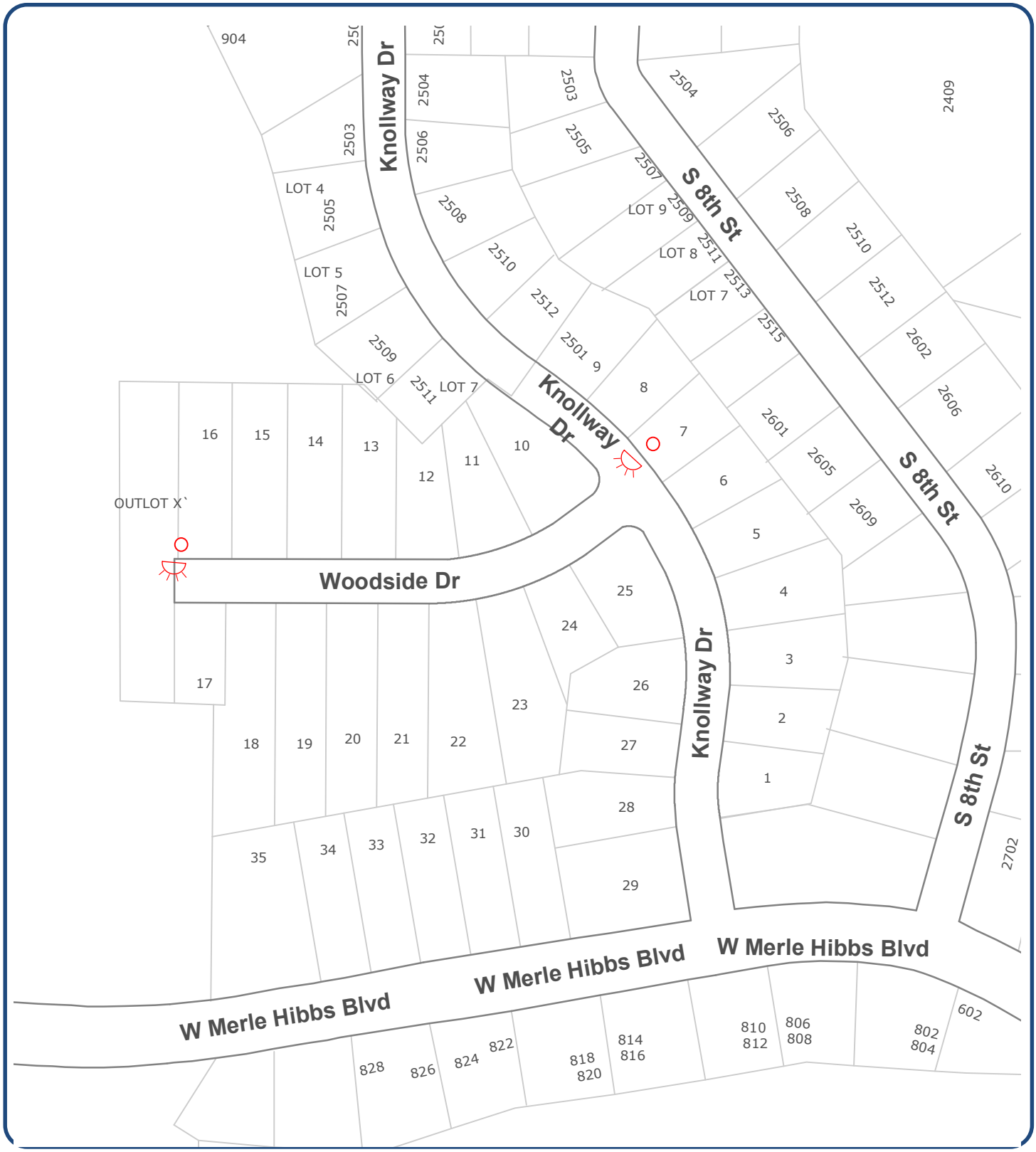

Alliant Energy Confidential
Classification: Confidential
1:2,250

GLENWOOD PARK 7TH ADDITION
STREET LIGHT INSTALL

Alliant Energy

2022-124

RESOLUTION APPROVING AMENDMENT 2 TO THE PROFESSIONAL SERVICES AGREEMENT FOR THE IEDA DOWNTOWN REVITALIZATION GRANT (DTR), WITH RDG IA INC, IN THE AMOUNT OF $4,850.00

WHEREAS the City of Marshalltown, Iowa, was awarded an Iowa Economic Development Authority (IEDA) Downtown Revitalization Program (DTR) grant, which requires plans to be developed by an Architect; and

WHEREAS the City went through a request for proposal process in preparing the grant application and selected RDG IA Inc. d/b/a/ RDG Planning & Design (RDG) to prepare the application and if awarded complete the plans for the project; and

WHEREAS the RDG has requested an amendment to the contract to include additional structural engineer review services in the amount of $4,850.00; and

WHEREAS the City Council has reviewed the proposed amendment and found it to be in the best interest of the City of Marshalltown.

NOW, THEREFORE BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. That Amendment 2 to the contract with RDG for the IEDA DTR Grant Project, to include the structural engineer review services, in the amount of $4,850.00, is hereby accepted and approved.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Michelle Spohnheimer, Housing & Community Development Director
DATE: 05/04/2022
RE: DTR Contract Amendment with RDG Planning & Design, Inc.

Policy Issue:

☒ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action:

- *Goal 1: Objective 1: Support the Marshalltown CBD and development in the Downtown – Administer the Downtown Revitalization Grant.* RDG is the contracted architect for the project and structural engineering services are additional services.

Recommendation: Staff is recommending approval of this Amendment 2 to the contract with RDG to provide for the necessary additional structural engineering review and plan preparation.

Budget Impact: The additional expenses are estimated to be $4,850 and are included in the grant budget.

Description/Background: RDG has been finalizing plans and structural engineering review was required at four of the properties involved in the project.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

AIA® Document G802™– 2017

Amendment to the Professional Services Agreement

PROJECT: *(name and address)*
Downtown Façade Improvements
Marshalltown, IA

AGREEMENT INFORMATION:
Date: .....November 1, 2021
RDG Project Number: R3005.009.00

AMENDMENT INFORMATION:
Amendment Number: 2
Date: .....April 25, 2022

OWNER: *(name and address)*
City of Marshalltown
24 North Center Street
Marshalltown, IA 50158
www.marshalltown-ia.gov

ARCHITECT: *(name and address)*
RDG Planning & Design, Inc.
301 Grand Avenue
Des Moines, IA 50309-1718
www.rdgusa.com

The Owner and Architect amend the Agreement as follows:

1. Structural Design. Add structural design as per the following scope:
   - .1 Services to be performed by Structural Engineer subconsultant:

     Tometich Engineering.
   - .2 List of buildings to be included and limited to:
     - .1 Building #4: 19 West Main Street
     - .2 Building #5: 21 West Main Street
     - .3 Building #6: 23 West Main Street
   - .3 Deliverables will be incorporated into the bidding documents, and include drawings, notes, and specifications as appropriate to illustrate and communicate the scope of work related to:
     - .1 Roof structure and roof sheathing repairs and replacement: Building #5.
     - .2 Exterior wall stabilization: Buildings #4, #5, and #6.
2. Exclusions:
   - .1 Material(s) testing, including but not limited to wood, steel, masonry, mortar, terra cotta, concrete.
   - .2 Destructive testing(s) of existing condition(s).
   - .3 Construction Contract Administration phase services requiring the consultation, direction, analysis, engineering, or other advice, or supplemental drawings and specifications, or responses to requests for information, submittal review, attending construction meetings, or performing site visits by the Structural Engineer. (These services may be added as Additional Services upon written request.)
3. Other Conditions:
   - .1 City will schedule, coordinate, and facilitate access (into and on top of the buildings) as required and necessary with each of the building owners, to allow additional observations, if necessary, to be conducted. All building(s) will be visited during the same site visit (one day).
   - .2 As of January 1st, 2022, RDG IA Inc and RDG Schutte Wilscam Birge, General Corporation have merged to form RDG Planning & Design, Inc., an Iowa corporation. The Owner hereby acknowledges that the Agreement will continue in full force and effect and will be on the same terms as were in effect prior to this merger.

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:

Basic Services Compensation as per original Agreement AIA-B101	$	120,000.00
Amendment No. 1 (structural evaluation)	$	5,375.00
Amendment No. 2 (structural design)	$	4,850.00
Total Amended Compensation	$	130,225.00

Schedule Adjustment:

Not applicable.

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SIGNATURES:

RDG Planning & Design, Inc.	City of Marshalltown, Iowa
ARCHITECT *(Firm name)*	**OWNER** *(Firm name)*
SIGNATURE	**SIGNATURE**
Philip A. Hodgin, AIA, Principal	Mayor or Designee
PRINTED NAME AND TITLE	**PRINTED NAME AND TITLE**
April 25, 2022	
DATE	**DATE**

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2022-125

RESOLUTION PLEDGING $250,000 TO TRAILS INC. FOR THE DESTINATION IOWA PROJECT APPLICATION FOR THE IOWA RIVER'S EDGE TRAIL

WHEREAS, Trails Inc. is a 501(c)3 non-profit that is working to complete the connection of the Iowa River's Edge Trail in Marshall County, to create a 34-mile trail connecting Steamboat Rock in Hardin County to Marshalltown; and

WHEREAS, the State of Iowa has recently announced the Destination Iowa grant program, which provides 40 percent funding for outdoor tourism projects, including regional trail connection projects; and

WHEREAS, Trails Inc. intends to apply for funding for the next phase of work which includes bridges 2, 3, 4, and 5 and the paving between the bridges; and

WHEREAS, Trails Inc. is required to show 60 percent funding for the project is pledged or secured;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, that a pledge of $250,000 is hereby committed to Trails Inc. for the Destination Iowa grant project application; and

BE IT FURTHER RESOLVED, should the grant be received and the pledge realized, the $250,000 is to come from the Council-designated Local Option Sales Tax.

Passed this 9th day of May 2022, and signed this ____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Jessica Kinser, City Administrator
DATE: April 21, 2022
RE: Destination Iowa Grant- Trails Inc.

Policy Issue: Council must approve all uses of Council-designated Local Option Sales Tax by a resolution

☐ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☒ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 2: Partner with Trails Inc. on trail-related issues-- Complete the bridge 2 to 5 replacement; Identify outside funding sources to support Trails Inc.

Recommendation: To bring forward a resolution pledging $250,000 in Council-designated LOST to the May 9th meeting to support Trails Inc.'s Destination Iowa grant application

Budget Impact: $250,000 in Council-designated LOST

Description/Background: The Governor has allocated $100 million in State ARPA funds to help support tourism and attraction in Iowa. There are four funding pots, with $80 million being allocated to economic development, outdoor tourism, and tourism attraction. Trails Inc./City of Marshalltown currently have $550,000 to fund the paving of approximately 1.8 miles of the River's Edge Trail between bridges 2 and 5, which are set for replacement in 2023. The grant requires 60% of funding secured in order to apply for the remaining 40%. The cost estimate is being revisited (handed out at meeting), and is expected to show a $1.4 million project cost, which means Trails Inc. needs an additonal $290,000 to reach the 60% mark. The recommendation is to pledge $250,000 in Council-designated LOST to Trails Inc., with Trails Inc. pledging $40,000 (or whatever remains of the cost estimate) to be able to apply for a $560,000 grant.

The City was recently informed that we would not have to contribute any local funds to our derecho FEMA claim. We had earmarked $300,000 for this in the Council-designated LOST. An updated spreadsheet of LOST is attached to show where we are at today with the additional recent commitments the Council has made. We also recently used $250,000 of LOST to fund the MACC for the CAT grant application, so this request is consistent with others.

The City is not going to be the applicant for Destination Iowa for this project, as we are looking at the fourth funding pool as potentially providing the biggest catalyst for the community. The Creative Placemaking allocation is $20 million and will be treated as a pilot program to fund 2-3 cities, one of

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

which will be rural and one urban. These funds are to be directed to transformational projects in a specific location within a community. Based on our population, we have to show $10 million of public and private investment. The best location in Marshalltown for this application is the Linn Creek District. In addition to the ongoing work at the MACC and the Martha Ellen Tye Theater, the City is planning a trail and bridge, trail head, and splash pad within fiscal years 2023 and 2024. The application for Creative Placemaking has not been posted, but is expected to be due in the summer 2022. Please anticipate a future conversation about this topic.

2022-126

RESOLUTION AUTHORIZING THE REQUEST OF CERTAIN DELINQUENT PROPERTIES BE DESIGNATED FOR THE 2022 PUBLIC NUISANCE TAX SALE

WHEREAS, there are numerous parcels of real property within the City of Marshalltown (the "City") with delinquent taxes, which will have tax certificates offered for sale as part of the annual tax sale conducted by the Marshall County Treasurer; and

WHEREAS, these parcels have been abandoned, are assessed as residential property or as commercial multi-family housing property, is, or is likely to become, a public nuisance, and each parcel is suitable for use as housing following rehabilitation; and

WHEREAS, Iowa Code Chapter 446.19B requires that the City designate such properties on or before May 15th of each year; and

WHEREAS, the City identified certain parcels with unpaid taxes as ones which are abandoned but which there was a desire to rehabilitate or demolish the structures on the property as part of the public nuisance tax sale on June 20, 2022;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, the following properties are requested by the Marshall County Treasurer to be listed on the Public Nuisance Tax Sale, assuming current year taxes and other assessments remain unpaid at the time of the tax sale:

Parcel Number	Address
8418-26-402-015	501 North 1st Avenue
8418-34-132-006	1316 West Linn Street
8418-26-430-018	406 Lee Street
8418-34-279-017	401 South 6th Street
8418-34-277-028	617 West Nevada Street
8418-25-378-004	211 North 10th Avenue

BE IT FURTHER RESOLVED, all parties interested in the potential purchase and rehabilitation or demolition of one of these properties must have signed a rehabilitation agreement with the City of Marshalltown prior to the Public Nuisance Tax Sale;

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Jessica Kinser, City Administrator
DATE: May 5, 2022
RE: Public Nuisance Tax Sale

Policy Issue: Resolution is required to request properties be placed on the pubic nuisance tax sale

☒ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☒ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Goal 1, Objective 1: Eliminate blight throughout the community
Goal 4, Objective 3: Work with other entities on partnerships which benefit the community - partner with the County Treasurer on public nuisance properties reuse

Recommendation: To approve the resolution as proposed

Budget Impact: No cost to designate the properties; if the tax certificates do not sell and become County-held tax certificates, there is a $10 assignment fee per certificate.

Description/Background: Each year the County Treasurer holds the Tax Sale on the third Monday in June. Iowa Code 446.19B sets forth the process and requirements for a Public Nuisance Tax Sale, which occurs at the same time as the regular tax sale but requires potential bidders to sign an agreement with the City to be registered for the Public Nuisance Tax Sale. Only those registered can bid on the properties through this separate tax sale. The purchaser of the tax certificate can determine that a property is not able to be rehabiliated and request permission to demolish it from the City. If a tax certificate is not purchased and taxes are not paid, the City has the option to request the tax certificate from the City.

This year's list is smaller than past years, and it is likely to get smaller prior to June 20th as people continue to pay their taxes. Two of the properties listed are possible 657A abandoned building cases while the others are frequent nuisance cases where we believe the property to be abandoned.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

2022-127

RESOLUTION AWARDING THE BID FOR THE DEMOLITION OF 101 WEST MAIN STREET TO LANSING BROTHERS CONSTRUCTION INC. FOR A COST OF $228,200

WHEREAS, the City of Marshalltown acquired 101 West Main Street through court-ordered title with the intentions of demolishing the property through the Dangerous and Dilapidated Building Program; and

WHEREAS, the City of Marshalltown solicited bids from qualified contractors, which resulted in two bids submitted for the scope of work, with Lansing Brothers Construction Co. Inc. being the lowest bidder at $228,200:

Item No.	Item	Unit	Quantity	Lansing Brothers Construction, Luxemburg, Iowa		Dore & Associates, Bay City, MI	
				Unit Price	Extended Price	Unit Price	Extended Price
Section 1 General Items							
1	Contractor's Demolition Plan	LS	1	$25,000.00	$25,000.00	$25,000.00	$25,000.00
2	Building Demolition, Site Backfill & Stabilization	LS	1	$166,000.00	$166,000.00	$198,200.00	$198,200.00
3	Repair of Wall in Common	LS	1	$10,000.00	$10,000.00	$9,300.00	$9,300.00
4	Construct Concrete Retaining Wall	LS	1	$15,000.00	$15,000.00	$18,700.00	$18,700.00
5	Disconnect Sanitary Sewer Service	LS	1	$3,000.00	$3,000.00	$3,500.00	$3,500.00
6	Exploratory Excavation	Hour	8	~~$2,400.00~~ $300.00	$2,400.00	$250.00	$2,000.00
7	Remove & Replace 9" PCC Pavement	SQ. YD	40	~~$2,800.00~~ $70.00	$2,800.00	$128.00	$5,120.00
8	Remove & Replace 6" PCC Sidewalk	SQ. FT	200	~~$2,000.00~~ $10.00	$2,000.00	$108.00	$21,600.00
9	Remove & Replace Pedestrian Ramp	Ea	1	$2,000.00	$2,000.00	$3,500.00	$3,500.00
					$228,200.00		**$286,920.00**
	TOTAL BID PRICE				**$ 228,200.00**		**$ 286,920.00**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, the low bid from Lansing Brothers Construction Co. Inc. is hereby accepted and the Mayor is authorized to execute a contract for the work; and

BE IT FURTHER RESOLVED, the cost of the contract shall be paid out of the Dangerous and Dilapidated Building Fund.

Passed this 9th day of May, 2022, and signed this _____ day of May, 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Jessica Kinser, City Administrator
DATE: May 4, 2022
RE: 101 West Main Demolition

Policy Issue: Council is to approve all purchases over $44,999

☒ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☒ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action:
Goal 1, Objective 1: Support the MCBD and development in Downtown - Complete City-owned demolition projects in Downtown
Goal 2, Objective 1: Eliminate blight throughout the community- Demolish 10 structures under D&D
Goal 2, Objetive 2: Design and construct capital projects which enhance the aesthetics of the community- Design and complete Park 101

Recommendation: To approve the resolution as proposed

Budget Impact: $228,200 from the Dangerous and Dilapidated Building Fund

Description/Background: 101 West Main Street was damaged in the 2018 tornado, with no repair work completed by the owner prior to him transferring the property. A new notification process to a new owner, combined with the impacts of COVID on the court system, resulted in the award of title in April 2021. The City then contracted with WHKS to assist with the bidding, structural and construction processes. This work was finally completed and the bid was issued in April 2022.

2 bids were received, and we are recommending the bid be awarded to Lansing Brothers Construction Inc. as the low bidder. Please note that there was an irregularity in Lansing's bid that we are asking you to waive as specified as a City right in the bid documents. Lansing's bid did not list a unit price and total for 3 of the bid items where both figures were the same. We confirmed the total bid of $228,200 was correct while the unit price was listed incorrectly for the 3 items.

Following the demolition, we will award a Shared Wall Grant to McGregor's to finish the newly exposed wall. When this is complete, we will the resurvey the property to determine where the property line is and proceed with a conveyance of any portion of the new exterior wall that would still remain on the 101 property. This will create a zero lot line and provide for an easy understanding of property ownership for future use as a park or for redevelopment.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

BID TABULATION

PROJECT: 101 W Main St Demolition Project
LOCATION OF PROJECT: Marshalltown, Iowa
WHKS PROJECT #: 9395
LETTING DATE-TIME-LOCATION: May 3, 2022 - 12:00 pm

Item No.	Item	Unit	Quantity	Lansing Brothers Construction, Luxemburg, Iowa		Dore & Associates, Bay City, MI	
				Unit Price	Extended Price	Unit Price	Extended Price
Section 1 General Items							
1	Contractor's Demolition Plan	LS	1	$25,000.00	$25,000.00	$25,000.00	$25,000.00
2	Building Demolition, Site Backfill & Stabilization	LS	1	$166,000.00	$166,000.00	$198,200.00	$198,200.00
3	Repair of Wall in Common	LS	1	$10,000.00	$10,000.00	$9,300.00	$9,300.00
4	Construct Concrete Retaining Wall	LS	1	$15,000.00	$15,000.00	$18,700.00	$18,700.00
5	Disconnect Sanitary Sewer Service	LS	1	$3,000.00	$3,000.00	$3,500.00	$3,500.00
6	Exploratory Excavation	Hour	8	~~$2,400.00~~ $300.00	$2,400.00	$250.00	$2,000.00
7	Remove & Replace 9" PCC Pavement	SQ. YD	40	~~$2,800.00~~ $70.00	$2,800.00	$128.00	$5,120.00
8	Remove & Replace 6" PCC Sidewalk	SQ. FT	200	~~$2,000.00~~ $10.00	$2,000.00	$108.00	$21,600.00
9	Remove & Replace Pedestrian Ramp	Ea	1	$2,000.00	$2,000.00	$3,500.00	$3,500.00
					$228,200.00		**$286,920.00**
	TOTAL BID PRICE				**$ 228,200.00**		**$ 286,920.00**

2022-128

RESOLUTION ACCEPTING BID AND AUTHORIZING THE AWARD OF CONTRACT FOR THE EDGEWOOD STREET EXTENSION PROJECT #STR19003 IN THE CITY OF MARSHALLTOWN, IOWA IN THE AMOUNT OF $6,088,627.50

WHEREAS, notice to bidders has been duly given as required by law publication in the Marshalltown Times-Republican for the Edgewood Street Extension Project, in the City of Marshalltown, as described in the plans and specifications therefore, and

WHEREAS, there has been filed with the City Clerk in response to the published notice to the bidders referred to above, certain proposals for the construction of the above designated improvement with the required certified checks or bid bond accompanying each proposal from the following bidders, to-wit:

Name and Address of Bidders	Amount of Bid
Con-Struct, Inc	$6,088,627.50
Peterson Contractors	$6,214,488.40
Boomerang Corp	$6,778,883.95
C.J. Moyna & Sons	$7,138,687.70
S. M. Hentges & Sons	$7,577,820.65

After consideration of all bids filed, there was determined by the Council that the bid of Con-Struct is the best and lowest responsible bid for the public improvement as is herein outlined.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. That the bid of Con-Struct and the same is hereby accepted for the construction of the improvement as described in the plans and specifications therefore, as previously ordered by the Council, and that the contract for the construction of same is now awarded to said contractor in the total amount Six Million Eighty-Eight Thousand Six Hundred and Twenty-Seven and .50/100 ($6,088,627.50) Dollars.

Section 2. Pursuant to Iowa Code section 26.10, the City Council authorizes the Public Works Director to retain the bid security furnished by the successful bidder until the approved contract form has been executed, a bond has been filed by the bidder guaranteeing the performance of the contract, and to approve the properly executed contract and bond. Checks or bidder's bonds of unsuccessful bidders shall be returned to the bidders as soon as the successful bidder is determined or within thirty days, whichever is sooner.

Section 3. The final settlement upon the contract, as referred to herein with said contractor, shall be upon the basis of the unit prices as are set forth in the bid of said contractor and for the actual quantities for each item of materials furnished or work performed in the construction of this public improvement. The said contract is subject to all of the conditions as are contained in the

resolution ordering construction of this improvement, the notice to bidders as published, the terms of the bidders written proposal, the plans and specifications as are provided therefore, all of which are made a part of this resolution and the said bidders contract by reference as though the same were set out herein verbatim and in specific detail.

Section 4. This resolution as now adopted shall be in full force and binding effect upon the City of Marshalltown, Iowa, upon the final approval of the completed contract with the successful bidder and the approval of the contractor's surety bond by resolution of this Council.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: April 25, 2022
RE: Edgewood Street Extension (STR 19-003)

Policy Issue: City purchasing policy requires horizontal infrastructure projects to go through a competitive bidding process with City Council approval.

☒ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 2 - Support and Promote Commercial and Industrial Development - Construct the Edgewood / North 8th Avenue Extension

Recommendation: Staff recommends accepting bid and awarding the STR 19-003, Edgewood Street Extension project to Con-Struct in the amount of $6,088,627.50.

Budget Impact: This project is planned to be funded through a combination of LOST, ARPA, RISE, US EDA, and Marshalltown Water Works Funding. A summary of anticipated total project construction costs and revenue sources are as follows:

Construction Costs:			
Construction	$	6,088,627.50	*Con-Struct, Inc.*
	$	**6,088,627.50**	**TOTAL**
Funding Sources			
Iowa DOT RISE Grant	$	1,640,342.00	
US EDA Grant	$	2,956,829.00	*shown less admin $*
ARPA	$	850,000.00	
MWW (Relocation Expenses)	$	236,146.00	*estimated*
MWW (Main Upsize Contribution)	$	60,000.00	*estimated*
LOST-Capital Projects (construction)	$	689,030.00	
	$	**6,432,347.00**	**TOTAL**

Current identified funding sources exceed currently identified project costs by approximately $323,700. Change orders are typical of projects this size. The designated ARPA funds of $850,000 were earmarked for the storm water ponds. Based on an analysis of the bid tab – the storm water ponds bid out at $587,177.35 – or $262,822.65 less than estimated. The council may have the option to reserve the difference in ARPA funding for project change orders or reallocate a portion of the ARPA funding at a later date.

Description/Background: The Edgewood Extension project was identified through the Highway 14 Corridor Study. Applications for partial funding through Iowa DOT (RISE) and US EDA were submitted and awarded. The project is to extend Edgewood Street east into City-owned agricultural land in order to make a new north-south N. 8th Avenue connection with Marion Street. The project will open up more than 45 acres for industrial development while diverting heavy truck traffic prior to Marion Street, helping to reduce traffic-related issues at the intersection of Marion Street and Highway 14. The project will also address stormwater requirements for each new lot as well as a large stormwater detention basin on the north side of the industrial park. Box Culvert improvements at Woodland Street will also reduce the frequency of storm water over topping Woodland Street.

Design Engineering for this project was performed by Bolton & Menk. Construction was estimated to cost $ 6,509,556.50.

We opened 5 valid bids on May 3rd as summarized below:

Con-Struct, Inc.	$	6,088,627.50
Peterson Contractors, Inc	$	6,214.488.40
Boomerang Corp	$	6,778,883.95
C.J. Moyna & Sons LLC	$	7,138,687.70
S.M. Hentges & Sons	$	7,577,820.62

We recommend award be contingent on US EDA and Iowa DOT approval.

The substantial completion date is September 15th, 2023.

Attachments: Bid Tabulation

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TABULATION OF BIDS

Edgewood Extension
City of Marshalltown
Marshalltown Coliseum

May 03, 2022 @ 10:00 AM

Item No.	Description	Unit	Quantity	Engineer's Estimate Bolton & Menk, Inc.		Con-Struct Marshalltown, IA		C.J. Moyna & Sons, LLC Elkader, IA	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1	CLEARING AND GRUBBING	UNIT	56.7	$ 100.00	$5,670.00	$36.00	$2,041.20	$80.00	$4,536.00
2	CLEARING AND GRUBBING	AC	7.6	$ 10,000.00	$76,000.00	$12,300.00	$93,480.00	$8,200.00	$62,320.00
3	TOPSOIL, ON-SITE	CY	122782	$ 5.00	$613,910.00	$5.40	$663,022.80	$5.60	$687,579.20
4	EXCAVATION, CLASS 13	CY	329515	$ 5.00	$1,647,575.00	$3.20	$1,054,448.00	$4.70	$1,548,720.50
5	SUBGRADE PREPARATION, 12 INCH	SY	16140	$ 3.00	$48,420.00	$1.80	$29,052.00	$3.30	$53,262.00
6	SUBGRADE TREATMENT, FLYASH, 18 INCHES	TON	150	$ 160.00	$24,000.00	$280.00	$42,000.00	$300.00	$45,000.00
7	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	16140	$ 4.00	$64,560.00	$3.00	$48,420.00	$3.50	$56,490.00
8	SUBBASE, MODIFIED, 4 INCH	SY	5884	$ 9.00	$52,956.00	$5.00	$29,420.00	$5.30	$31,185.20
9	SUBBASE, MODIFIED, 8 INCH	SY	16140	$ 12.00	$193,680.00	$8.80	$142,032.00	$8.70	$140,418.00
10	COMPACTION TESTING	LS	1	$ 5,000.00	$5,000.00	$15,000.00	$15,000.00	$12,000.00	$12,000.00
11	EXPLORATORY EXCAVATION	EA	10	$ 250.00	$2,500.00	$2,000.00	$20,000.00	$2,500.00	$25,000.00
12	TRENCH FOUNDATION	TON	50	$ 50.00	$2,500.00	$30.00	$1,500.00	$35.00	$1,750.00
13	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	200	$ 30.00	$6,000.00	$15.00	$3,000.00	$20.00	$4,000.00
14	TRENCH COMPACTION TESTING	LS	1	$ 15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00
15	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 12 INCH	LF	1888	$ 50.00	$94,400.00	$89.00	$168,032.00	$90.00	$169,920.00
16	SANITARY SEWER SERVICE STUB, PVC, 8 INCH	LF	453	$ 42.00	$19,026.00	$96.00	$43,488.00	$100.00	$45,300.00
17	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	737	$ 50.00	$36,850.00	$55.00	$40,535.00	$60.00	$44,220.00
18	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	1622	$ 75.00	$121,650.00	$59.00	$95,698.00	$65.00	$105,430.00
19	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	663	$ 80.00	$53,040.00	$65.00	$43,095.00	$70.00	$46,410.00
20	STORM SEWER, TRENCHED, ARCP, 22 INCH BY 13 INCH ARCH	LF	66	$ 90.00	$5,940.00	$100.00	$6,600.00	$110.00	$7,260.00
21	STORM SEWER, TRENCHED, ARCP, 28 INCH BY 18 INCH ARCH	LF	359	$ 122.00	$43,798.00	$110.00	$39,490.00	$120.00	$43,080.00
22	STORM SEWER, TRENCHED, ARCP, 36 INCH BY 22 INCH ARCH	LF	129	$ 450.00	$58,050.00	$140.00	$18,060.00	$150.00	$19,350.00
23	REMOVAL OF STORM SEWER, RCP, 12 INCH	LF	122	$ 10.00	$1,220.00	$20.00	$2,440.00	$25.00	$3,050.00
24	6'X3' BOX CULVERT	LF	90	$ 800.00	$72,000.00	$780.00	$70,200.00	$800.00	$72,000.00
25	10'X4' BOX CULVERT	LF	276	$ 900.00	$248,400.00	$1,100.00	$303,600.00	$1,200.00	$331,200.00
26	6'X3' BOX CULVERT END SECTION	EA	2	$ 10,000.00	$20,000.00	$6,000.00	$12,000.00	$6,300.00	$12,600.00
27	10'X4' BOX CULVERT END SECTION	EA	4	$ 15,000.00	$60,000.00	$11,000.00	$44,000.00	$12,000.00	$48,000.00
28	PIPE APRON, ARCP, 28 INCH BY 18 INCH ARCH	EA	1	$ 1,500.00	$1,500.00	$4,000.00	$4,000.00	$5,000.00	$5,000.00
29	PIPE APRON, ARCP, 36 INCH BY 22 INCH ARCH	EA	1	$ 2,500.00	$2,500.00	$5,000.00	$5,000.00	$6,000.00	$6,000.00
30	SUBDRAIN, PVC, 4 INCH	LF	3416	$ 15.00	$51,240.00	$14.50	$49,532.00	$16.00	$54,656.00
31	SUBDRAIN CLEANOUT, PVC, 4 INCH	EA	3	$ 700.00	$2,100.00	$1,000.00	$3,000.00	$1,000.00	$3,000.00
32	SUBDRAIN OUTLETS AND CONNECTIONS, PVC, 4 INCH	EA	32	$ 500.00	$16,000.00	$400.00	$12,800.00	$500.00	$16,000.00
33	WATERMAIN, TRENCHED, PVC DR14, 12 INCH	LF	3245	$ 50.00	$162,250.00	$85.00	$275,825.00	$87.00	$282,315.00
34	WATERMAIN, TRENCHED, PVC DR14, 8 INCH	LF	68	$ 55.00	$3,740.00	$72.00	$4,896.00	$75.00	$5,100.00

Item No.	Description	Unit	Quantity	Engineer's Estimate Bolton & Menk, Inc.		Con-Struct Marshalltown, IA		C.J. Moyna & Sons, LLC Elkader, IA	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
35	WATERMAIN, TRENCHED, DUCTILE IRON, 24 INCH	LF	71	$ 200.00	$14,200.00	$350.00	$24,850.00	$400.00	$28,400.00
36	FITTINGS BY WEIGHT, DUCTILE IRON	LB	846	$ 15.00	$12,690.00	$15.00	$12,690.00	$16.00	$13,536.00
37	VALVE, GATE, 12 INCH	EA	8	$ 5,000.00	$40,000.00	$4,000.00	$32,000.00	$4,200.00	$33,600.00
38	VALVE, GATE, 8 INCH	EA	2	$ 2,500.00	$5,000.00	$2,800.00	$5,600.00	$3,000.00	$6,000.00
39	VALVE, BUTTERFLY, 24 INCH, FURNISH ONLY	EA	1	$ 25,000.00	$25,000.00	$8,700.00	$8,700.00	$2,500.00	$2,500.00
40	VALVE, BUTTERFLY, 24 INCH, INSTALLATION	EA	1	$ 20,000.00	$20,000.00	$2,000.00	$2,000.00	$9,000.00	$9,000.00
41	VALVE, INSERTION VALVE, 24 INCH	EA	2	$ 60,000.00	$120,000.00	$61,000.00	$122,000.00	$62,000.00	$124,000.00
42	TAPPING VALVE ASSEMBLY, 12 INCH	EA	1	$ 10,000.00	$10,000.00	$4,300.00	$4,300.00	$4,400.00	$4,400.00
43	FIRE HYDRANT ASSEMBLY	EA	9	$ 5,500.00	$49,500.00	$6,500.00	$58,500.00	$6,700.00	$60,300.00
44	WATERMAIN OFFSET, 8 INCH	EA	1	$ 5,000.00	$5,000.00	$8,600.00	$8,600.00	$9,000.00	$9,000.00
45	WATERMAIN OFFSET, 24 INCH	EA	1	$ 9,000.00	$9,000.00	$26,000.00	$26,000.00	$27,000.00	$27,000.00
46	FLUSHING DEVICE (BLOWOFF)	EA	1	$ 6,000.00	$6,000.00	$6,500.00	$6,500.00	$7,000.00	$7,000.00
47	SANITARY MANHOLE, SW-303, 48 INCH	EA	1	$ 5,500.00	$5,500.00	$4,800.00	$4,800.00	$5,000.00	$5,000.00
48	SANITARY MANHOLE, SW-301, 48 INCH	EA	7	$ 5,500.00	$38,500.00	$5,500.00	$38,500.00	$5,600.00	$39,200.00
49	STORM MANHOLE, SW-401, 60 INCH	EA	1	$ 5,500.00	$5,500.00	$6,300.00	$6,300.00	$6,500.00	$6,500.00
50	INTAKE, SW-507	EA	28	$ 3,800.00	$106,400.00	$4,200.00	$117,600.00	$4,300.00	$120,400.00
51	INTAKE, SW-508	EA	1	$ 6,500.00	$6,500.00	$5,500.00	$5,500.00	$5,800.00	$5,800.00
52	INTAKE, SW-509	EA	4	$ 6,000.00	$24,000.00	$5,800.00	$23,200.00	$6,000.00	$24,000.00
53	INTAKE, SW-510	EA	3	$ 7,500.00	$22,500.00	$7,000.00	$21,000.00	$7,200.00	$21,600.00
54	MANHOLE ADJUSTMENT, MINOR	EA	3	$ 1,000.00	$3,000.00	$1,800.00	$5,400.00	$2,000.00	$6,000.00
55	MANHOLE ADJUSTMENT, MAJOR	EA	3	$ 3,000.00	$9,000.00	$3,000.00	$9,000.00	$3,200.00	$9,600.00
56	CONNECTION TO EXISTING MANHOLE	EA	1	$ 1,500.00	$1,500.00	$1,800.00	$1,800.00	$2,000.00	$2,000.00
57	REMOVE INTAKE	EA	5	$ 1,000.00	$5,000.00	$800.00	$4,000.00	$1,000.00	$5,000.00
58	PAVEMENT, PCC, 8 INCH	SY	14606	$ 60.00	$876,360.00	$65.00	$949,390.00	$67.00	$978,602.00
59	PCC PAVEMENT SAMPLES AND TESTING	LS	1	$ 5,000.00	$5,000.00	$12,000.00	$12,000.00	$12,500.00	$12,500.00
60	TEMPORARY PAVEMENT, 5" PCC OR 4" HMA	SY	1136	$ 35.00	$39,760.00	$50.00	$56,800.00	$50.00	$56,800.00
61	REMOVAL OF GRAVEL DRIVEWAY	SY	266	$ 6.00	$1,596.00	$3.50	$931.00	$8.00	$2,128.00
62	REMOVAL OF CURB	LF	168	$ 10.00	$1,680.00	$10.00	$1,680.00	$10.00	$1,680.00
63	SHARED USE PATH, PCC, 5 INCH	SY	3178	$ 40.00	$127,120.00	$45.00	$143,010.00	$47.00	$149,366.00
64	SIDEWALK, PCC, 5 INCH	SY	1843	$ 40.00	$73,720.00	$50.00	$92,150.00	$52.00	$95,836.00
65	SIDEWALK, PCC, 6 INCH	SY	184	$ 45.00	$8,280.00	$65.00	$11,960.00	$67.00	$12,328.00
66	DETECTABLE WARNING	SF	189	$ 35.00	$6,615.00	$45.00	$8,505.00	$47.00	$8,883.00
67	DRIVEWAY, PAVED, PCC, 6 INCH	SY	52	$ 50.00	$2,600.00	$65.00	$3,380.00	$67.00	$3,484.00
68	FULL DEPTH PATCHES	SY	69	$ 120.00	$8,280.00	$100.00	$6,900.00	$110.00	$7,590.00
69	PAVEMENT REMOVAL	SY	873	$ 10.00	$8,730.00	$7.00	$6,111.00	$14.00	$12,222.00
70	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	142.3	$ 50.00	$7,115.00	$80.00	$11,384.00	$75.00	$10,672.50
71	PAINTED SYMBOLS AND LEGENDS	EA	8	$ 150.00	$1,200.00	$110.00	$880.00	$100.00	$800.00
72	TYPE A SIGN, SHEET ALUMINUM	SF	46.5	$ 50.00	$2,325.00	$120.00	$5,580.00	$115.00	$5,347.50
73	SIGN REMOVAL	EA	2	$ 100.00	$200.00	$550.00	$1,100.00	$500.00	$1,000.00
74	TEMPORARY TRAFFIC CONTROL	LS	1	$ 20,000.00	$20,000.00	$20,000.00	$20,000.00	$32,000.00	$32,000.00
75	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	55	$ 2,500.00	$137,500.00	$3,360.00	$184,800.00	$3,200.00	$176,000.00
76	SWPPP PREPARATION	LS	1	$ 1,500.00	$1,500.00	$1,575.00	$1,575.00	$1,500.00	$1,500.00
77	SWPPP MANAGEMENT	LS	1	$ 5,000.00	$5,000.00	$5,500.00	$5,500.00	$5,250.00	$5,250.00
78	TEMPORARY RECP, TYPE 2.C	SY	27797	$ 7.00	$194,579.00	$1.00	$27,797.00	$0.90	$25,017.30
79	RIP RAP, TYPE E	TON	60	$ 60.00	$3,600.00	$50.00	$3,000.00	$72.00	$4,320.00
80	SILT FENCE OR SILT FENCE DITCH CHECK	LF	13290	$ 3.00	$39,870.00	$1.75	$23,257.50	$1.65	$21,928.50

Item No.	Description	Unit	Quantity	Engineer's Estimate Bolton & Menk, Inc.		Con-Struct Marshalltown, IA		C.J. Moyna & Sons, LLC Elkader, IA	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
81	STABILIZED CONSTRUCTION ENTRANCE	SY	244	$ 10.00	$2,440.00	$10.00	$2,440.00	$20.00	$4,880.00
82	EROSION CONTROL MULCHING, CONVENTIONAL	AC	55	$ 1,500.00	$82,500.00	$446.00	$24,530.00	$425.00	$23,375.00
83	INLET PROTECTION DEVICE, DROP-IN	EA	36	$ 200.00	$7,200.00	$175.00	$6,300.00	$165.00	$5,940.00
84	INLET PROTECTION DEVICE, SURFACE APPLIED	EA	36	$ 150.00	$5,400.00	$175.00	$6,300.00	$165.00	$5,940.00
85	REMOVAL OF FENCE	LF	1550	$ 3.00	$4,650.00	$6.00	$9,300.00	$3.00	$4,650.00
86	SAFETY RAIL	LF	48	$ 250.00	$12,000.00	$515.00	$24,720.00	$520.00	$24,960.00
87	CONSTRUCTION SURVEY	LS	1	$ 70,000.00	$70,000.00	$32,000.00	$32,000.00	$62,000.00	$62,000.00
88	MONUMENT PRESERVATION AND REPLACEMENT	LS	1	$ 1,500.00	$1,500.00	$1,000.00	$1,000.00	$2,500.00	$2,500.00
89	MOBILIZATION	LS	1	$ 365,400.00	$365,400.00	$425,000.00	$425,000.00	$610,000.00	$610,000.00
90	CONCRETE WASHOUT	LS	1	$ 1,000.00	$1,000.00	$1,000.00	$1,000.00	$7,000.00	$7,000.00
91	DRAINAGE WELL	EA	8	$ 500.00	$4,000.00	$1,000.00	$8,000.00	$20,000.00	$160,000.00
92	WOODCHIP/COMPOST DEBRIS REMOVAL	CY	600	$ 30.00	$18,000.00	$15.00	$9,000.00	$22.00	$13,200.00
93	EDA SITE SIGN	LS	1	$ 1,000.00	$1,000.00	$1,800.00	$1,800.00	$2,000.00	$2,000.00
94	TEMPORARY 2 INCH WATER SERVICE	LS	1	$ 5,000.00	$5,000.00	$10,000.00	$10,000.00	$10,000.00	$10,000.00
	TOTAL BASE BID				**$6,527,985.00**		**$6,088,627.50**		**$7,138,687.70**

3-May-22
H:\MRTNIA_CI_IA\A13119531\6_Plans-Specs\B_Bid Tabulation\[Edgewood - Bid Tab.xlsm]Bid Tab

Denotes math error on proposal

TABULATION OF BIDS

Edgewood Extension
City of Marshalltown
Marshalltown Coliseum

May 03, 2022 @ 10:00 AM

Item No.	Description	Unit	Quantity	Boomerang Corp Anamosa, IA		S.M. Hentges & Sons Jordan, MN		Peterson Contractors Inc. Reinbeck, IA	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1	CLEARING AND GRUBBING	UNIT	56.7	$38.00	$2,154.60	$41.00	$2,324.70	$40.00	$2,268.00
2	CLEARING AND GRUBBING	AC	7.6	$8,000.00	$60,800.00	$8,500.00	$64,600.00	$8,250.00	$62,700.00
3	TOPSOIL, ON-SITE	CY	122782	$6.00	$736,692.00	$6.45	$791,943.90	$5.10	$626,188.20
4	EXCAVATION, CLASS 13	CY	329515	$4.89	$1,611,328.35	$6.45	$2,125,371.75	$3.10	$1,021,496.50
5	SUBGRADE PREPARATION, 12 INCH	SY	16140	$1.00	$16,140.00	$2.00	$32,280.00	$1.80	$29,052.00
6	SUBGRADE TREATMENT, FLYASH, 18 INCHES	TON	150	$200.00	$30,000.00	$158.00	$23,700.00	$300.00	$45,000.00
7	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	16140	$2.00	$32,280.00	$2.90	$46,806.00	$3.15	$50,841.00
8	SUBBASE, MODIFIED, 4 INCH	SY	5884	$7.50	$44,130.00	$5.80	$34,127.20	$6.10	$35,892.40
9	SUBBASE, MODIFIED, 8 INCH	SY	16140	$12.00	$193,680.00	$10.60	$171,084.00	$10.85	$175,119.00
10	COMPACTION TESTING	LS	1	$20,000.00	$20,000.00	$29,300.00	$29,300.00	$20,000.00	$20,000.00
11	EXPLORATORY EXCAVATION	EA	10	$300.00	$3,000.00	$575.00	$5,750.00	$2,500.00	$25,000.00
12	TRENCH FOUNDATION	TON	50	$40.00	$2,000.00	$32.00	$1,600.00	$35.00	$1,750.00
13	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	200	$50.00	$10,000.00	$24.00	$4,800.00	$20.00	$4,000.00
14	TRENCH COMPACTION TESTING	LS	1	$15,000.00	$15,000.00	$6,100.00	$6,100.00	$15,000.00	$15,000.00
15	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 12 INCH	LF	1888	$150.00	$283,200.00	$100.00	$188,800.00	$90.00	$169,920.00
16	SANITARY SEWER SERVICE STUB, PVC, 8 INCH	LF	453	$97.00	$43,941.00	$70.00	$31,710.00	$100.00	$45,300.00
17	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	737	$75.00	$55,275.00	$67.00	$49,379.00	$60.00	$44,220.00
18	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	1622	$77.00	$124,894.00	$74.00	$120,028.00	$65.00	$105,430.00
19	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	663	$83.00	$55,029.00	$77.00	$51,051.00	$70.00	$46,410.00
20	STORM SEWER, TRENCHED, ARCP, 22 INCH BY 13 INCH ARCH	LF	66	$165.00	$10,890.00	$132.00	$8,712.00	$110.00	$7,260.00
21	STORM SEWER, TRENCHED, ARCP, 28 INCH BY 18 INCH ARCH	LF	359	$150.00	$53,850.00	$146.00	$52,414.00	$120.00	$43,080.00
22	STORM SEWER, TRENCHED, ARCP, 36 INCH BY 22 INCH ARCH	LF	129	$200.00	$25,800.00	$195.00	$25,155.00	$150.00	$19,350.00
23	REMOVAL OF STORM SEWER, RCP, 12 INCH	LF	122	$20.00	$2,440.00	$25.00	$3,050.00	$25.00	$3,050.00
24	6'X3' BOX CULVERT	LF	90	$670.00	$60,300.00	$772.00	$69,480.00	$785.00	$70,650.00
25	10'X4' BOX CULVERT	LF	276	$940.00	$259,440.00	$1,300.00	$358,800.00	$1,160.00	$320,160.00
26	6'X3' BOX CULVERT END SECTION	EA	2	$12,000.00	$24,000.00	$5,570.00	$11,140.00	$8,170.00	$16,340.00
27	10'X4' BOX CULVERT END SECTION	EA	4	$20,000.00	$80,000.00	$10,700.00	$42,800.00	$13,600.00	$54,400.00
28	PIPE APRON, ARCP, 28 INCH BY 18 INCH ARCH	EA	1	$3,500.00	$3,500.00	$8,000.00	$8,000.00	$5,000.00	$5,000.00
29	PIPE APRON, ARCP, 36 INCH BY 22 INCH ARCH	EA	1	$4,400.00	$4,400.00	$9,000.00	$9,000.00	$6,000.00	$6,000.00
30	SUBDRAIN, PVC, 4 INCH	LF	3416	$19.00	$64,904.00	$16.00	$54,656.00	$16.00	$54,656.00
31	SUBDRAIN CLEANOUT, PVC, 4 INCH	EA	3	$800.00	$2,400.00	$796.00	$2,388.00	$1,000.00	$3,000.00
32	SUBDRAIN OUTLETS AND CONNECTIONS, PVC, 4 INCH	EA	32	$325.00	$10,400.00	$300.00	$9,600.00	$500.00	$16,000.00
33	WATERMAIN, TRENCHED, PVC DR14, 12 INCH	LF	3245	$96.00	$311,520.00	$106.00	$343,970.00	$87.00	$282,315.00
34	WATERMAIN, TRENCHED, PVC DR14, 8 INCH	LF	68	$120.00	$8,160.00	$145.00	$9,860.00	$75.00	$5,100.00

Item No.	Description	Unit	Quantity	Boomerang Corp Anamosa, IA		S.M. Hentges & Sons Jordan, MN		Peterson Contractors Inc. Reinbeck, IA	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
35	WATERMAIN, TRENCHED, DUCTILE IRON, 24 INCH	LF	71	$435.00	$30,885.00	$650.00	$46,150.00	$400.00	$28,400.00
36	FITTINGS BY WEIGHT, DUCTILE IRON	LB	846	$17.00	$14,382.00	$15.00	$12,690.00	$16.00	$13,536.00
37	VALVE, GATE, 12 INCH	EA	8	$4,000.00	$32,000.00	$4,200.00	$33,600.00	$4,200.00	$33,600.00
38	VALVE, GATE, 8 INCH	EA	2	$2,500.00	$5,000.00	$2,600.00	$5,200.00	$3,000.00	$6,000.00
39	VALVE, BUTTERFLY, 24 INCH, FURNISH ONLY	EA	1	$9,500.00	$9,500.00	$22,900.00	$22,900.00	$9,000.00	$9,000.00
40	VALVE, BUTTERFLY, 24 INCH, INSTALLATION	EA	1	$1,400.00	$1,400.00	$1,200.00	$1,200.00	$2,500.00	$2,500.00
41	VALVE, INSERTION VALVE, 24 INCH	EA	2	$50,000.00	$100,000.00	$65,000.00	$130,000.00	$62,000.00	$124,000.00
42	TAPPING VALVE ASSEMBLY, 12 INCH	EA	1	$5,000.00	$5,000.00	$10,600.00	$10,600.00	$4,400.00	$4,400.00
43	FIRE HYDRANT ASSEMBLY	EA	9	$7,000.00	$63,000.00	$8,100.00	$72,900.00	$6,700.00	$60,300.00
44	WATERMAIN OFFSET, 8 INCH	EA	1	$7,000.00	$7,000.00	$2,400.00	$2,400.00	$9,000.00	$9,000.00
45	WATERMAIN OFFSET, 24 INCH	EA	1	$25,000.00	$25,000.00	$8,300.00	$8,300.00	$27,000.00	$27,000.00
46	FLUSHING DEVICE (BLOWOFF)	EA	1	$10,000.00	$10,000.00	$10,800.00	$10,800.00	$7,000.00	$7,000.00
47	SANITARY MANHOLE, SW-303, 48 INCH	EA	1	$8,000.00	$8,000.00	$12,100.00	$12,100.00	$5,000.00	$5,000.00
48	SANITARY MANHOLE, SW-301, 48 INCH	EA	7	$8,000.00	$56,000.00	$6,100.00	$42,700.00	$5,600.00	$39,200.00
49	STORM MANHOLE, SW-401, 60 INCH	EA	1	$6,000.00	$6,000.00	$6,200.00	$6,200.00	$6,500.00	$6,500.00
50	INTAKE, SW-507	EA	28	$5,000.00	$140,000.00	$3,900.00	$109,200.00	$4,300.00	$120,400.00
51	INTAKE, SW-508	EA	1	$5,200.00	$5,200.00	$6,000.00	$6,000.00	$5,800.00	$5,800.00
52	INTAKE, SW-509	EA	4	$6,500.00	$26,000.00	$6,600.00	$26,400.00	$6,000.00	$24,000.00
53	INTAKE, SW-510	EA	3	$8,500.00	$25,500.00	$8,000.00	$24,000.00	$7,200.00	$21,600.00
54	MANHOLE ADJUSTMENT, MINOR	EA	3	$2,000.00	$6,000.00	$920.00	$2,760.00	$2,000.00	$6,000.00
55	MANHOLE ADJUSTMENT, MAJOR	EA	3	$3,000.00	$9,000.00	$2,100.00	$6,300.00	$3,200.00	$9,600.00
56	CONNECTION TO EXISTING MANHOLE	EA	1	$3,000.00	$3,000.00	$1,700.00	$1,700.00	$2,000.00	$2,000.00
57	REMOVE INTAKE	EA	5	$1,000.00	$5,000.00	$560.00	$2,800.00	$1,000.00	$5,000.00
58	PAVEMENT, PCC, 8 INCH	SY	14606	$64.00	$934,784.00	$70.00	$1,022,420.00	$67.00	$978,602.00
59	PCC PAVEMENT SAMPLES AND TESTING	LS	1	$20,000.00	$20,000.00	$12,200.00	$12,200.00	$12,000.00	$12,000.00
60	TEMPORARY PAVEMENT, 5" PCC OR 4" HMA	SY	1136	$38.00	$43,168.00	$54.00	$61,344.00	$52.00	$59,072.00
61	REMOVAL OF GRAVEL DRIVEWAY	SY	266	$3.00	$798.00	$1.35	$359.10	$3.50	$931.00
62	REMOVAL OF CURB	LF	168	$17.00	$2,856.00	$4.80	$806.40	$11.25	$1,890.00
63	SHARED USE PATH, PCC, 5 INCH	SY	3178	$42.00	$133,476.00	$48.00	$152,544.00	$47.00	$149,366.00
64	SIDEWALK, PCC, 5 INCH	SY	1843	$44.00	$81,092.00	$53.00	$97,679.00	$52.00	$95,836.00
65	SIDEWALK, PCC, 6 INCH	SY	184	$77.00	$14,168.00	$58.00	$10,672.00	$67.00	$12,328.00
66	DETECTABLE WARNING	SF	189	$40.00	$7,560.00	$48.00	$9,072.00	$47.00	$8,883.00
67	DRIVEWAY, PAVED, PCC, 6 INCH	SY	52	$97.00	$5,044.00	$69.00	$3,588.00	$67.00	$3,484.00
68	FULL DEPTH PATCHES	SY	69	$165.00	$11,385.00	$112.00	$7,728.00	$110.00	$7,590.00
69	PAVEMENT REMOVAL	SY	873	$9.00	$7,857.00	$10.00	$8,730.00	$5.50	$4,801.50
70	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	142.3	$120.00	$17,076.00	$76.00	$10,814.80	$75.00	$10,672.50
71	PAINTED SYMBOLS AND LEGENDS	EA	8	$160.00	$1,280.00	$103.00	$824.00	$100.00	$800.00
72	TYPE A SIGN, SHEET ALUMINUM	SF	46.5	$160.00	$7,440.00	$118.00	$5,487.00	$115.00	$5,347.50
73	SIGN REMOVAL	EA	2	$135.00	$270.00	$511.00	$1,022.00	$500.00	$1,000.00
74	TEMPORARY TRAFFIC CONTROL	LS	1	$10,000.00	$10,000.00	$12,450.00	$12,450.00	$22,700.00	$22,700.00
75	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	55	$2,500.00	$137,500.00	$3,200.00	$176,000.00	$3,200.00	$176,000.00
76	SWPPP PREPARATION	LS	1	$2,000.00	$2,000.00	$2,040.00	$2,040.00	$1,500.00	$1,500.00
77	SWPPP MANAGEMENT	LS	1	$3,000.00	$3,000.00	$10,300.00	$10,300.00	$8,850.00	$8,850.00
78	TEMPORARY RECP, TYPE 2.C	SY	27797	$1.00	$27,797.00	$0.90	$25,017.30	$0.90	$25,017.30
79	RIP RAP, TYPE E	TON	60	$80.00	$4,800.00	$84.00	$5,040.00	$55.00	$3,300.00
80	SILT FENCE OR SILT FENCE DITCH CHECK	LF	13290	$2.00	$26,580.00	$1.75	$23,257.50	$1.65	$21,928.50

Item No.	Description	Unit	Quantity	Boomerang Corp Anamosa, IA		S.M. Hentges & Sons Jordan, MN		Peterson Contractors Inc. Reinbeck, IA	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
81	STABILIZED CONSTRUCTION ENTRANCE	SY	244	$17.00	$4,148.00	$24.00	$5,856.00	$35.00	$8,540.00
82	EROSION CONTROL MULCHING, CONVENTIONAL	AC	55	$450.00	$24,750.00	$460.00	$25,300.00	$425.00	$23,375.00
83	INLET PROTECTION DEVICE, DROP-IN	EA	36	$200.00	$7,200.00	$205.00	$7,380.00	$165.00	$5,940.00
84	INLET PROTECTION DEVICE, SURFACE APPLIED	EA	36	$150.00	$5,400.00	$154.00	$5,544.00	$165.00	$5,940.00
85	REMOVAL OF FENCE	LF	1550	$6.00	$9,300.00	$1.50	$2,325.00	$5.00	$7,750.00
86	SAFETY RAIL	LF	48	$160.00	$7,680.00	$330.00	$15,840.00	$520.00	$24,960.00
87	CONSTRUCTION SURVEY	LS	1	$40,000.00	$40,000.00	$32,000.00	$32,000.00	$30,500.00	$30,500.00
88	MONUMENT PRESERVATION AND REPLACEMENT	LS	1	$5,000.00	$5,000.00	$400.00	$400.00	$1,000.00	$1,000.00
89	MOBILIZATION	LS	1	$300,000.00	$300,000.00	$400,000.00	$400,000.00	$250,150.00	$250,150.00
90	CONCRETE WASHOUT	LS	1	$680.00	$680.00	$5,200.00	$5,200.00	$5,000.00	$5,000.00
91	DRAINAGE WELL	EA	8	$735.00	$5,880.00	$650.00	$5,200.00	$20,000.00	$160,000.00
92	WOODCHIP/COMPOST DEBRIS REMOVAL	CY	600	$15.00	$9,000.00	$37.00	$22,200.00	$110.00	$66,000.00
93	EDA SITE SIGN	LS	1	$1,500.00	$1,500.00	$2,000.00	$2,000.00	$1,650.00	$1,650.00
94	TEMPORARY 2 INCH WATER SERVICE	LS	1	$4,000.00	$4,000.00	$2,500.00	$2,500.00	$10,000.00	$10,000.00
	TOTAL BASE BID				**$6,778,883.95**		**$7,577,820.65**		**$6,214,488.40**

3-May-22
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2022-129

RESOLUTION PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 308 SOUTH 7TH AVENUE FROM THE CITY OF MARSHALLTOWN, IOWA TO DUANE E. YILEK

WHEREAS, the Council of the City of Marshalltown, Iowa finds it is in the best interest of the City and proposes to convey and transfer by Quit Claim Deed, property set out and described in Section 1 hereof to Duane E. Yilek; and

WHEREAS, the consideration for the transfer of the real estate to Duane E. Yilek, as set forth in Section 1, is the full sum of $7,160.00 (Seven Thousand One Hundred Sixty and 00/100) Dollars, said sum payable to the City of Marshalltown; and

WHEREAS, the property being transferred by the City of Marshalltown, Iowa to Duane E. Yilek is real estate which is not being used to the full advantage of the City, and is not required for any other public purpose, and no rights of private persons will be adversely affected; and

WHEREAS, the City of Marshalltown hereby proposes the transfer of said property, subject to easements being retained and rights of way of utilities, and access to and maintenance of said utilities. Said easements, rights of way and access will be retained until such time as the utility no longer utilizes or needs facilities in this location; and

WHEREAS, a notice of public hearing has been published according to law notifying the public of the proposed conveyance and transfer of title, and said public hearing was held.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. The City of Marshalltown, Iowa, by this resolution, approve the conveyance and transfer of title by Quit Claim Deed to Duane E. Yilek of the property:

308 South 7th Avenue, legally described as:
THE NORTH 1/3 OF LOTS 7, 8, AND 9, BLOCK 5, BINFORD AND WEBSTER'S ADDITION TO THE TOWN OF MARSHALL, MARSHALL COUNTY, IOWA.

(and)

THE NORTH 1/3 OF THE ALLEY VACATED ON OCTOBER 29, 1957 THAT LIES DIRECTLY EAST OF LOT 9 OF BLOCK 5, BINFORD AND WEBSTER'S ADDITION TO THE TOWN OF MARSHALL, MARSHALL COUNTY, IOWA.

The consideration for such conveyance shall be the sum of $7,160.00 (Seven Thousand One Hundred Sixty and 00/100).

Section 2. The City of Marshalltown hereby approves the transfer of said property, subject to easements being retained and rights of way of utilities, and access to and maintenance of said

utilities. Said easements, rights of way and access will be retained until such time as the utility no longer utilizes or needs facilities in this location.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

2022-130

RESOLUTION APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST FOR THE STATE STREET RECONSTRUCION PROJECT, IN THE CITY OF MARSHALLTOWN, IOWA, BEING PROJECT NO. STR21004

WHEREAS, there was placed on file in the office of the Clerk of the City of Marshalltown, Iowa, proposed plans and specifications, proposed form of contract and estimated cost for a public improvement in the City of Marshalltown, Iowa, for the State Street Reconstruction Project, Project No. STR21004, as fully set forth in the resolution ordering same, and that public notice of hearing on such plans, specifications and form of contract were duly published in the Marshalltown Times-Republican in time for hearing now before the Council, and

WHEREAS, written objections to the plans, specifications and form of contract have been called for and no such written objections have been filed with the City Clerk, and oral objections being called for and no oral objections being made in open Council, it is the decision of this Council that such plans, specifications, form of contract and estimate of cost should be approved.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, that the plans, specifications, form of contract and estimated cost heretofore placed on file and upon which public notice has been duly given and no objections thereto have been made either in writing or in open council, the Council does now adopt and approve the plans, specifications, form of contract and estimate of cost for Project No STR21004, being the State Street Reconstruction Project in the city of Marshalltown, Iowa.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: April 25, 2022
RE: State Street Reconstruction (STR 21-004)

Policy Issue: City purchasing policy requires horizontal infrastructure projects exceeding $48,000 to go through a competitive bidding process with City Council approval of plans, specifications, form of contract, and opinion of cost in addition to holding a public hearing.

☒ Goal 1: Expand and improve development	☐ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 1 – Support the Marshalltown Central Business District and development in Downtown – Complete the State Street Reconstruction Project

Recommendation: Staff recommends approving plans, specifications, form of contract, and opinion of probable cost for said improvements.

Budget Impact: This project is planned to be funded through a combination of the GO Bonds, ARPA, Sanitary Sewer Enterprise, Storm Sewer Enterprise, and Marshalltown Water Works Funding.

Description/Background: The State Street Reconstruction Project was identified through the 2019 Downtown Master Plan and 2021 Downtown Implementation Plan. The project is to provide for complete reconstruction of State Street from N 3rd St to N 3rd Ave and pavement marking modifications from N 3rd Ave to N 5th Ave. The street section will include one east bound vehicular traffic lane, one west bound vehicular traffic lane, and one parallel parking lane on the south side of the traveled way. In addition to pavement reconstruction, significant public utility work and replacement is being completed for water, sanitary sewer, and storm sewer; a raised cycle track will be installed on the north side of State Street; and improved pedestrian access and safety through new sidewalks and intersection bump outs will be installed.

Design Engineering for this project was performed by Bolton & Menk. Construction is estimated to cost $ 5,715,546.50 for the base bid. In addition to the items included in this construction bid, additional project components include site furnishings, a structural/artistic monument, and street signs.

Due to the supply chain issues, the exact start of construction will be dependent on material delays and the Contractor's schedule. We have staged the project to limit construction to two construction seasons. If work begins in 2022, the substantial completion date is August 25th 2023. If work begins in 2023, the substantial completion date is August 31st, 2024. The project requires traffic and pavement to

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

be opened over the winter with the construction shut down required by late October. The first phase of construction is anticipated to be the stretch from N 1st Avenue to N 3rd Avenue.

The bid timeline is as follows:
- Optional Contractor Pre-Bid Conference at 10:00 AM, May 10th, 2022
- Receiving/Opening Bids at 10:00 AM, May 17th, 2022
- Awarding Bid at the May 23rd, 2022 council meeting.

Attachments: Official Notice of Hearing & Letting, Plans, Project Manual, Cost Estimate

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OFFICIAL NOTICE OF HEARING AND LETTING

CITY OF MARSHALLTOWN

MARSHALLTOWN, IOWA

STATE STREET RECONSTRUCTION

PROJECT NO. STR-21004

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, PROPOSED FORM OF CONTRACT AND ESTIMATED COST FOR THE STATE STREET RECONSTRUCTION IN THE CITY OF MARSHALLTOWN, IOWA, AND THE TAKING OF BIDS FOR SUCH IMPROVEMENTS.

A public hearing will be held at 5:30 p.m. local time on the 9th day of May, 2022 in the Council Chambers, Second Floor, 10 West State Street, Marshalltown, Iowa, on the proposed plans, specifications, proposed form of contract, and the estimated cost of improvements proposed to be constructed under PROJECT NO. STR-21004, the STATE STREET RECONSTRUCTION is now on file in the office of the City Clerk and at said hearing any interested person may appear and file objection thereto or to the bidding process.

Sealed proposals based upon the proposed plans, specifications, proposed form of contract, estimated costs of improvement, will be received at the City Clerk's Office located at 24 N. Center Street, Marshalltown, IA until 10:00 a.m. local time, on the 17th day of May, 2022 for the construction of the STATE STREET RECONSTRUCTION as described in the plans and specifications for Project No. STR-21004, and which will be opened, read, and tabulated by the City Engineer or his designate at that time, will be acted upon by the City Council of said City at a meeting to be held in the Council Chambers on the 23rd day of May, 2022 or at such later time and place as may then be fixed.

The proposed work will involve furnishing the labor, equipment, and materials necessary for constructing the STATE STREET RECONSTRUCTION in Marshalltown, Iowa as shown in the plans and specifications for PROJECT NO. STR-21004 the STATE STREET RECONSTRUCTION

The estimated quantities of materials and labor to be furnished in the construction of said improvements and on which bids will be received are as follows:

ESTIMATED PROJECT QUANTITIES				
BASE BID ITEMS				
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL EST. QUANT.
1	2010-108-C-0	CLEARING AND GRUBBING	LS	1
2	2010-108-D-2	AMENDED PLANTING SOIL	CY	83
3	2010-108-D-3	TOPSOIL, OFF-SITE	CY	352
4	2010-108-D-4	STRUCTURAL SOIL	CY	400
5	2010-108-E-0	EXCAVATION, CLASS 13	CY	5,295

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6	2010-108-G-0	SUBGRADE PREPARATION, 12 INCH	SY	14,033
7	2010-108-H-0	SUBGRADE TREATMENT, CEMENT STABILIZATION	TON	122
8	2010-108-H-0	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	14,033
9	2010-108-J-0	SUBBASE, MODIFIED, 4 INCH	SY	9,982
10	2010-108-J-0	SUBBASE, MODIFIED, 6 INCH	SY	1,181
11	2010-108-J-0	SUBBASE, MODIFIED, 8 INCH	SY	14,033
12	2010-108-I-0	SUBBASE, TEMPORARY GRANULAR MATERIAL	TON	200
13	2010-108-J-1	REMOVAL OF STRUCTURE, LIGHT POLE FOOTINGS	EA	8
14	2010-108-M-1	COMPACTION TESTING	LS	1
15	2010-108-X-X	EXPLORATORY EXCAVATION	HR	20
16	3010-108-C-0	TRENCH FOUNDATION	TON	200
17	3010-108-D-0	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	400
18	3010-108-F-0	TRENCH COMPACTION TESTING	LS	1
19	3010-201-X-0	DISPOSAL OF CONTAMINATED SOIL	TONS	2,084
20	3010-201-X-0	DISPOSAL OF CONTAMINATED GROUNDWATER	GAL	2,000
21	4010-108-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, SDR 26, 8 INCH	LF	2,772
22	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 6 INCH	EA	24
23	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 8 INCH	EA	1
24	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 10 INCH	EA	2
25	4010-108-I-0	SANITARY SEWER CLEANOUT	EA	1
26	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 6 INCH	LF	105
27	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	54
28	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	970
29	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	156
30	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 24 INCH	LF	818
31	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 30 INCH	LF	521
32	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 36 INCH	LF	292
33	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 36 INCH EQUIVALENT	LF	368
34	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 42 INCH EQUIVALENT	LF	427
35	4020-108-C-0	LINEAR TRENCH DRAIN	LF	9
36	4020-108-D-0	REMOVAL OF STORM SEWER, RCP, 36 INCH OR LESS	LF	3,051
37	4020-108-G-0	STORM SEWER ABANDONMENT, FILL AND PLUG	LF	106
38	4040-108-A-0	SUBDRAIN, PVC, 6 INCH	LF	2,519
39	4040-108-C-0	SUBDRAIN CLEANOUT, TYPE A-1, 6 INCH	EA	7
40	4040-108-D-0	SUBDRAIN OUTLETS AND CONNECTIONS	EA	29

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41	4050-108-G-3	BYPASS PUMPING	LS	1
42	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 4 INCH	LF	12
43	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 6 INCH	LF	604
44	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 10 INCH	LF	140
45	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 12 INCH	LF	2,778
46	5010-108-C-2	FITTING, DUCTILE IRON,	LB	4,146
47	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3/4 INCH	LF	281
48	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 INCH	LF	89
49	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 1/4 INCH	LF	73
50	5010-108-E-1	WATER SERVICE PIPE, COPPER, 2 INCH	LF	33
51	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3 INCH	LF	32
52	5010-108-E-1	WATER SERVICE PIPE, COPPER, 4 INCH FIRE PROTECTION	LF	19
53	5010-108-E-1	WATER SERVICE PIPE, COPPER, 6 INCH FIRE PROTECTION	LF	157
54	5010-108-E-3	WATER SERVICE CURB STOP AND BOX	EA	35
55	5010-108-H-1	WATER MAIN REMOVAL	LF	6,187
56	5020-108-A-0	VALVE, GATE, 6 INCH	EA	10
57	5020-108-A-0	VALVE, GATE, 10 INCH	EA	2
58	5020-108-A-0	VALVE, GATE, 12 INCH	EA	11
59	5020-108-C-0	FIRE HYDRANT ASSEMBLY	EA	6
60	5020-108-E-0	FLUSHING DEVICE (TEMPORARY BLOWOFF HYDRANT)	EA	20
61	5020-108-F-0	VALVE BOX ADJUSTMENT	EA	2
62	5020-108-G-0	VALVE BOX REPLACEMENT	EA	2
63	5020-108-I-0	FIRE HYDRANT ASSEMBLY REMOVAL	EA	6
64	5020-108-J-0	VALVE REMOVAL	EA	37
65	6010-108-A-0	SANITARY MANHOLE, SW-301, 48 INCH	EA	10
66	6010-108-A-0	STORM MANHOLE, SW-401, 48 INCH	EA	3
67	6010-108-A-0	STORM MANHOLE, SW-401, 60 INCH	EA	2
68	6010-108-A-0	STORM MANHOLE, SW-401, 72 INCH	EA	3
69	6010-108-A-0	STORM MANHOLE, SW-402, 6'X6'	EA	3
70	6010-108-B-0	INTAKE, SW-501	EA	2
71	6010-108-B-0	INTAKE, SW-505	EA	10
72	6010-108-B-0	INTAKE, SW-507	EA	9
73	6010-108-B-0	INTAKE, SW-509	EA	14
74	6010-108-B-0	INTAKE, SW-510, MODIFIED	EA	12
75	6010-108-B-0	INTAKE, SW-541	EA	4
76	6010-108-B-0	INTAKE, SW-512	EA	1
77	6010-108-E-0	MANHOLE ADJUSTMENT, MINOR	EA	3

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78	6010-108-F-0	MANHOLE ADJUSTMENT, MAJOR	EA	3
79	6010-108-G-0	CONNECTION TO EXISTING MANHOLE	EA	1
80	6010-108-H-0	REMOVE MANHOLE	EA	21
81	6010-108-H-0	REMOVE INTAKE	EA	25
82	7010-108-A-0	PAVEMENT, PCC, 8 INCH	SY	12,650
83	7010-108-E-0	CURB AND GUTTER, PCC, 6 INCH	LF	340
84	7010-108-F-0	BEAM CURB	LF	22
85	7010-108-I-0	PCC PAVEMENT SAMPLES AND TESTING	LS	1
86	7020-108-B-0	PAVEMENT, HMA, 5"	SY	60
87	7030-108-A-0	REMOVAL OF SIDEWALK	SY	4,411
88	7030-108-A-0	REMOVAL OF DRIVEWAY	SY	1,965
89	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 5 INCH	SY	1,788
90	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 6 INCH	SY	286
91	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 8 INCH	SY	54
92	7030-108-C-0	CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6 INCH	SY	15
93	7030-108-E-0	SIDEWALK, PCC, 5 INCH	SY	5,957
94	7030-108-E-0	SIDEWALK, PCC, 6 INCH	SY	661
95	7030-108-F-0	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE	SF	4,920
96	7030-108-G-0	DETECTABLE WARNING	SF	919
97	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6 INCH	SY	923
98	7030-108-H-1	DRIVEWAY, PAVED, PCC, 8 INCH	SY	204
99	7030-108-I-0	SIDEWALK ASSURANCE TESTING	LS	1
100	7030-108-I-0	CYCLE ASSURANCE TESTING	LS	1
101	7030-108-I-0	DRIVEWAY ASSURANCE TESTING	LS	1
102	7030-108-X-0	REINFORCED CONCRETE BAND, VARIABLE WIDTH	SF	1,041
103	7030-108-X-0	CONCRETE RAMP & STAIRS	SF	118
104	7040-108-H-0	PAVEMENT REMOVAL	SY	16,739
105	8010-108-A-0	TRAFFIC SIGNAL MODIFICATIONS	LS	1
106	8020-108-B-0	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	200
107	8020-108-G-0	PAINTED SYMBOLS AND LEGENDS	EA	33
108	8020-108-K-0	PAVEMENT MARKINGS REMOVED	STA	20
109	8020-108-L-0	SYMBOLS AND LEGENDS REMOVED	EA	6
110	8030-108-A-0	TEMPORARY TRAFFIC CONTROL	LS	1
111	8030-108-X-X	REMOVAL OF SIGN AND SIGN POST	EA	37
112	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (TYPE 1), FERTILIZING, AND MULCHING	AC	0
113	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (LOW MOW), FERTILIZING, AND MULCHING	AC	0
114	9020-108-A-0	SOD	SQ	164
115	9030-108-B-0	PERENNIAL GROUND COVER (1 GAL)	EA	1,052

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116	9030-108-B-0	DECIDUOUS TREE	EA	42
117	9030-108-X-X	TREE GRATE AND FRAME	EA	27
118	9040-108-A-1	SWPPP PREPARATION	LS	1
119	9040-108-A-2	SWPPP MANAGEMENT	LS	1
120	9040-108-D-1	FILTER SOCK, 8 INCH	LF	4,000
121	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	LF	444
122	9040-108-O-1	STABILIZED CONSTRUCTION ENTRANCE	SY	600
123	9040-108-Q-2	EROSION CONTROL MULCHING, HYDROMULCHING	AC	1
124	9040-108-T-1	INLET PROTECTION DEVICE,	EA	52
125	9080-108-B-0	HANDRAIL, STEEL	LF	51
126	11010-108-A-1	CONSTRUCTION SURVEY	LS	1
127	11010-108-B-1	MONUMENT PRESERVATION AND REPLACEMENT	LS	1
128	11020-108-A-1	MOBILIZATION	LS	1
129	11030-108-A-0	MAINTENANCE OF POSTAL SERVICE	LS	1
130	11030-108-B-0	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1
131	11040-108-A-0	TEMPORARY PEDESTRIAN RESIDENTIAL ACCESS	SY	400
132	11050-108-A-0	CONCRETE WASHOUT	LS	1
133	12010-108-X-2	MONUMENT FOUNDATION	EA	1
134	12020-108-X-1	ROCK MULCH	TON	10
135	12030-108-X-1	ELECTRICAL CONDUIT, OPEN CUT, HDPE OR PVC, 2-INCH	LF	226
136	12030-108-X-2	JUNCTION BOX, ELECTRICAL, 12"X18"	EA	2
137	12030-108-X-3	GFCI RECEPTACLE, PEDESTAL	EA	6
138	12040-108-X-3	IRRIGATION SYSTEM ADJUSTMENTS	LS	1
BID ALTERNATE 1				
A1	12040-108-X-X	TEMPORARY WATER SERVICE (ADDITIVE)	LS	1
A2	12040-108-X-X	WATERMAIN FITTINGS (DEDUCT)	LB	-568
A3	12040-108-X-X	FLUSHING DEVICE - TEMPORARY BLOWOFF HYDRANT (DEDUCT)	EA	-12

All work is to be done in strict compliance with the Plans and Specifications for said PROJECT NO. STR-21004 as proposed by the City Engineer.

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Obtaining the Bidding Documents

Plans, specifications and proposed contract documents may be examined at the office of the City Engineer, Marshalltown, Iowa, and at the office of the City Clerk, Marshalltown, Iowa. Bidding Documents may be downloaded from the City of Marshalltown's web site upon registration at no cost. The documents may be downloaded at https://www.marshalltown-ia.gov/Bids.aspx.

A deposit of $150 per paper set of plans, specifications and proposed contract documents will be charged, all of which will be refunded if the paper documents are returned in reusable condition within 14 days of the Award of Contract. If all paper documents are not returned in reusable condition and within 14 days, the deposit will be forfeited.

Pre-bid Conference

A pre-bid conference will be held for the Project on May 10th, 2022 @10am in the Marshalltown Coliseum

Instructions to Bidders.

A Bid must be accompanied by Bid security made payable to Owner in an amount of ten (10) percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions or a certified check in an amount equal to ten percent (10%) of the total amount of the bid, drawn on and certified payable by a solvent bank to the City Treasurer of the City. Such Bid bond will be issued in the form included in the Bidding Documents.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

The City Council reserves the right to reject any and all bids and to waive technicalities and irregularities and all bids must remain effective for a period of 30 days of opening same.

This Notice to Bidders is hereby published by authority of resolution duly adopted by the Council of the City of Marshalltown on the 25th day of April, 2022.

Owner: City of Marshalltown

By: Alicia Hunter

Title: City Clerk

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ENGINEER'S ESTIMATE

STATE STREET RECONSTRUCTION

CITY OF MARSHALLTOWN

BMI PROJECT NO. 0A1.125646

BOLTON & MENK
Real People. Real Solutions.

April 20, 2022

Item No.	Item	Unit	Estimated Quantity	Unit Price	Total Amount
1	CLEARING AND GRUBBING	LS	1	$2,500.00	$2,500.00
2	AMENDED PLANTING SOIL	CY	83	$80.00	$6,640.00
3	TOPSOIL, OFF-SITE	CY	352	$50.00	$17,600.00
4	STRUCTURAL SOIL	CY	400	$200.00	$80,000.00
5	EXCAVATION, CLASS 13	CY	5295	$18.00	$95,310.00
6	SUBGRADE PREPARATION, 12 INCH	SY	14033	$3.50	$49,115.50
7	SUBGRADE TREATMENT, CEMENT STABILIZATION	TON	122	$150.00	$18,300.00
8	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	14033	$4.50	$63,148.50
9	SUBBASE, MODIFIED, 4 INCH	SY	9982	$10.00	$99,820.00
10	SUBBASE, MODIFIED, 6 INCH	SY	1181	$12.00	$14,172.00
11	SUBBASE, MODIFIED, 8 INCH	SY	14033	$14.00	$196,462.00
12	SUBBASE, TEMPORARY GRANULAR MATERIAL	TON	200	$50.00	$10,000.00
13	REMOVAL OF STRUCTURE, LIGHT POLE FOOTINGS	EA	8	$500.00	$4,000.00
14	COMPACTION TESTING	LS	1	$5,000.00	$5,000.00
15	EXPLORATORY EXCAVATION	HR	20	$200.00	$4,000.00
16	TRENCH FOUNDATION	TON	200	$50.00	$10,000.00
17	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	400	$30.00	$12,000.00
18	TRENCH COMPACTION TESTING	LS	1	$4,000.00	$4,000.00
19	DISPOSAL OF CONTAMINATED SOIL	TONS	2084	$150.00	$312,600.00
20	DISPOSAL OF CONTAMINATED GROUNDWATER	GAL	2000	$1.75	$3,500.00
21	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, SDR 26, 8 INCH	LF	2772	$50.00	$138,600.00
22	SANITARY SEWER SERVICE REPLACEMENT, 6 INCH	EA	24	$2,000.00	$48,000.00
23	SANITARY SEWER SERVICE REPLACEMENT, 8 INCH	EA	1	$2,500.00	$2,500.00
24	SANITARY SEWER SERVICE REPLACEMENT, 10 INCH	EA	2	$3,000.00	$6,000.00
25	SANITARY SEWER CLEANOUT	EA	1	$1,200.00	$1,200.00
26	STORM SEWER, TRENCHED, PVC, 6 INCH	LF	105	$18.00	$1,890.00
27	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	54	$65.00	$3,510.00
28	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	970	$70.00	$67,900.00
29	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	156	$75.00	$11,700.00
30	STORM SEWER, TRENCHED, RCP, 24 INCH	LF	818	$90.00	$73,620.00
31	STORM SEWER, TRENCHED, RCP, 30 INCH	LF	521	$95.00	$49,495.00
32	STORM SEWER, TRENCHED, RCP, 36 INCH	LF	292	$110.00	$32,120.00
33	STORM SEWER, TRENCHED, RCAP, 36 INCH EQUIVALENT	LF	368	$150.00	$55,200.00
34	STORM SEWER, TRENCHED, RCAP, 42 INCH EQUIVALENT	LF	427	$150.00	$64,050.00
35	LINEAR TRENCH DRAIN	LF	9	$250.00	$2,250.00
36	REMOVAL OF STORM SEWER, RCP, 36 INCH OR LESS	LF	3051	$10.00	$30,510.00
37	STORM SEWER ABANDONMENT, FILL AND PLUG	LF	106	$12.00	$1,272.00
38	SUBDRAIN, PVC, 6 INCH	LF	2519	$18.00	$45,342.00
39	SUBDRAIN CLEANOUT, TYPE A-1, 6 INCH	EA	7	$1,200.00	$8,400.00
40	SUBDRAIN OUTLETS AND CONNECTIONS	EA	29	$500.00	$14,500.00
41	BYPASS PUMPING	LS	1	$40,000.00	$40,000.00
42	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 4 INCH	LF	12	$42.00	$504.00
43	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 6 INCH	LF	604	$48.00	$28,992.00
44	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 10 INCH	LF	140	$85.00	$11,900.00
45	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 12 INCH	LF	2778	$95.00	$263,910.00
46	FITTING, DUCTILE IRON,	LB	4146	$9.00	$37,314.00
47	WATER SERVICE PIPE, COPPER, 3/4 INCH	LF	281	$33.00	$9,273.00
48	WATER SERVICE PIPE, COPPER, 1 INCH	LF	89	$35.00	$3,115.00
49	WATER SERVICE PIPE, COPPER, 1 1/4 INCH	LF	73	$37.50	$2,737.50
50	WATER SERVICE PIPE, COPPER, 2 INCH	LF	33	$40.00	$1,320.00
51	WATER SERVICE PIPE, COPPER, 3 INCH	LF	32	$42.00	$1,344.00
52	WATER SERVICE PIPE, COPPER, 4 INCH FIRE PROTECTION	LF	19	$45.00	$855.00
53	WATER SERVICE PIPE, COPPER, 6 INCH FIRE PROTECTION	LF	157	$50.00	$7,850.00
54	WATER SERVICE CURB STOP AND BOX	EA	35	$900.00	$31,500.00
55	WATER MAIN REMOVAL	LF	6187	$10.00	$61,870.00
56	VALVE, GATE, 6 INCH	EA	10	$2,000.00	$20,000.00

57	VALVE, GATE, 10 INCH	EA	2	$3,000.00	$6,000.00
58	VALVE, GATE, 12 INCH	EA	11	$4,000.00	$44,000.00
59	FIRE HYDRANT ASSEMBLY	EA	6	$7,000.00	$42,000.00
60	FLUSHING DEVICE (TEMPORARY BLOWOFF HYDRANT)	EA	20	$3,000.00	$60,000.00
61	VALVE BOX ADJUSTMENT	EA	2	$500.00	$1,000.00
62	VALVE BOX REPLACEMENT	EA	2	$1,000.00	$2,000.00
63	FIRE HYDRANT ASSEMBLY REMOVAL	EA	6	$1,500.00	$9,000.00
64	VALVE REMOVAL	EA	37	$400.00	$14,800.00
65	SANITARY MANHOLE, SW-301, 48 INCH	EA	10	$5,500.00	$55,000.00
66	STORM MANHOLE, SW-401, 48 INCH	EA	3	$5,000.00	$15,000.00
67	STORM MANHOLE, SW-401, 60 INCH	EA	2	$6,200.00	$12,400.00
68	STORM MANHOLE, SW-401, 72 INCH	EA	3	$7,500.00	$22,500.00
69	STORM MANHOLE, SW-402, 6'X6'	EA	3	$10,000.00	$30,000.00
70	INTAKE, SW-501	EA	2	$3,500.00	$7,000.00
71	INTAKE, SW-505	EA	10	$5,500.00	$55,000.00
72	INTAKE, SW-507	EA	9	$6,000.00	$54,000.00
73	INTAKE, SW-509	EA	14	$6,500.00	$91,000.00
74	INTAKE, SW-510, MODIFIED	EA	12	$8,000.00	$96,000.00
75	INTAKE, SW-541	EA	4	$6,500.00	$26,000.00
76	INTAKE, SW-512	EA	1	$2,200.00	$2,200.00
77	MANHOLE ADJUSTMENT, MINOR	EA	3	$1,200.00	$3,600.00
78	MANHOLE ADJUSTMENT, MAJOR	EA	3	$2,500.00	$7,500.00
79	CONNECTION TO EXISTING MANHOLE	EA	1	$1,000.00	$1,000.00
80	REMOVE MANHOLE	EA	21	$1,200.00	$25,200.00
81	REMOVE INTAKE	EA	25	$1,000.00	$25,000.00
82	PAVEMENT, PCC, 8 INCH	SY	12650	$70.00	$885,500.00
83	CURB AND GUTTER, PCC, 6 INCH	LF	340	$45.00	$15,300.00
84	BEAM CURB	LF	22	$40.00	$880.00
85	PCC PAVEMENT SAMPLES AND TESTING	LS	1	$6,000.00	$6,000.00
86	PAVEMENT, HMA, 5"	SY	60	$60.00	$3,600.00
87	REMOVAL OF SIDEWALK	SY	4411	$11.00	$48,521.00
88	REMOVAL OF DRIVEWAY	SY	1965	$11.00	$21,615.00
89	CYCLE TRACK, INTEGRAL COLORED PCC, 5 INCH	SY	1788	$115.00	$205,620.00
90	CYCLE TRACK, INTEGRAL COLORED PCC, 6 INCH	SY	286	$125.00	$35,750.00
91	CYCLE TRACK, INTEGRAL COLORED PCC, 8 INCH	SY	54	$145.00	$7,830.00
92	CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6 INCH	SY	15	$140.00	$2,100.00
93	SIDEWALK, PCC, 5 INCH	SY	5957	$55.00	$327,635.00
94	SIDEWALK, PCC, 6 INCH	SY	661	$60.00	$39,660.00
95	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE	SF	4920	$29.00	$142,680.00
96	DETECTABLE WARNING	SF	919	$40.00	$36,760.00
97	DRIVEWAY, PAVED, PCC, 6 INCH	SY	923	$55.00	$50,765.00
98	DRIVEWAY, PAVED, PCC, 8 INCH	SY	204	$55.00	$11,220.00
99	SIDEWALK ASSURANCE TESTING	LS	1	$4,000.00	$4,000.00
100	CYCLE ASSURANCE TESTING	LS	1	$4,000.00	$4,000.00
101	DRIVEWAY ASSURANCE TESTING	LS	1	$4,000.00	$4,000.00
102	REINFORCED CONCRETE BAND, VARIABLE WIDTH	SF	1041	$12.00	$12,492.00
103	CONCRETE RAMP & STAIRS	SF	118	$250.00	$29,500.00
104	PAVEMENT REMOVAL	SY	16739	$11.00	$184,129.00
105	TRAFFIC SIGNAL MODIFICATIONS	LS	1	$20,000.00	$20,000.00
106	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	200	$75.00	$15,000.00
107	PAINTED SYMBOLS AND LEGENDS	EA	33	$400.00	$13,200.00
108	PAVEMENT MARKINGS REMOVED	STA	20	$40.00	$800.00
109	SYMBOLS AND LEGENDS REMOVED	EA	6	$140.00	$840.00
110	TEMPORARY TRAFFIC CONTROL	LS	1	$40,000.00	$40,000.00
111	REMOVAL OF SIGN AND SIGN POST	EA	37	$125.00	$4,625.00
112	CONVENTIONAL SEEDING, SEEDING (TYPE 1), FERTILIZING, AND MULCHING	AC	0.01	$2,500.00	$25.00
113	CONVENTIONAL SEEDING, SEEDING (LOW MOW), FERTILIZING, AND MULCHING	AC	0.05	$2,500.00	$125.00
114	SOD	SQ	164	$90.00	$14,760.00
115	PERENNIAL GROUND COVER (1 GAL)	EA	1052	$24.00	$25,248.00
116	DECIDUOUS TREE	EA	42	$600.00	$25,200.00
117	TREE GRATE AND FRAME	EA	27	$4,500.00	$121,500.00
118	SWPPP PREPARATION	LS	1	$1,500.00	$1,500.00
119	SWPPP MANAGEMENT	LS	1	$5,000.00	$5,000.00
120	FILTER SOCK, 8 INCH	LF	4000	$4.00	$16,000.00

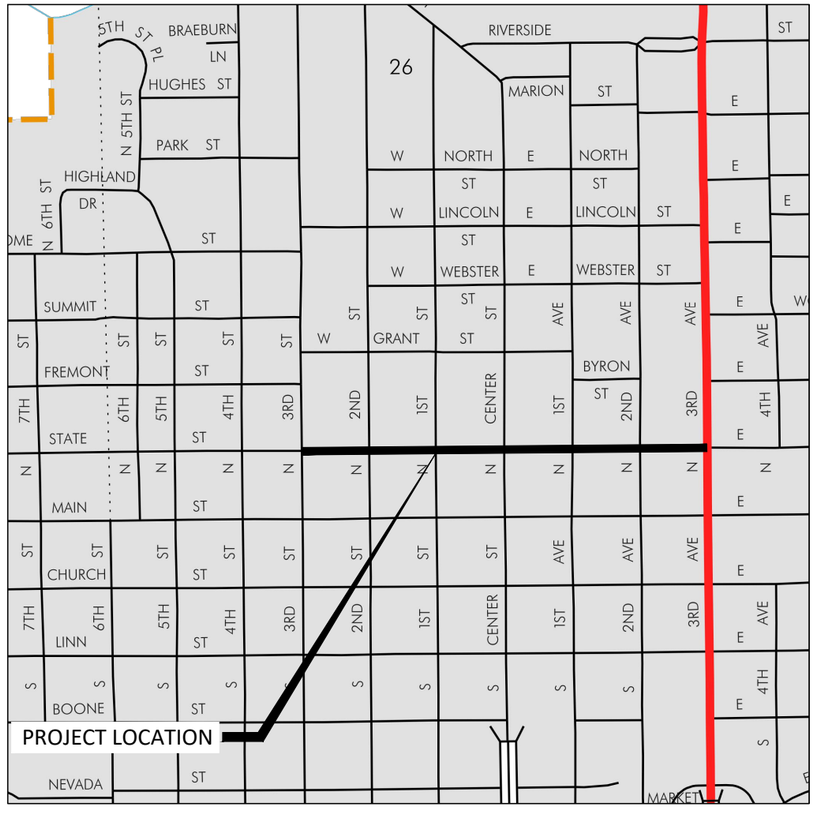
121	SILT FENCE OR SILT FENCE DITCH CHECK	LF	444	$4.00	$1,776.00
122	STABILIZED CONSTRUCTION ENTRANCE	SY	600	$10.00	$6,000.00
123	EROSION CONTROL MULCHING, HYDROMULCHING	AC	1	$1,500.00	$1,500.00
124	INLET PROTECTION DEVICE,	EA	52	$200.00	$10,400.00
125	HANDRAIL, STEEL	LF	51	$225.00	$11,475.00
126	CONSTRUCTION SURVEY	LS	1	$50,000.00	$50,000.00
127	MONUMENT PRESERVATION AND REPLACEMENT	LS	1	$2,500.00	$2,500.00
128	MOBILIZATION	LS	1	$324,000.00	$324,000.00
129	MAINTENANCE OF POSTAL SERVICE	LS	1	$5,000.00	$5,000.00
130	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1	$2,000.00	$2,000.00
131	TEMPORARY PEDESTRIAN RESIDENTIAL ACCESS	SY	400	$8.00	$3,200.00
132	CONCRETE WASHOUT	LS	1	$1,000.00	$1,000.00
133	MONUMENT FOUNDATION	EA	1	$5,000.00	$5,000.00
134	ROCK MULCH	TON	10	$140.00	$1,400.00
135	ELECTRICAL CONDUIT, OPEN CUT, HDPE OR PVC, 2-INCH	LF	226	$4.00	$904.00
136	JUNCTION BOX, ELECTRICAL, 12"X18"	EA	2	$2,200.00	$4,400.00
137	GFCI RECEPTACLE, PEDESTAL	EA	6	$750.00	$4,500.00
138	IRRIGATION SYSTEM ADJUSTMENTS	LS	1	$1,200.00	$1,200.00
139					
140					
			OPINION OF PROBABLE CONSTRUCTION COST:		**$5,715,546.50**
	ALTERNATE A				
A1	TEMPORARY WATER SERVICE (ADDITIVE)	LS	1	$50,000.00	$50,000.00
A2	WATERMAIN FITTINGS (DEDUCT)	LB	-568	$9.00	-$5,112.00
A3	FLUSHING DEVICE - TEMPORARY BLOWOFF HYDRANT (DEDUCT)	EA	-12	$3,000.00	-$36,000.00
A4					
A5					
			ALTERNATE A - PROBABLE CONSTRUCTION COST:		**$8,888.00**

CITY OF MARSHALLTOWN

CONSTRUCTION PLANS FOR

STATE STREET RECONSTRUCTION

April, 2022



MAP OF PORTIONS OF THE
CITY OF MARSHALLTOWN
MARSHALL COUNTY, IA

MARSHALL COUNTY, IA

GOVERNING SPECIFICATIONS

THE 2022 EDITION OF THE "IOWA STATEWIDE URBAN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS" AND CITY OF MARSHALLTOWN SPECIFICATIONS.

MUTCD 2009 AS ADOPTED BY IOWA DEPARTMENT OF TRANSPORTATION.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.

IOWA ONE CALL
1-800-292-8989 | 811
www.iowaonecall.com

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY IOWA ONE CALL 1-800-292-8989 OR 811

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

RESOURCE LIST

CITY OF MARSHALLTOWN

City Hall
24 N Center Street
Marshalltown, IA 50158
(641) 754-5701

City Administrator:
Jessica Kinser

Mayor: Joel Greer

City Council Members:
Gary Thompson
Barry Kell
Jeff Schneider
Mike Ladehoff
Gabriel Isom
Dex Walker
Al Hoop

City Engineer:
Heather Thomas

Water Pollution Control
Superintendent:
Bob Ranson
(641) 754-5709

UTILITIES

GAS
Alliant Energy
Alliant Energy Field Engineer
(800) 255-4268

TELEPHONE
Centurylink
Sadie Hull
(918) 547-0147

LOCAL:
Marshalltown Water Works
Zach Maxfield
(641) 753-7913

City of Marshalltown Sewer
Troy McGahuey
(641) 751-9608

CABLE / INTERNET
Mediacom
Curt Hodges
(515) 669-3647

Heart of Iowa Ventures
Jay Duncan
(641) 486-2211

ELECTRIC
City of Marshalltown
Heather Thomas
(641) 754-5734

PLAN REVISIONS		
DATE	SHEET NUMBER	APPROVED BY

SHEET NUMBER	SHEET TITLE
A.01 - A.02	TITLE SHEET, LEGEND SHEET
B.01 - B.16	TYPICAL SECTIONS AND TYPICAL DETAILS
C.01 - C.21	QUANTITIES, ESTIMATE REFERENCE NOTES, & TABULATIONS
CE.01 - CE.05	EROSION CONTROL SHEETS
D.01 - D.05	PLAN & PROFILE - STATE STREET
E.01 - E.06	PLAN & PROFILE - SIDE STREETS
F.01 - F.05	REMOVAL SHEETS
G.01 - G.02	REFERENCES & BENCHMARKS
H.01 - H.05	RIGHT-OF-WAY SHEETS
J.01 - J.07	STAGING AND TRAFFIC CONTROL SHEETS
K.01 - K.07	PAVEMENT MARKING SHEETS
L1.01 - L1.10	INTERSECTION DETAIL SHEETS
L2.01 - L2.10	JOINTING SHEETS
M.01 - M.15	STORM SEWER SHEETS
M.16 - M.23	SANITARY SEWER SHEETS
M.24 - M.32	WATERMAIN SHEETS
N.01	TRAFFIC SIGNAL SHEETS
S.01 - S.07	SIDEWALK SHEETS
T.00 - T.10	STREETSCAPE SHEETS
W.01 - W.14	CROSS SECTIONS - STATE STREET

THIS PLAN SET CONTAINS 166 SHEETS.

REVIEWED & APPROVED Heather Thomas DATE: 04/21/2022
PUBLIC WORKS DIRECTOR

CASEY BYERS 00637 PROFESSIONAL LANDSCAPE ARCHITECT IOWA

I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND RESPONSIBLE CHARGE. I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.

CASEY BYERS, L.A.

REG. NO. 00637 DATE: 4/20/2022

MY LICENSE RENEWAL DATE IS JUNE 30, 2023

PAGES OR SHEETS COVERED BY THIS SEAL:

B.12-B.16, T.00-T.10

GREGORY A. BROUSSARD 21974 LICENSED PROFESSIONAL ENGINEER IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

GREGORY A. BROUSSARD, P.E.

REG. NO. 21974 DATE: 4/20/2022

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023

PAGES OR SHEETS COVERED BY THIS SEAL:

ALL SHEETS EXCEPT T.00-T.10

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED JDA
DRAWN DEM
CHECKED GAB
CLIENT PROJ. NO. 0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TITLE SHEET

SHEET A.01

EXISTING TOPOGRAPHIC SYMBOLS

- ACCESS GRATE
- AIR CONDITION UNIT
- ANTENNA
- AUTO SPRINKLER CONNECTION
- BARRICADE PERMANENT
- BASKETBALL POST
- BENCH
- BIRD FEEDER
- BOLLARD
- BUSH
- CATCH BASIN RECTANGULAR CASTING
- CATCH BASIN CIRCULAR CASTING
- CURB STOP
- CLEAN OUT
- CULVERT END
- DRINKING FOUNTAIN
- DOWN SPOUT
- FILL PIPE
- FIRE HYDRANT
- FLAG POLE
- FLARED END / APRON
- FUEL PUMP
- GRILL
- GUY WIRE ANCHOR
- HANDHOLE
- HANDICAP SPACE
- IRRIGATION SPRINKLER HEAD
- IRRIGATION VALVE BOX
- LIFT STATION CONTROL PANEL
- LIFT STATION
- LIGHT POLE
- MAILBOX
- MANHOLE-COMMUNICATION
- MANHOLE-ELECTRIC
- MANHOLE-GAS
- MANHOLE-HEAT
- MANHOLE-SANITARY SEWER
- MANHOLE-STORM SEWER
- MANHOLE-UTILITY
- MANHOLE-WATER
- METER
- ORDER MICROPHONE
- PARKING METER
- PAVEMENT MARKING
- PEDESTAL-COMMUNICATION
- PEDESTAL-ELECTRIC
- PEDESTRIAN PUSH BUTTON
- PICNIC TABLE
- POLE-UTILITY
- POST
- RAILROAD SIGNAL POLE
- REGULATION STATION GAS
- SATELLITE DISH
- SIGN TRAFFIC
- SIGNAL CONTROL CABINET
- SOIL BORING
- SIREN
- TELEPHONE BOOTH
- TILE INLET
- TILE OUTLET
- TILE RISER
- TRANSFORMER-ELECTRIC
- TREE-CONIFEROUS
- TREE-DEAD
- TREE-DECIDUOUS
- TREE STUMP
- TRAFFIC ARM BARRIER
- TRAFFIC SIGNAL
- TRASH CAN
- UTILITY MARKER
- VALVE
- VALVE POST INDICATOR
- VALVE VAULT
- VENT PIPE
- WATER SPIGOT
- WELL
- WETLAND DELINEATED MARKER
- WETLAND
- WET WELL
- YARD HYDRANT

PROPOSED TOPOGRAPHIC SYMBOLS

- CLEANOUT
- MANHOLE
- LIFT STATION
- STORM SEWER CIRCULAR CASTING
- STORM SEWER RECTANGULAR CASTING
- STORM SEWER FLARED END / APRON
- STORM SEWER OUTLET STRUCTURE
- STORM SEWER OVERFLOW STRUCTURE
- CURB BOX
- FIRE HYDRANT
- WATER VALVE
- WATER REDUCER
- WATER BEND
- WATER TEE
- WATER CROSS
- WATER SLEEVE
- WATER CAP / PLUG
- RIP RAP
- DRAINAGE FLOW
- TRAFFIC SIGNS
- LIGHT POLE

SURVEY SYMBOLS

- BENCH MARK LOCATION
- CONTROL POINT
- MONUMENT IRON FOUND
- CAST IRON MONUMENT

EXISTING TOPOGRAPHIC LINES

- RETAINING WALL
- FENCE
- FENCE-DECORATIVE
- GUARD RAIL
- TREE LINE
- BUSH LINE

SURVEY LINES

- CONTROLLED ACCESS
- BOUNDARY
- CENTERLINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- SETBACK LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- TEMPORARY EASEMENT

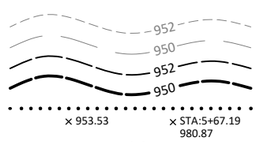
EXISTING UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE

PROPOSED UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- PIPE CASING

GRADING INFORMATION



- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- PROPOSED CONTOUR MINOR
- PROPOSED CONTOUR MAJOR
- PROPOSED GRADING LIMITS / SLOPE LIMITS
- PROPOSED SPOT ELEVATION
- RISE:RUN (SLOPE)

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY IOWA ONE CALL - 1-800-292-8989

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

- UNDERGROUND FIBER OPTIC
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS
- UNDERGROUND COMMUNICATION
- OVERHEAD ELECTRIC
- OVERHEAD COMMUNICATION
- OVERHEAD UTILITY

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GV	GATE VALVE	RT	RIGHT
ADJ	ADJUST	HDPE	HIGH DENSITY POLYETHYLENE	SAN	SANITARY SEWER
ALT	ALTERNATE	HH	HANDHOLE	SCH	SCHEDULE
B-B	BACK TO BACK	HMA	HOT MIX ASPHALT	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL.	CLASS	MH	MANHOLE	TYP	TYPICAL
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VCP	VITRIFIED CLAY PIPE
C.O.	CHANGE ORDER	MPW	MUSCATINE POWER & WATER	VERT	VERTICAL
COMM	COMMUNICATION	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
CSP	CORRUGATED STEEL PIPE	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CLVT	CULVERT	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
DIA	DIAMETER	NTS	NOT TO SCALE	WM	WATERMAIN
DIP	DUCTILE IRON PIPE	NWL	NORMAL WATER LEVEL	WS	WATER SERVICE
DWY	DRIVEWAY	OHW	ORDINARY HIGH WATER LEVEL		
E	EXTERNAL CURVE DISTANCE	PC	POINT OF CURVE		
ESMT	EASEMENT	PCC	PORTLAND CEMENT CONCRETE	AC	ACRES
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CF	CUBIC FEET
ELEV/EL	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CV	COMPACTED VOLUME
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	CY	CUBIC YARD
ER	END RADIUS	PERM	PERMANENT	EA	EACH
EX	EXISTING	PI	POINT OF INTERSECTION	EV	EXCAVATED VOLUME
FES	FLARED END SECTION	PL	PROPERTY LINE	LB	POUND
F-F	FACE TO FACE	PRC	POINT OF REVERSE CURVE	LF	LINEAR FEET
FF	FINISHED FLOOR	PT	POINT OF TANGENT	LS	LUMP SUM
F&I	FURNISH AND INSTALL	PVC	POLYVINYL CHLORIDE PIPE	LV	LOOSE VOLUME
FM	FORCEMAIN	PVMT	PAVEMENT	SF	SQUARE FEET
FO	FIBER OPTIC	R	RADIUS	SV	STOCKPILE VOLUME
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE	SY	SQUARE YARD
GRAN	GRANULAR	RET	RETAINING		
GRAV	GRAVEL	R/W	RIGHT-OF-WAY		
GU	GUTTER	RSC	RIGID STEEL CONDUIT		

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Phone: (515) 233-6100
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GAB			
CLIENT PROJ. NO.			
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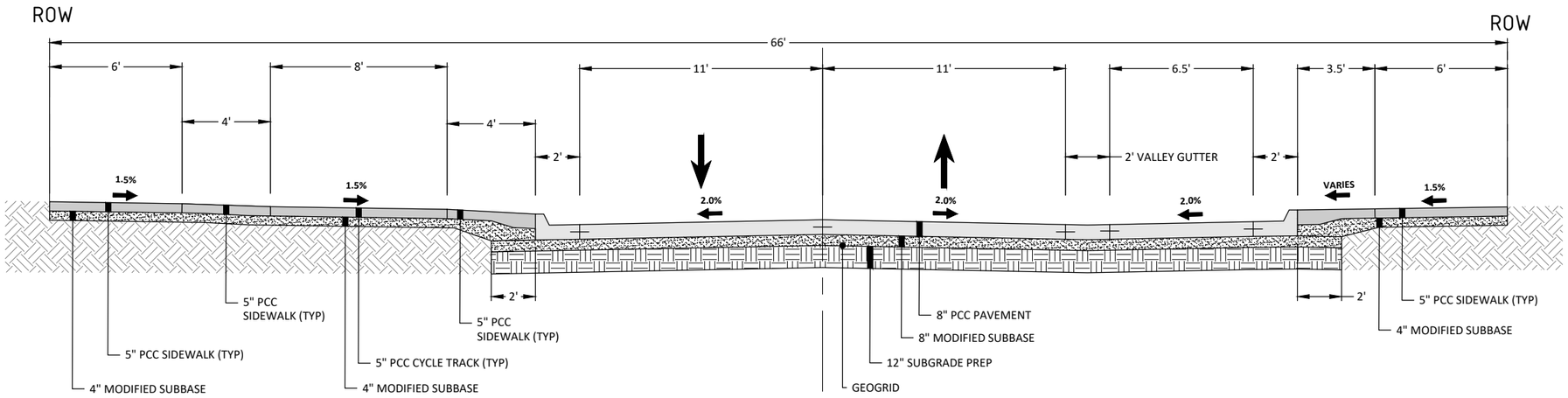
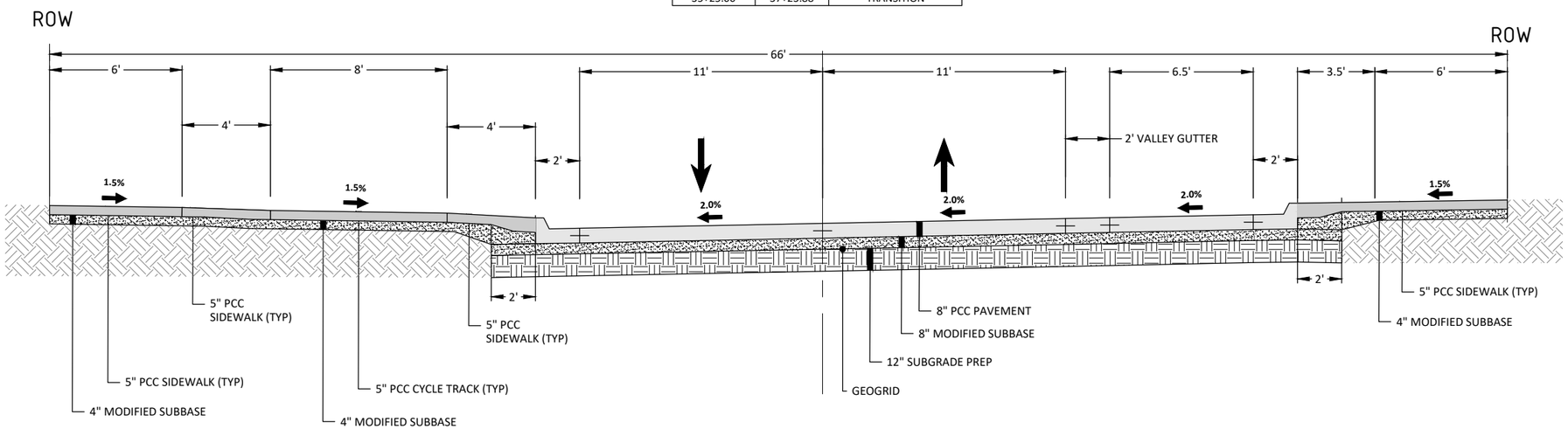
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
LEGEND SHEET

SHEET
A.02



1 / B.01 STATE STREET TYPICAL SECTION
NOT TO SCALE

STATION RANGES		
BEGIN STATION	END STATION	TYPICAL SECTION USED
10+50.00	10+69.02	TRANSITION
10+69.02	15+50.00	1
15+50.00	16+50.00	TRANSITION
16+50.00	24+00.00	2
24+00.00	25+00.00	TRANSITION
25+00.00	35+25.00	1
35+25.00	37+23.88	TRANSITION



2 / B.01 STATE STREET TYPICAL SECTION
NOT TO SCALE

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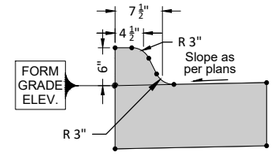
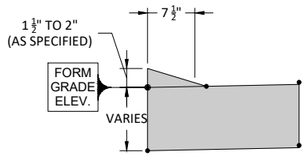
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TYPICAL SECTIONS

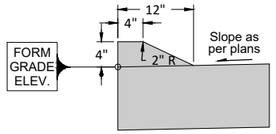
SHEET
B.01



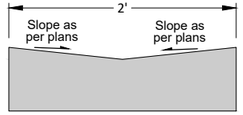
6" STANDARD CURB



DRIVEWAY DROP CURB

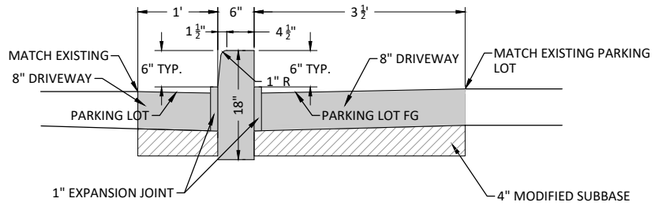


4" SLOPED CURB



VALLEY GUTTER

* VALLEY GUTTER SHALL BE POURED AS INTEGRAL TO MAINLINE PAVING

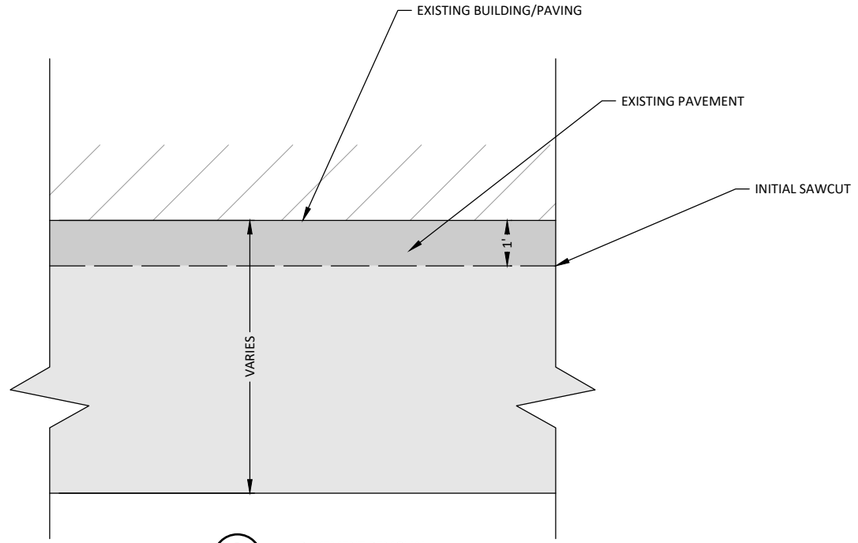


BEAM CURB
(AT 107 E STATE)

1 / B.02 TYPICAL CURB DETAILS
NOT TO SCALE

PAVEMENT REMOVAL PROCESS

1. FULL DEPTH SAWCUT 1' FROM BUILDING FACE OR EXISTING PAVEMENT
2. REMOVE PAVEMENT OUTSIDE OF 1' STRIP
3. REMOVE 1' OF REMAINING MATERIAL USING HAND-HELD JACK HAMMER WEIGHING 30 POUNDS OR LESS OR OTHER LIGHT DUTY EQUIPMENT WHICH WILL NOT CAUSE DISTRESS ON BUILDING OR PAVEMENT TO REMAIN.



2 / B.02 PAVEMENT REMOVAL
NOT TO SCALE

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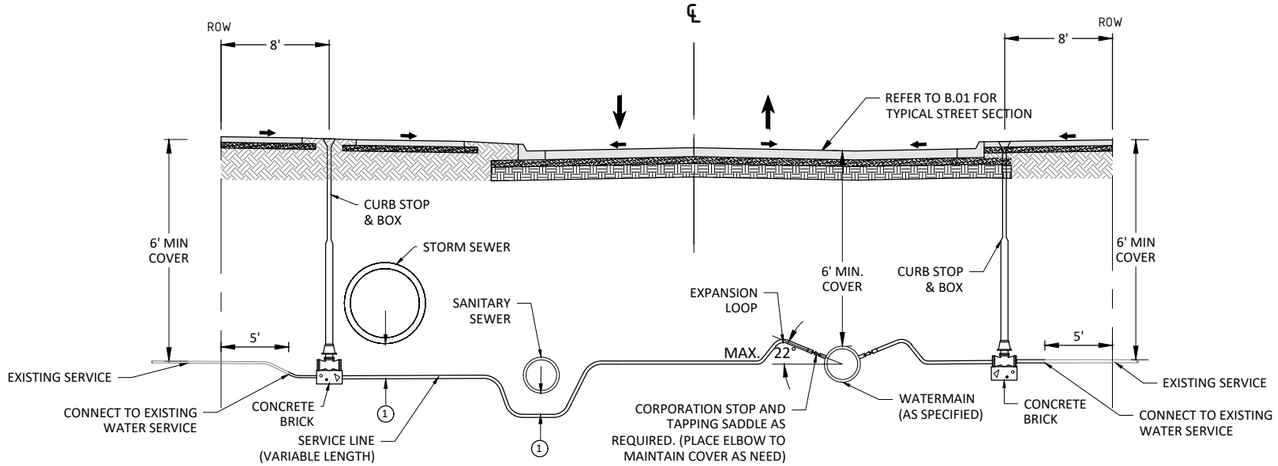
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TYPICAL DETAILS

SHEET
B.02

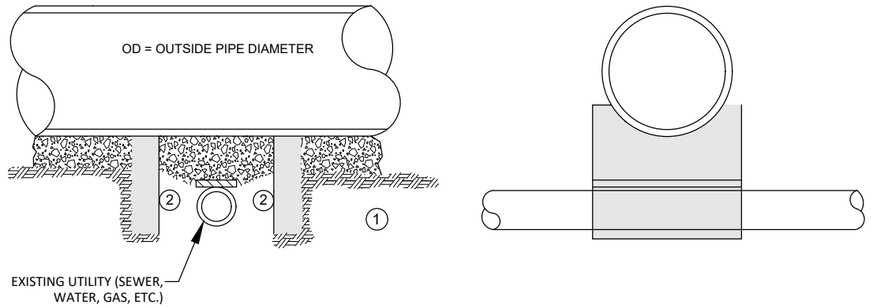


1 VERIFY SANITARY AND STORM SEWER PIPE ELEVATION TO MAINTAIN 1.5' SEPARATION AND A MINIMUM OF 6' COVER OR CONSTRUCT WATER SERVICE BELOW SANITARY AND STORM SEWER WITH 1.5' MINIMUM SEPARATION.

INSTALL PIPE SUPPORT FOR ALL NEW SEWERS 12 INCHES IN DIAMETER OR LARGER WHEN CLEARANCE BETWEEN BOTTOM OF NEW SEWER AND TOP OF EXISTING LINE IS 18 INCHES OR LESS.

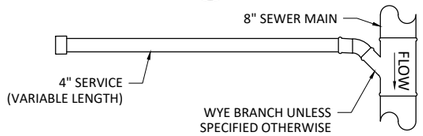
1 COMPLY WITH FIGURE SW-101.

2 FORM INTERIOR SURFACE OF FOOTINGS. KEEP THE 12 INCH UTILITY CLEAR ZONE FREE OF CONCRETE.

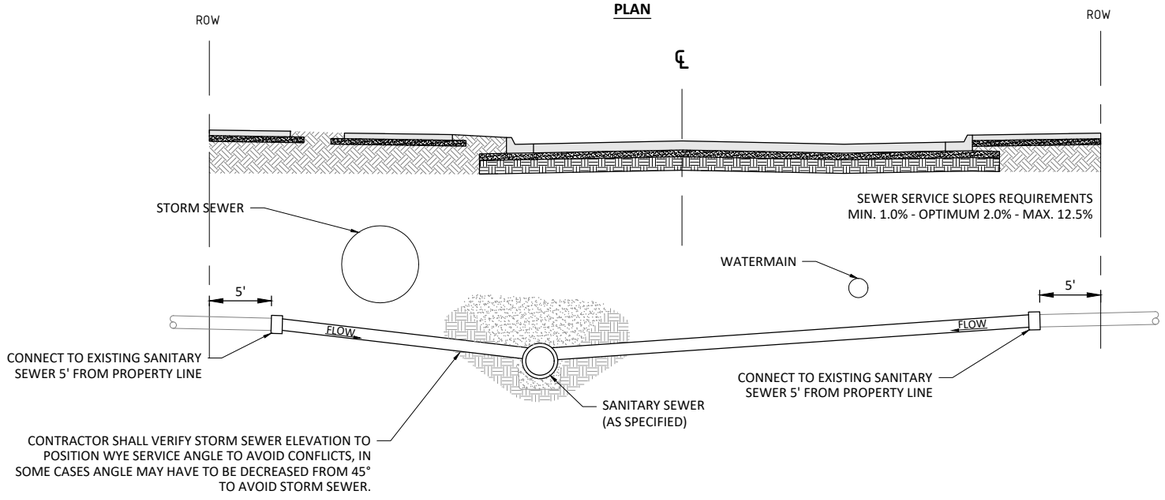


3 B.03 UTILITY CROSSING
NOT TO SCALE

1 B.03 WATER SERVICE DETAIL
NOT TO SCALE

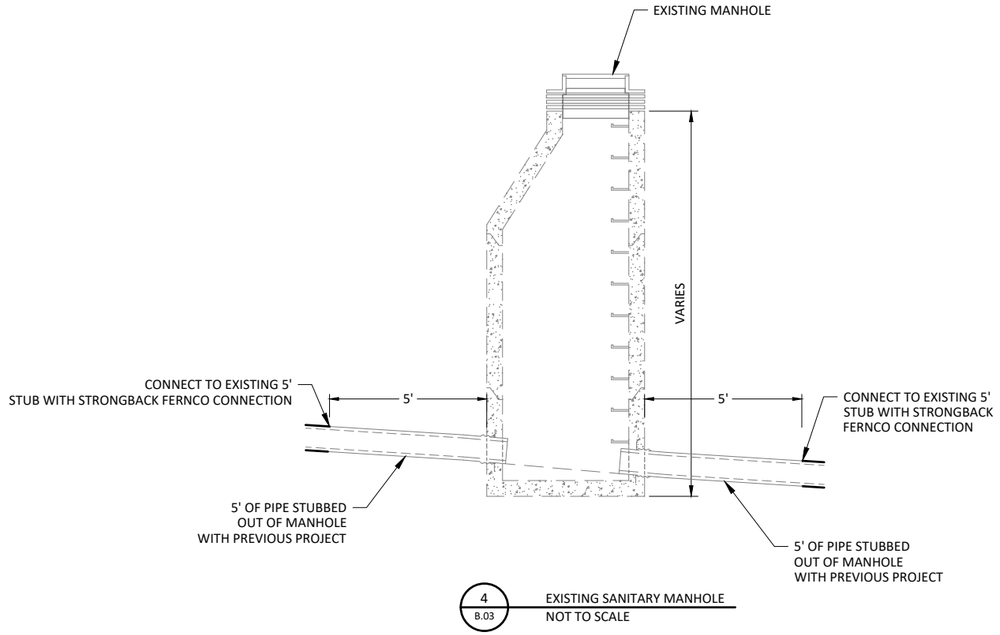


PLAN



PROFILE

2 B.03 SANITARY SERVICE DETAIL
NOT TO SCALE



4 B.03 EXISTING SANITARY MANHOLE
NOT TO SCALE

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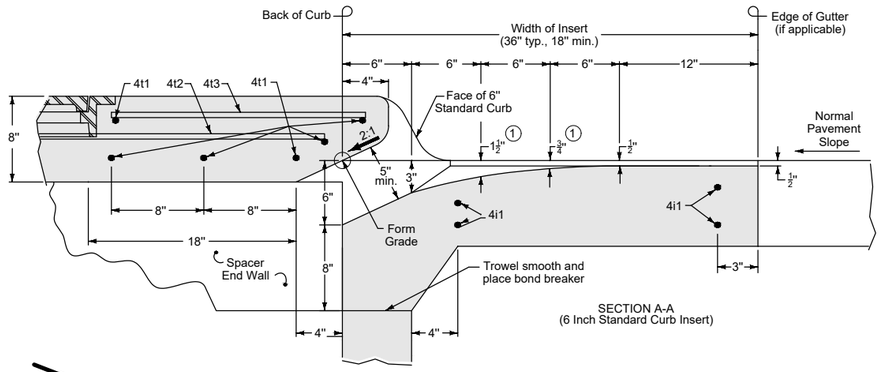
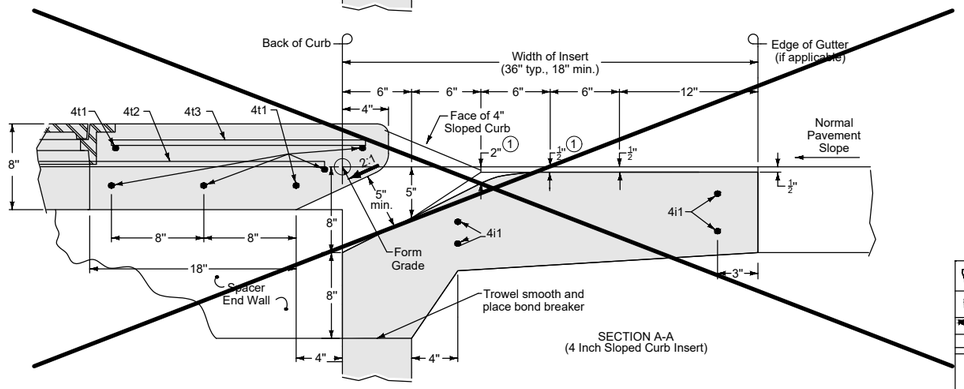
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TYPICAL DETAILS

SHEET
B.03

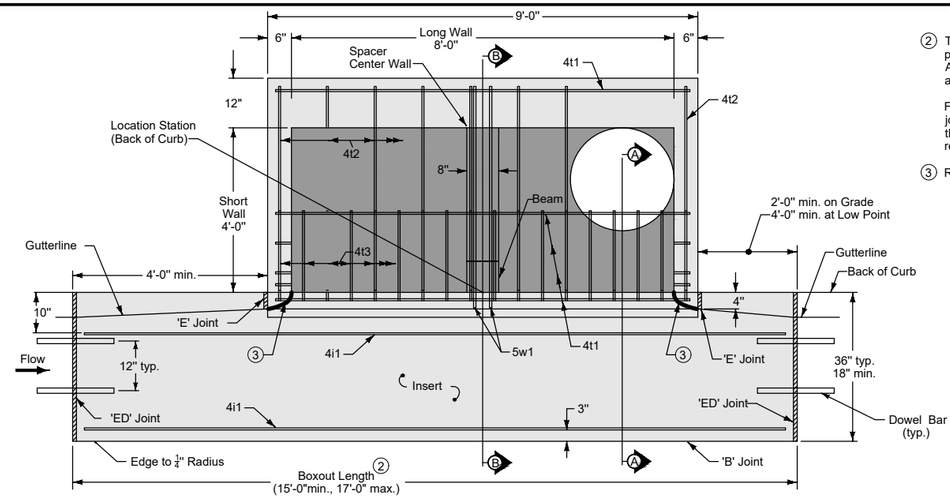


SECTION A-A
(6 Inch Standard Curb Insert)



SECTION A-A
(4 Inch Sloped Curb Insert)

① Insert shaping may be modified for insert widths less than 36 inches. For an 18 inch insert, reduce dimensions indicated by ¼ inch.



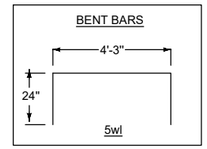
PLAN

② Transverse joint spacing on new concrete pavement is controlled by the intake boxout. Adjust adjacent joint spacing as required to accommodate boxouts.

For retrofit intakes, match existing pavement joints. Stop any transverse pavement joints that do not conform to the minimum spacing requirements at the edge of the insert area.

③ Rounded shaping at inlet.

REINFORCING BAR LIST						
Mark	Size	Location	Shape	Count	Length	Spacing
4b1	4	Base	——	9	4'-6"	12"
4b2	4	Base	——	6	8'-6"	11"
4i1	4	Insert	——	4	Boxout Length minus 8"	See Insert
4t1	4	Top	——	7	8'-6"	See Plan
4t2	4	Top	——	8	4'-4"	12"
4t3	4	Top	——	18	1'-10"	6"
4w1	4	Walls	——	24	Wall Height minus 4"	13"
4w2	4	Long Walls	——	Varies	4'-8"	12"
4w3	4	Short Walls	——	Varies	8'-8"	12"
5w1	5	Beam	⌐	2	8'-3"	4"



MODIFIED

SUDAS | STANDARD ROAD PLAN | REVISION 6 04-21-20 | SW-509 | SHEET 1 of 3

REVISIONS: Added Class I Bedding Material and changed maximum box out length to 17

Paul D. Wiegand
SUDAS DIRECTOR — DESIGN METHODS ENGINEER

DOUBLE OPEN-THROAT CURB INTAKE, SMALL BOX

FIGURE 6010.510 SHEET 1 OF 3

MODIFIED

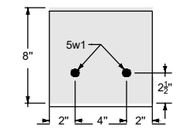
SUDAS | STANDARD ROAD PLAN | REVISION 6 04-21-20 | SW-509 | SHEET 2 of 3

REVISIONS: Added Class I Bedding Material and changed maximum box out length to 17

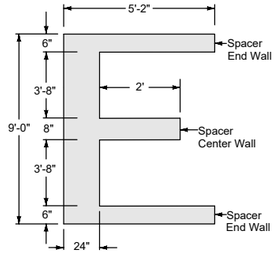
Paul D. Wiegand
SUDAS DIRECTOR — DESIGN METHODS ENGINEER

DOUBLE OPEN-THROAT CURB INTAKE, SMALL BOX

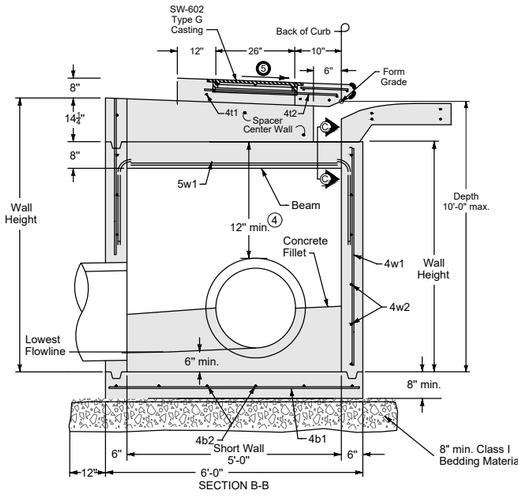
FIGURE 6010.510 SHEET 2 OF 3



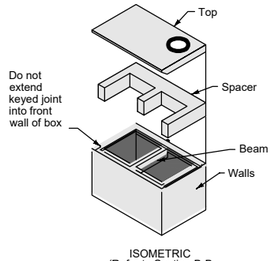
SECTION C-C



PLAN
(SPACER)



SECTION B-B



ISOMETRIC
(Refer to Section B-B for alignment of Top with Spacer)

④ 12 inch minimum wall height above all pipes.

⑤ Slope of 1.5% or as specified in the contract documents.

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	42"	42"
Long Wall	60"	66"

MODIFIED

SUDAS | STANDARD ROAD PLAN | REVISION 6 04-21-20 | SW-509 | SHEET 3 of 3

REVISIONS: Added Class I Bedding Material and changed maximum box out length to 17

Paul D. Wiegand
SUDAS DIRECTOR — DESIGN METHODS ENGINEER

DOUBLE OPEN-THROAT CURB INTAKE, SMALL BOX

FIGURE 6010.510 SHEET 3 OF 3

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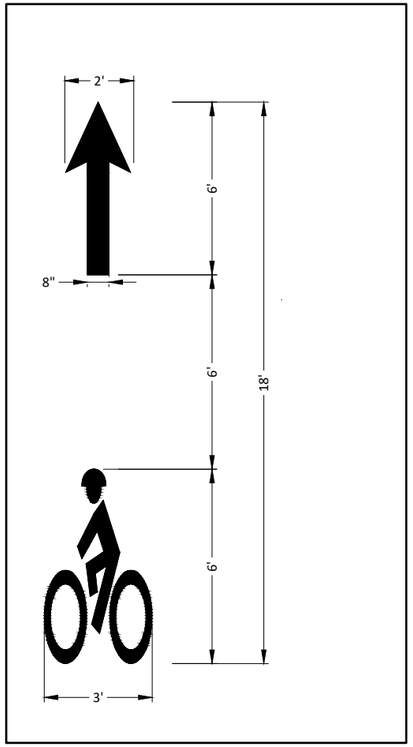
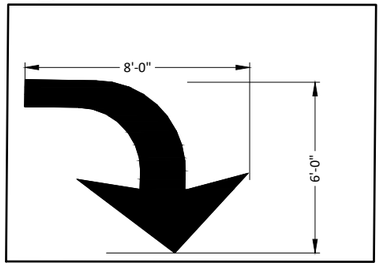
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
MODIFIED SW-510 DETAIL

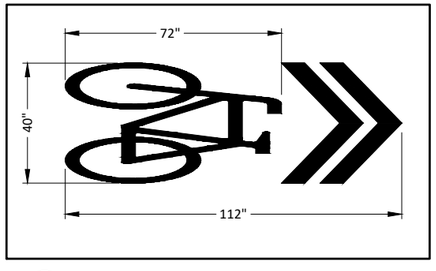
SHEET
B.04



1 B.05 CYCLE TRACK MARKING

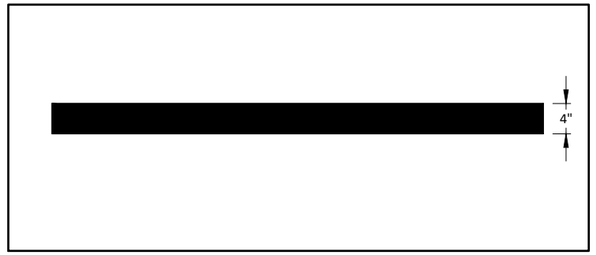


2 B.05 LTAW - LEFT TURN ARROW (WHITE)

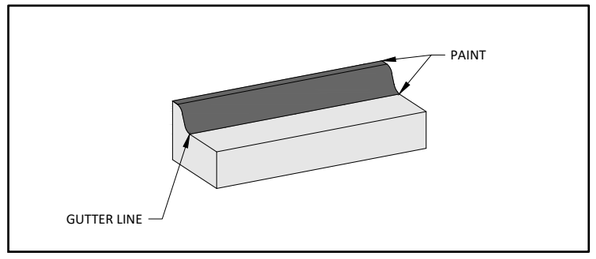


3 B.05 SLSW - SHARED LANE MARKING (WHITE)

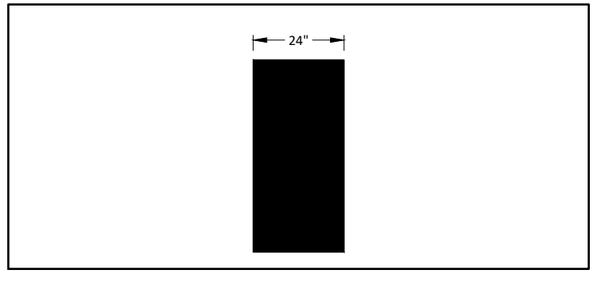
4 B.05 DCY4 - DOUBLE CENTERLINE (YELLOW)



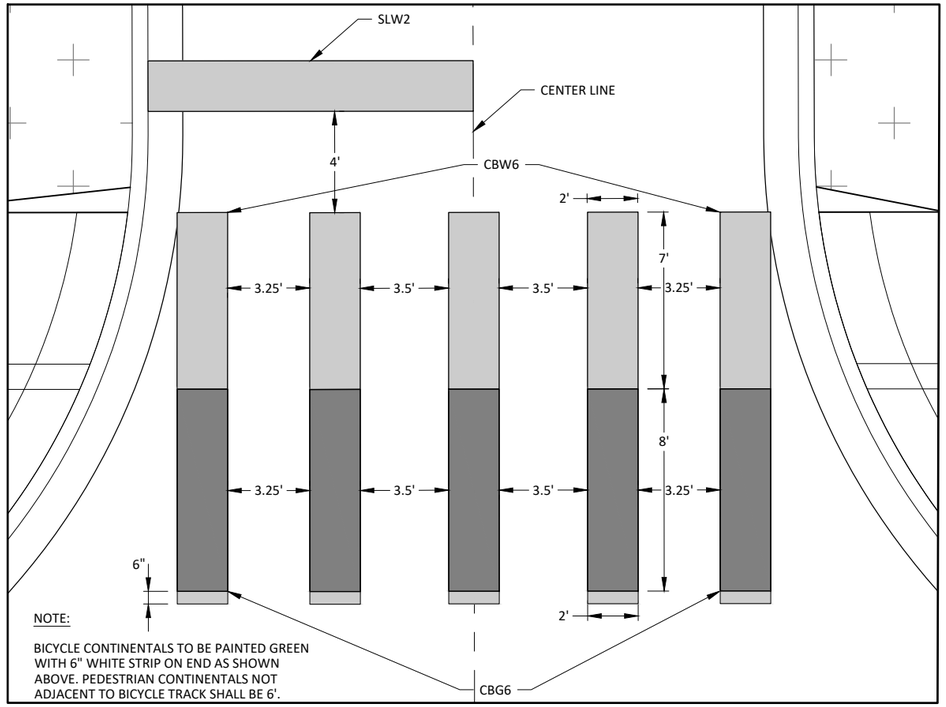
5 B.05 CHW4 - PARKING STALL LINE



6 B.05 STY6 - STANDARD CURB 6" (YELLOW)



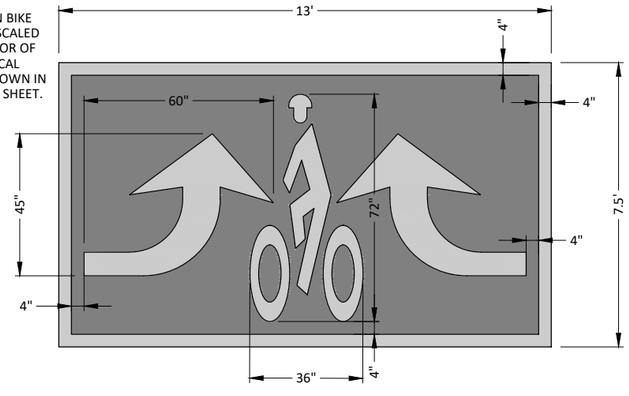
7 B.05 SLW2 - STOP LINE (WHITE)



8 B.05 CBW6/CBG6 - BICYCLE AND PEDESTRIAN CROSSWALK

NOTE:

TURN ARROWS IN BIKE BOXES SHALL BE SCALED DOWN BY A FACTOR OF 0.625 FROM TYPICAL TURN ARROW SHOWN IN DETAIL B ON THIS SHEET.



NOTE:

BIKE BOXES SHALL BE PAINTED GREEN WITH A 4" WHITE STRIP AROUND THE BOX.

9 B.05 DOUBLE TURN BIKE BOX

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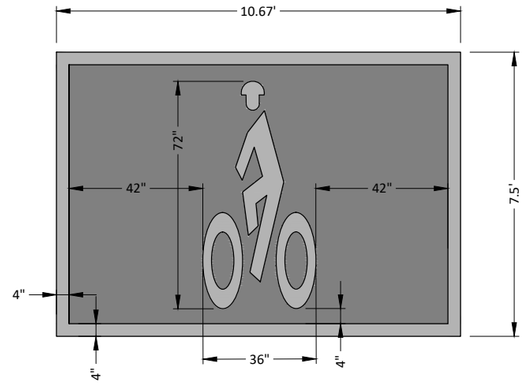
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING DETAILS

SHEET B.05



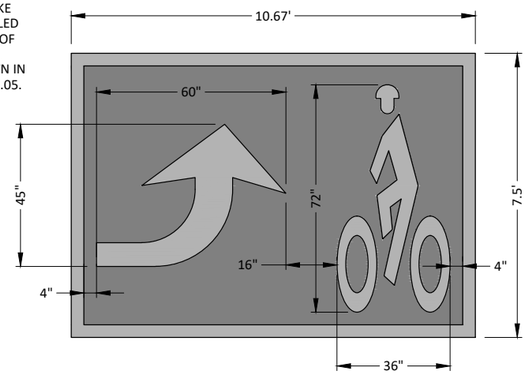
NOTE:

BIKE BOXES SHALL BE PAINTED GREEN WITH A 4" WHITE STRIP AROUND THE BOX.

10 B.06 STANDARD BIKE BOX

NOTE:

TURN ARROWS IN BIKE BOXES SHALL BE SCALED DOWN BY A FACTOR OF 0.625 FROM TYPICAL TURN ARROW SHOWN IN DETAIL B ON SHEET B.05.



NOTE:

BIKE BOXES SHALL BE PAINTED GREEN WITH A 4" WHITE STRIP AROUND THE BOX.

11 B.06 SINGLE TURN BIKE BOX

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING DETAILS

SHEET B.06

5" SIDEWALK

1/2" EXPANSION JOINT

6" SIDEWALK

6" SIDEWALK

6" SIDEWALK

5" SIDEWALK

CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6INCH

6'

6'

6'

1'

11.3'

5" SIDEWALK

9'

6" CYCLE TRACK

6" CYCLE TRACK

6" SIDEWALK

5" CYCLE TRACK

8'

1/2" EXPANSION JOINT

10'

9'

8'

6" SIDEWALK

6" SIDEWALK

5" SIDEWALK

4'

4'

NOTES:

1. TYPICAL INTERSECTION SHOWN. DIMENSIONS MAY VARY
2. REFER TO DETAILS ON B.10 FOR JOINT REINFORCEMENT DETAILS.

1' FLARE (TYP.)

DETECTABLE WARNING PANEL

CONCRETE BAND

CONCRETE UNIT PAVER

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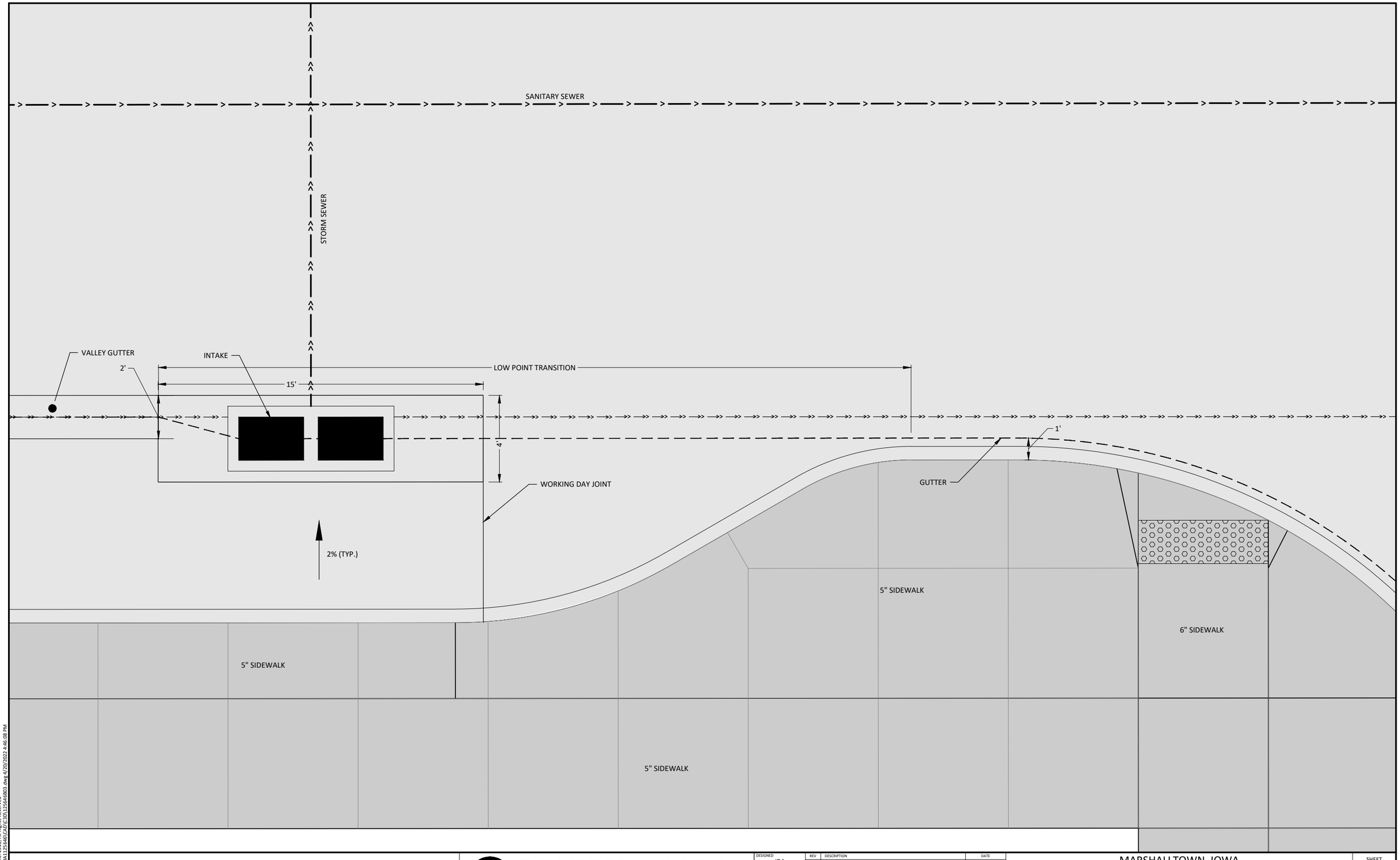
MARSHALLTOWN, IOWA

STATE STREET RECONSTRUCTION

STREET QUADRANT DETAIL

SHEET B.07



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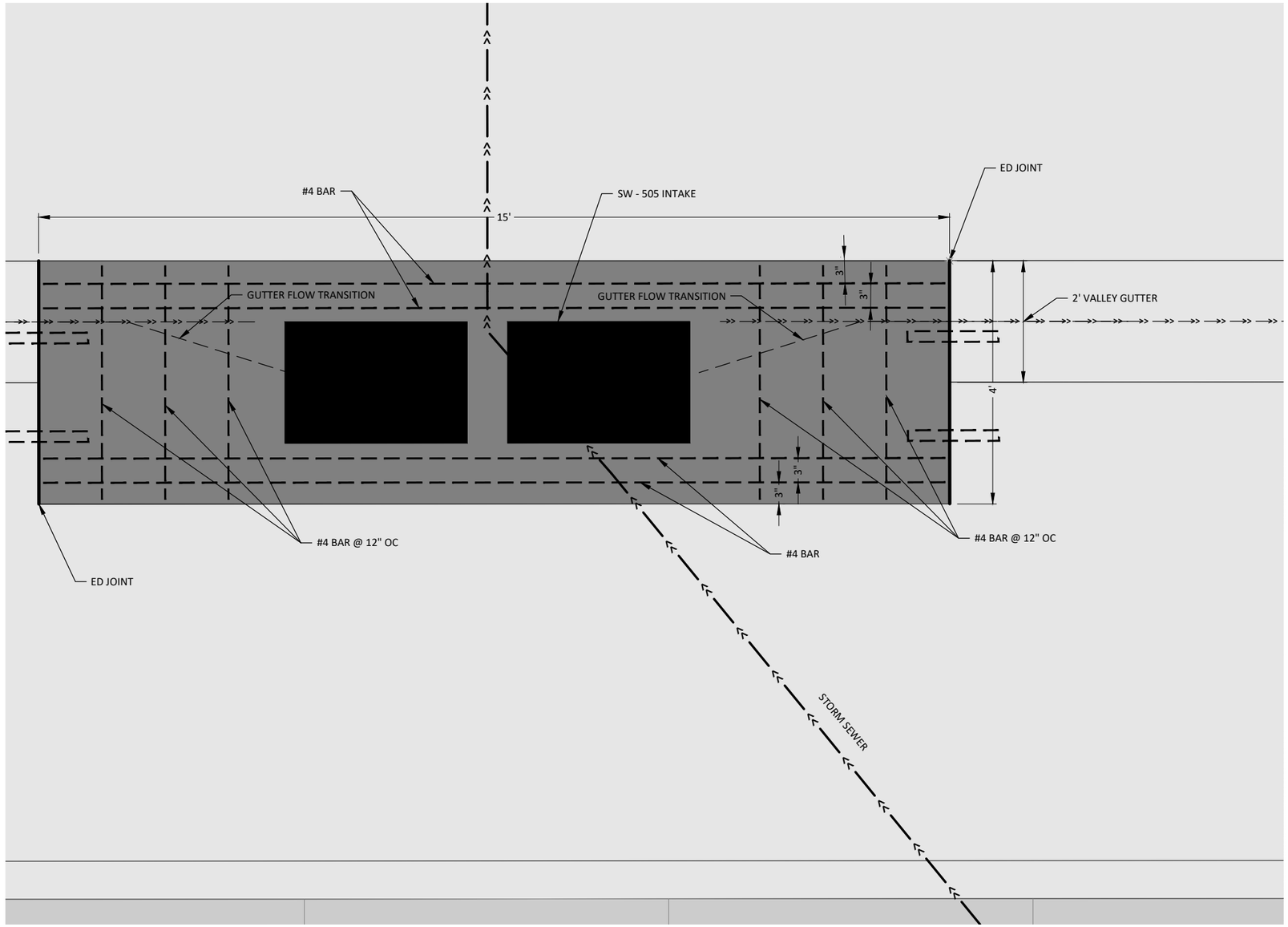
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
VALLEY GUTTER TRANSITION

SHEET
B.08



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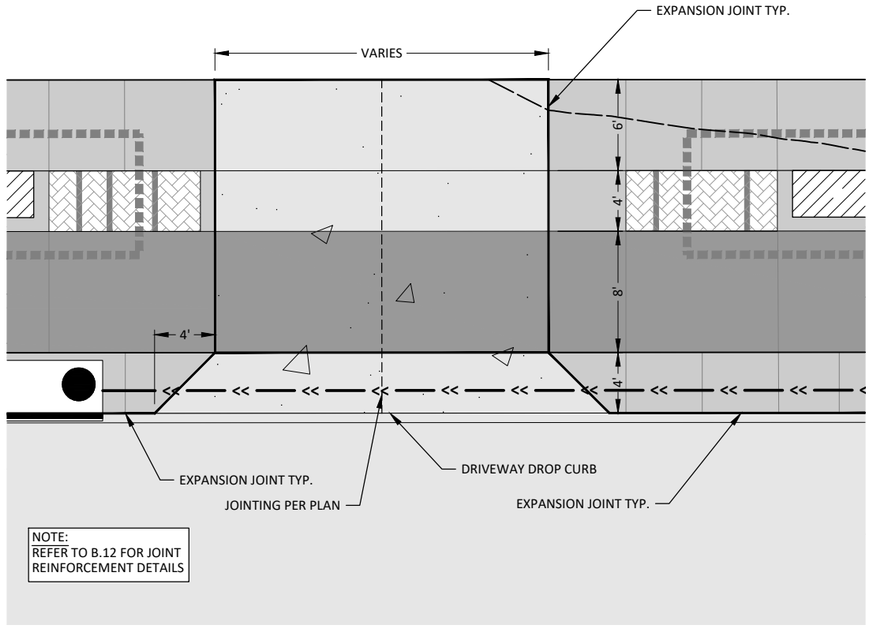
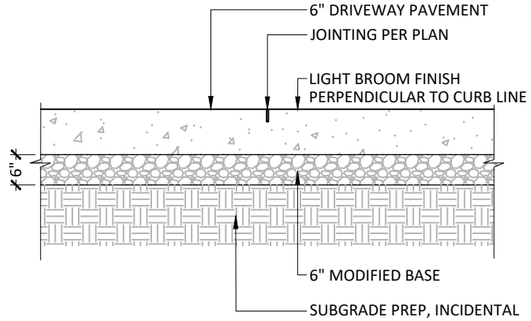
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STORM INTAKE BOX OUT

SHEET
B.09



1 / B.10 CONCRETE DRIVEWAY DETAIL



NOTE - ALL DRIVEWAY PAVEMENT SHALL BE 6" UNLESS NOTED OTHERWISE.

2 / B.10 DRIVEWAY, PCC
NOT TO SCALE

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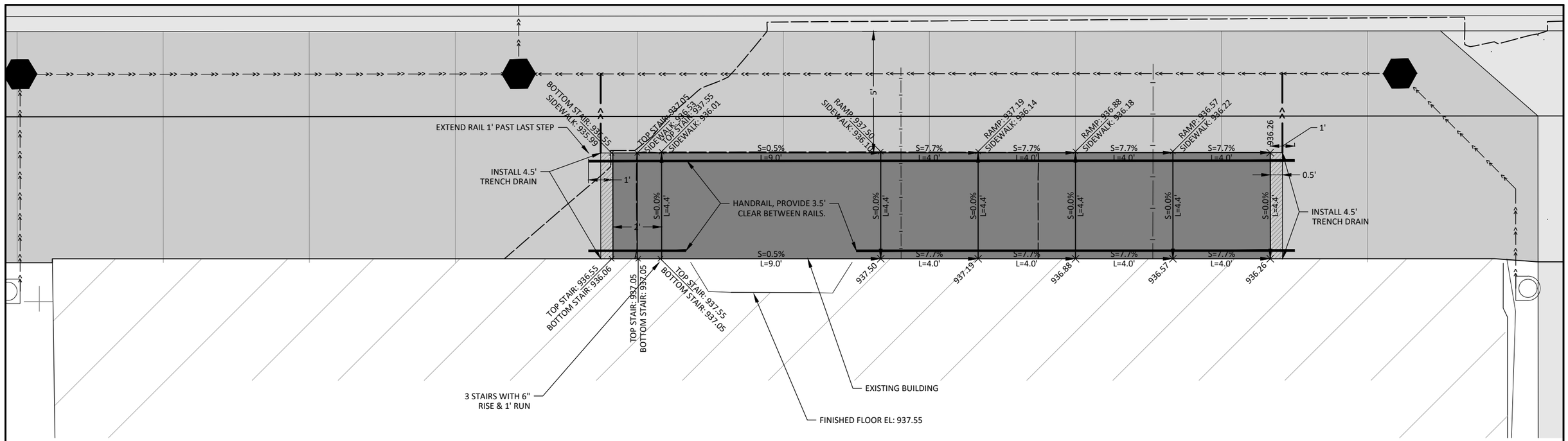
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
DRIVEWAY DETAIL

SHEET
B.10



1 / B.11 — 205 E. STATE ST. RAMP AND STAIR DETAIL

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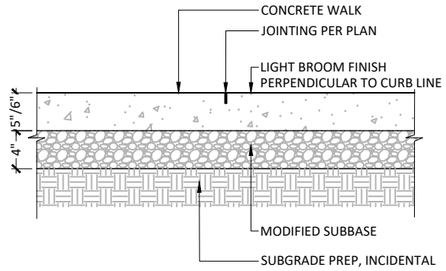
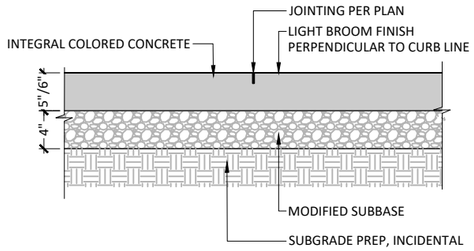
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ACCESSIBLE RAMP DETAIL

SHEET B.11

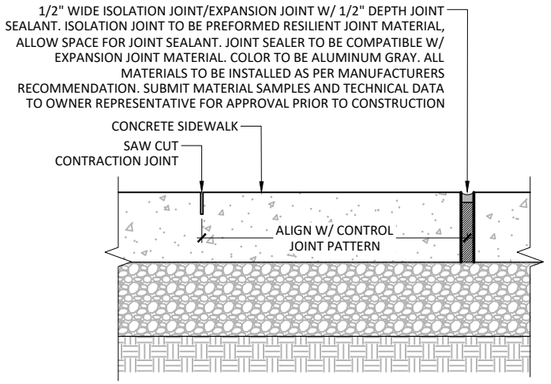


1 SIDEWALK, PCC
SCALE: N.T.S.

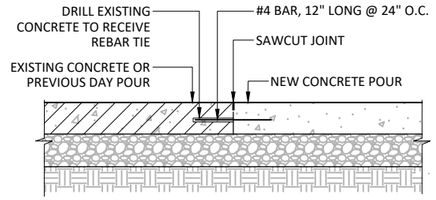
NOTE: SEE PLAN FOR CHANGES IN PAVEMENT THICKNESS



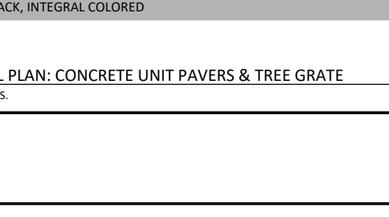
2 CYCLE TRACK, INTEGRAL COLORED PCC
SCALE: N.T.S.



3 CONCRETE SIDEWALK JOINTS
SCALE: N.T.S.



4 SIDEWALK REINFORCED CONSTRUCTION JOINT
SCALE: N.T.S.



5 TYPICAL SECTION: CONCRETE SIDEWALK AT BUILDING
SCALE: N.T.S.

6 SIDEWALK TO DRIVEWAY CONNECTION
SCALE: N.T.S.

7 CONCRETE UNIT PAVERS
SCALE: N.T.S.

8 THICKENED SIDEWALK EDGE AT CONCRETE UNIT PAVERS
SCALE: N.T.S.

9 TYPICAL PLAN: CONCRETE UNIT PAVERS & TREE GRATE
SCALE: N.T.S.

STAMP PRODUCT INFORMATION:

4" X 12" BRICK BORDER BY BRICKFORM

STAMP SIZE - 12" X 48"

OR APPROVED EQUAL

10 DETECTABLE EDGE DETAIL: STAMPED INTEGRAL COLORED PCC
SCALE: N.T.S.

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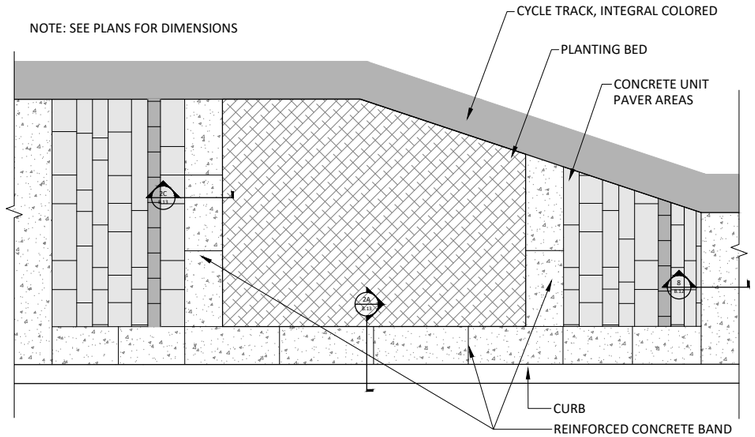
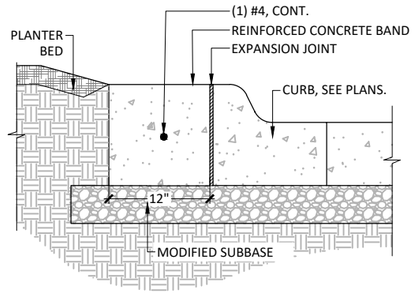
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE DETAILS

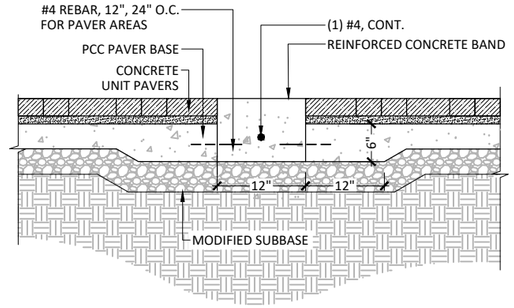
SHEET
B.12



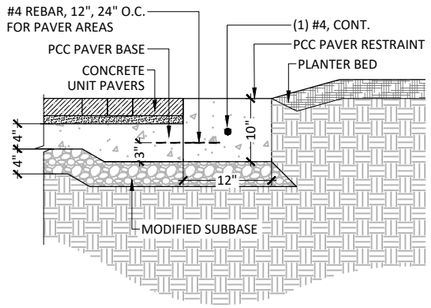
1 TYPICAL PLAN: CONCRETE UNIT PAVERS & PLANTING BED
SCALE: N.T.S.



A. REINFORCED CONCRETE BAND AT CURB



B. REINFORCED CONCRETE BAND AT PAVERS



C. REINFORCED CONCRETE BAND AT SIDEWALK PAVERS / PLANTER BED

2 REINFORCED CONCRETE BAND (VARIED DIMENSIONS)
SCALE: N.T.S.

NOTES:
1. NEENAH METROPOLITAN R-8809, OR APPROVED EQUAL
2. CAST IRON / NATURAL FINISH
3. NO OPENINGS GREATER THAN 3/8"
4. REFER TO MANUFACTURERS SPECIFICATIONS FOR INSTALLATION DETAILS AND FRAMES

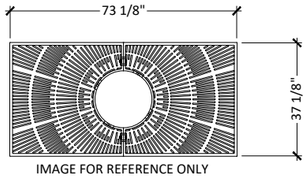
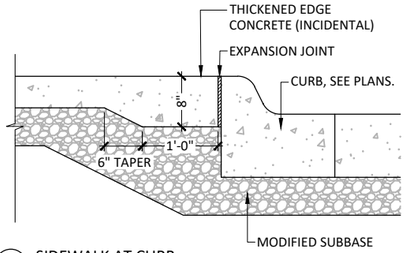
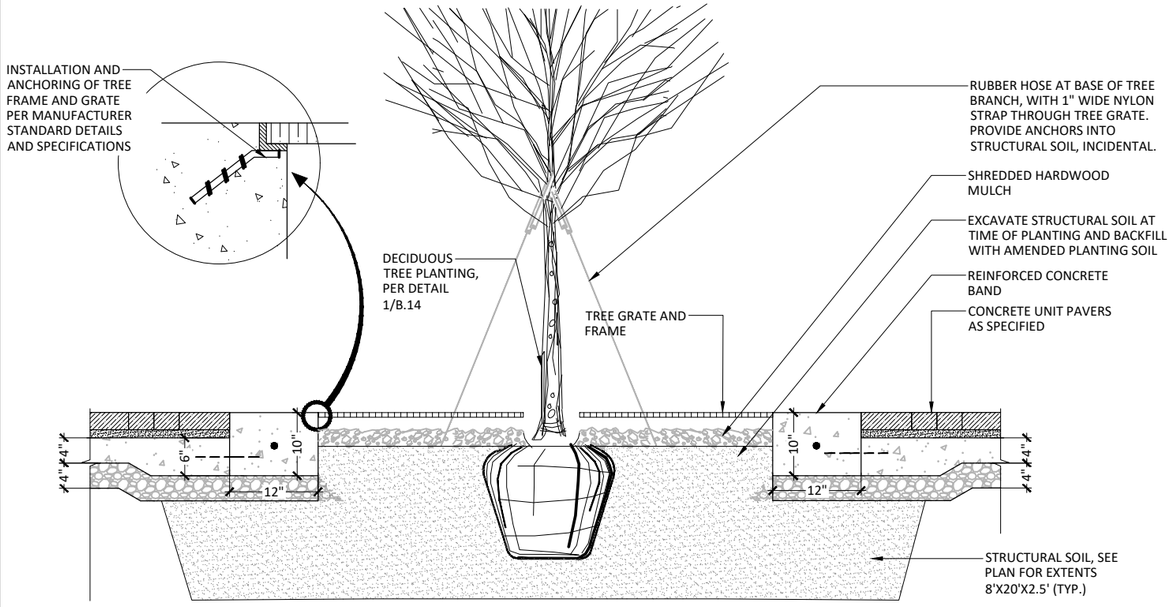


IMAGE FOR REFERENCE ONLY

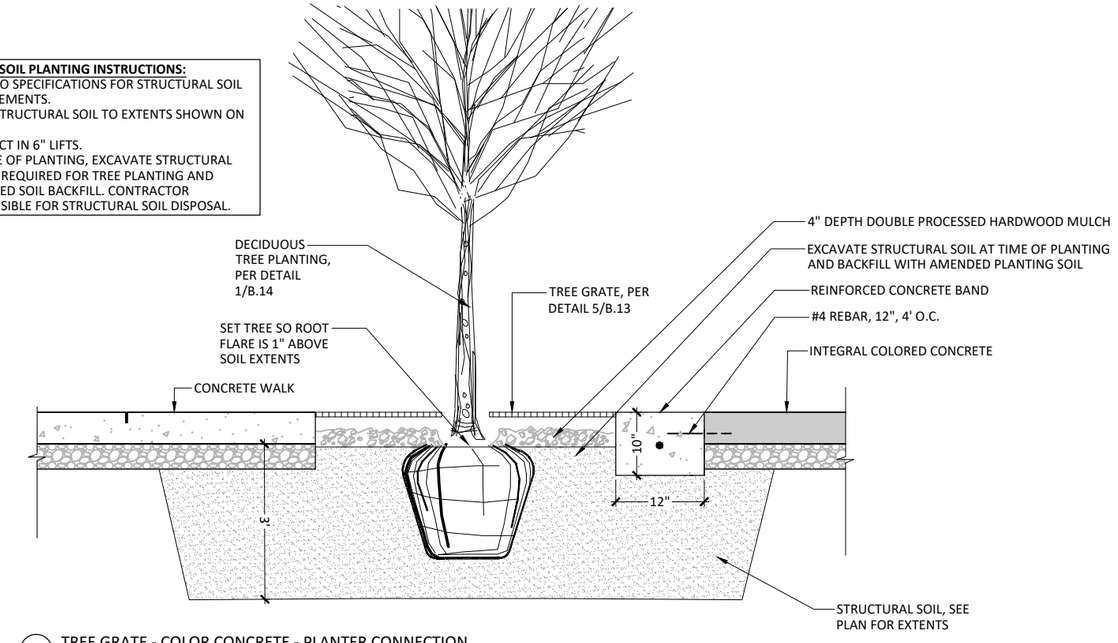


3 SIDEWALK AT CURB
SCALE: N.T.S.



4 PAVER - TREE GRATE - PAVER CONNECTION
SCALE: N.T.S.

STRUCTURAL SOIL PLANTING INSTRUCTIONS:
1. REFER TO SPECIFICATIONS FOR STRUCTURAL SOIL REQUIREMENTS.
2. PLACE STRUCTURAL SOIL TO EXTENTS SHOWN ON PLANS.
3. COMPACT IN 6" LIFTS.
4. AT TIME OF PLANTING, EXCAVATE STRUCTURAL SOIL AS REQUIRED FOR TREE PLANTING AND AMENDED SOIL BACKFILL. CONTRACTOR RESPONSIBLE FOR STRUCTURAL SOIL DISPOSAL.



5 TREE GRATE - COLOR CONCRETE - PLANTER CONNECTION
SCALE: N.T.S.

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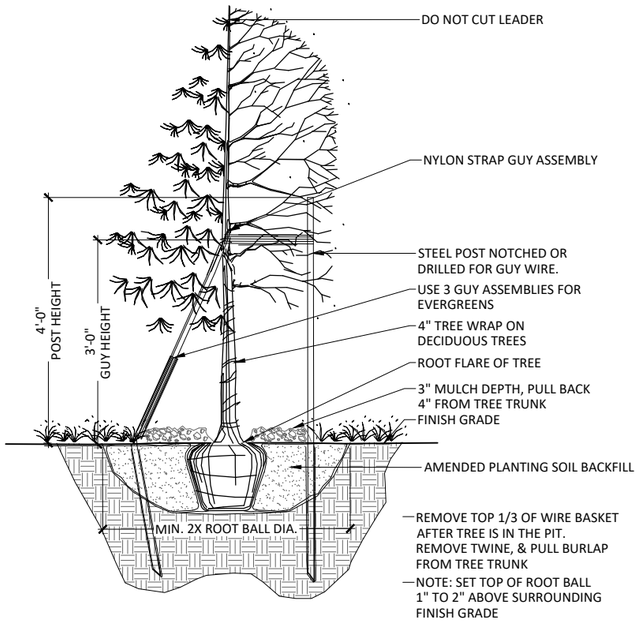
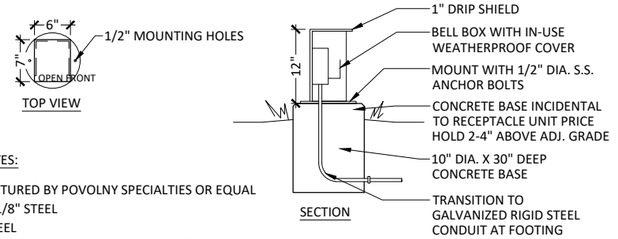
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
LANDSCAPING DETAILS

SHEET
B.13



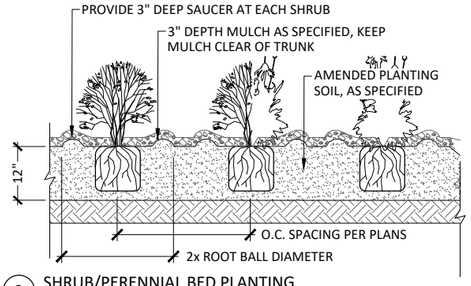
1 TREE PLANTING IN PLANTER
SCALE: N.T.S.



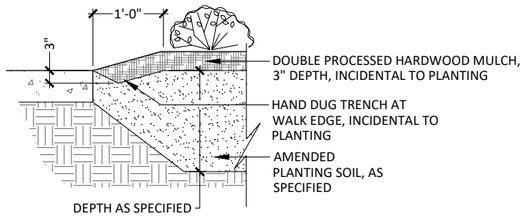
FABRICATION NOTES:

1. AS MANUFACTURED BY POVOLNY SPECIALTIES OR EQUAL
2. STANCHION-1/8" STEEL
3. BASE-1/4" STEEL
4. POWDER COATED BLACK ENAMEL PAINT FINISH
5. ETL LISTED IN COMPLIANCE WITH UL 50

2 GFCI DUPLEX PEDESTAL - ON FOOTING
SCALE: N.T.S.



3 SHRUB/PERENNIAL BED PLANTING
SCALE: N.T.S.



4 SPADE/HAND DUG EDGE AT PAVED EDGE
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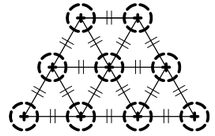
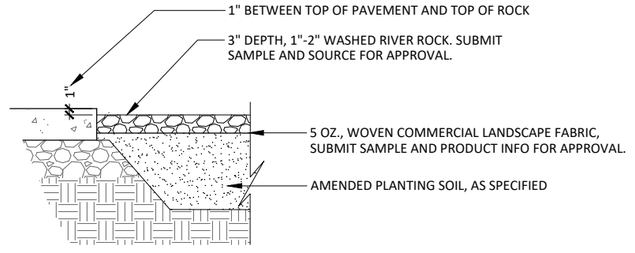


NOTES:
1. O.C. TRIANGULAR PLANT SPACING PER PLANS
2. AREAS IDENTIFIED ON PLANTING PLAN AS O.C. SHALL BE TRIANGULAR SPACED
3. SEE PLANTING PLAN/SCHEDULE FOR SPECIES

5 PERENNIAL PLANT SPACING
SCALE: N.T.S.

NOTE: SEE T-SERIES PLANS FOR ROCK MULCH LOCATION



6 ROCK MULCH
SCALE: N.T.S.

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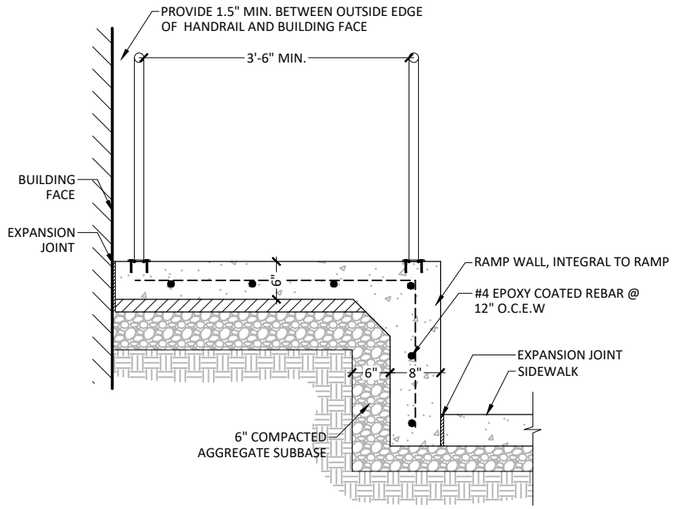
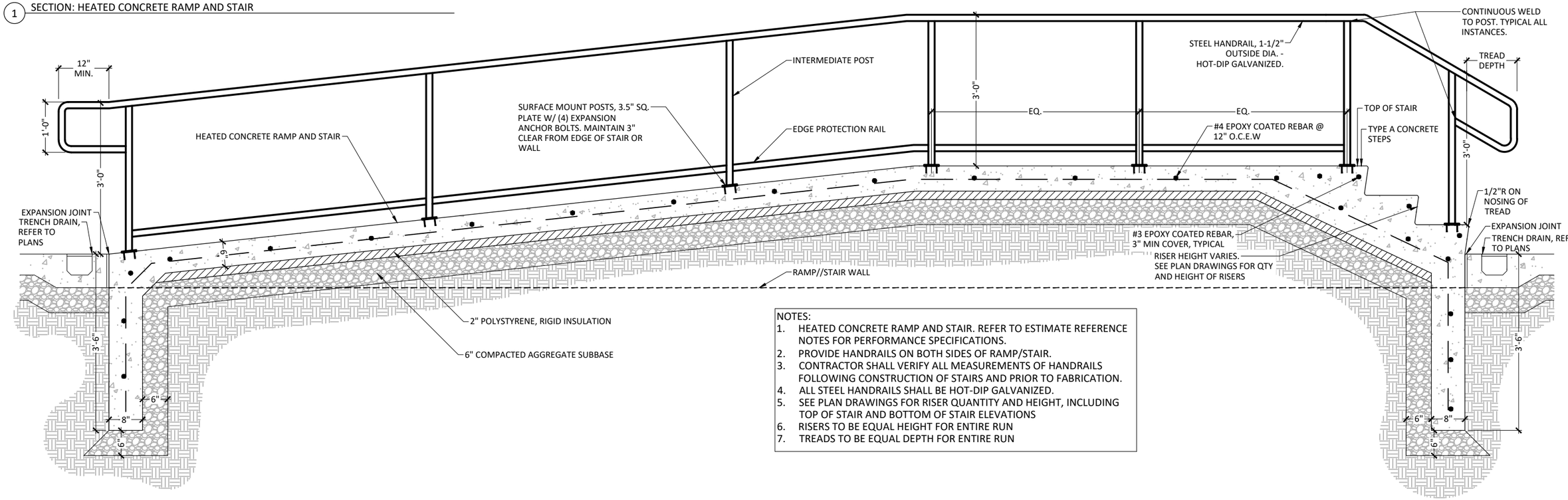
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
LANDSCAPING DETAILS

SHEET B.14



1 SECTION: HEATED CONCRETE RAMP AND STAIR



NOTES:
1. HEATED CONCRETE RAMP AND STAIR. REFER TO ESTIMATE REFERENCE NOTES FOR PERFORMANCE SPECIFICATIONS.
2. PROVIDE HANDRAILS ON BOTH SIDES OF RAMP/STAIR.
3. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS OF HANDRAILS FOLLOWING CONSTRUCTION OF STAIRS AND PRIOR TO FABRICATION.
4. ALL STEEL HANDRAILS SHALL BE HOT-DIP GALVANIZED.
5. SEE PLAN DRAWINGS FOR RISER QUANTITY AND HEIGHT, INCLUDING TOP OF STAIR AND BOTTOM OF STAIR ELEVATIONS
6. RISERS TO BE EQUAL HEIGHT FOR ENTIRE RUN
7. TREADS TO BE EQUAL DEPTH FOR ENTIRE RUN

2 HEATED CONCRETE RAMP AND STAIR

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LANDSCAPING DETAILS

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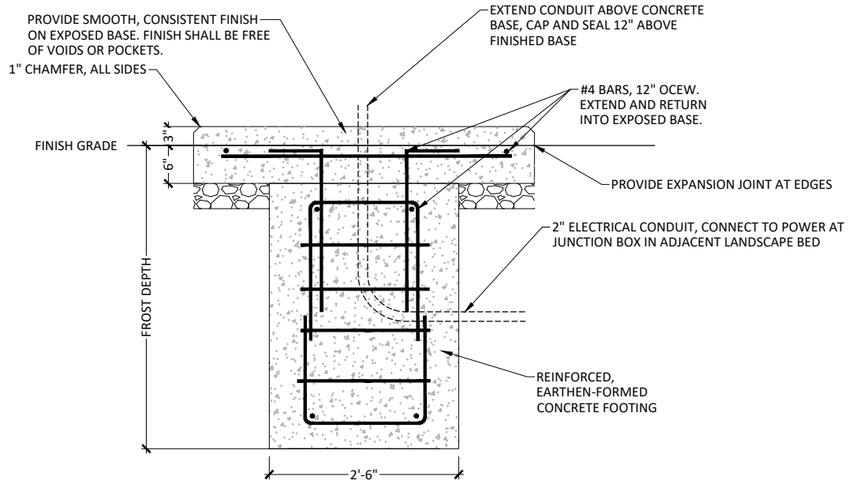

1 MONUMENT BASE/FOUNDATION
SCALE: N.T.S.

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STATE STREET RECONSTRUCTION
LANDSCAPING DETAILS

SHEET
B.16

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNIT	QUANT	AS BUILT QUANT.
1	2010-108-C-0	CLEARING AND GRUBBING	LS	1	
2	2010-108-D-2	AMENDED PLANTING SOIL	CY	83	
3	2010-108-D-3	TOPSOIL, OFF-SITE	CY	352	
4	2010-108-D-4	STRUCTURAL SOIL	CY	400	
5	2010-108-E-0	EXCAVATION, CLASS 13	CY	5295	
6	2010-108-G-0	SUBGRADE PREPARATION, 12 INCH	SY	14033	
7	2010-108-H-0	SUBGRADE TREATMENT, CEMENT STABILIZATION	TON	122	
8	2010-108-H-0	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	14033	
9	2010-108-J-0	SUBBASE, MODIFIED, 4 INCH	SY	9982	
10	2010-108-J-0	SUBBASE, MODIFIED, 6 INCH	SY	1181	
11	2010-108-J-0	SUBBASE, MODIFIED, 8 INCH	SY	14033	
12	2010-108-I-0	SUBBASE, TEMPORARY GRANULAR MATERIAL	TON	200	
13	2010-108-J-1	REMOVAL OF STRUCTURE, LIGHT POLE FOOTINGS	EA	8	
14	2010-108-M-1	COMPACTION TESTING	LS	1	
15	2010-108-X-X	EXPLORATORY EXCAVATION	HR	20	
16	3010-108-C-0	TRENCH FOUNDATION	TON	200	
17	3010-108-D-0	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	400	
18	3010-108-F-0	TRENCH COMPACTION TESTING	LS	1	
19	3010-201-X-0	DISPOSAL OF CONTAMINATED SOIL	TONS	2084	
20	3010-201-X-0	DISPOSAL OF CONTAMINATED GROUNDWATER	GAL	2000	
21	4010-108-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, SDR 26, 8 INCH	LF	2772	
22	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 6 INCH	EA	24	
23	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 8 INCH	EA	1	
24	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 10 INCH	EA	2	
25	4010-108-I-0	SANITARY SEWER CLEANOUT	EA	1	
26	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 6 INCH	LF	105	
27	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	54	
28	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	970	
29	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	156	
30	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 24 INCH	LF	818	
31	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 30 INCH	LF	521	
32	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 36 INCH	LF	292	
33	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 36 INCH EQUIVALENT	LF	368	
34	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 42 INCH EQUIVALENT	LF	427	
35	4020-108-C-0	LINEAR TRENCH DRAIN	LF	9	
36	4020-108-D-0	REMOVAL OF STORM SEWER, RCP, 36 INCH OR LESS	LF	3051	
37	4020-108-G-0	STORM SEWER ABANDONMENT, FILL AND PLUG	LF	106	
38	4040-108-A-0	SUBDRAIN, PVC, 6 INCH	LF	2519	
39	4040-108-C-0	SUBDRAIN CLEANOUT, TYPE A-1, 6 INCH	EA	7	
40	4040-108-D-0	SUBDRAIN OUTLETS AND CONNECTIONS	EA	29	
41	4050-108-G-3	BYPASS PUMPING	LS	1	
42	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 4 INCH	LF	12	
43	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 6 INCH	LF	604	
44	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 10 INCH	LF	140	
45	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 12 INCH	LF	2778	
46	5010-108-C-2	FITTING, DUCTILE IRON,	LB	4146	
47	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3/4 INCH	LF	281	
48	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 INCH	LF	89	
49	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 1/4 INCH	LF	73	
50	5010-108-E-1	WATER SERVICE PIPE, COPPER, 2 INCH	LF	33	
51	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3 INCH	LF	32	
52	5010-108-E-1	WATER SERVICE PIPE, COPPER, 4 INCH FIRE PROTECTION	LF	19	
53	5010-108-E-1	WATER SERVICE PIPE, COPPER, 6 INCH FIRE PROTECTION	LF	157	
54	5010-108-E-3	WATER SERVICE CURB STOP AND BOX	EA	35	
55	5010-108-H-1	WATER MAIN REMOVAL	LF	6187	
56	5020-108-A-0	VALVE, GATE, 6 INCH	EA	10	
57	5020-108-A-0	VALVE, GATE, 10 INCH	EA	2	
58	5020-108-A-0	VALVE, GATE, 12 INCH	EA	11	
59	5020-108-C-0	FIRE HYDRANT ASSEMBLY	EA	6	
60	5020-108-E-0	FLUSHING DEVICE (TEMPORARY BLOWOFF HYDRANT)	EA	20	
61	5020-108-F-0	VALVE BOX ADJUSTMENT	EA	2	
62	5020-108-G-0	VALVE BOX REPLACEMENT	EA	2	
63	5020-108-I-0	FIRE HYDRANT ASSEMBLY REMOVAL	EA	6	
64	5020-108-J-0	VALVE REMOVAL	EA	37	
65	6010-108-A-0	SANITARY MANHOLE, SW-301, 48 INCH	EA	10	
66	6010-108-A-0	STORM MANHOLE, SW-401, 48 INCH	EA	3	
67	6010-108-A-0	STORM MANHOLE, SW-401, 60 INCH	EA	2	
68	6010-108-A-0	STORM MANHOLE, SW-401, 72 INCH	EA	3	
69	6010-108-A-0	STORM MANHOLE, SW-402, 6'X6'	EA	3	
70	6010-108-B-0	INTAKE, SW-501	EA	2	
71	6010-108-B-0	INTAKE, SW-505	EA	10	
72	6010-108-B-0	INTAKE, SW-507	EA	9	
73	6010-108-B-0	INTAKE, SW-509	EA	14	
74	6010-108-B-0	INTAKE, SW-510, MODIFIED	EA	12	
75	6010-108-B-0	INTAKE, SW-541	EA	4	
76	6010-108-B-0	INTAKE, SW-512	EA	1	
77	6010-108-E-0	MANHOLE ADJUSTMENT, MINOR	EA	3	
78	6010-108-F-0	MANHOLE ADJUSTMENT, MAJOR	EA	3	
79	6010-108-G-0	CONNECTION TO EXISTING MANHOLE	EA	1	
80	6010-108-H-0	REMOVE MANHOLE	EA	21	
81	6010-108-H-0	REMOVE INTAKE	EA	25	
82	7010-108-A-0	PAVEMENT, PCC, 8 INCH	SY	12650	
83	7010-108-E-0	CURB AND GUTTER, PCC, 6 INCH	LF	340	
84	7010-108-F-0	BEAM CURB	LF	22	
85	7010-108-I-0	PCC PAVEMENT SAMPLES AND TESTING	LS	1	
86	7020-108-B-0	PAVEMENT, HMA, 5"	SY	60	
87	7030-108-A-0	REMOVAL OF SIDEWALK	SY	4411	
88	7030-108-A-0	REMOVAL OF DRIVEWAY	SY	1965	
89	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 5 INCH	SY	1788	
90	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 6 INCH	SY	286	
91	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 8 INCH	SY	54	
92	7030-108-C-0	CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6 INCH	SY	15	
93	7030-108-E-0	SIDEWALK, PCC, 5 INCH	SY	5957	
94	7030-108-E-0	SIDEWALK, PCC, 6 INCH	SY	661	
95	7030-108-F-0	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE	SF	4920	
96	7030-108-G-0	DETECTABLE WARNING	SF	919	
97	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6 INCH	SY	923	
98	7030-108-H-1	DRIVEWAY, PAVED, PCC, 8 INCH	SY	204	
99	7030-108-I-0	SIDEWALK ASSURANCE TESTING	LS	1	
100	7030-108-I-0	CYCLE ASSURANCE TESTING	LS	1	
101	7030-108-I-0	DRIVEWAY ASSURANCE TESTING	LS	1	
102	7030-108-X-0	REINFORCED CONCRETE BAND, VARIABLE WIDTH	SF	1041	
103	7030-108-X-0	CONCRETE RAMP & STAIRS	SF	118	
104	7040-108-H-0	PAVEMENT REMOVAL	SY	16739	
105	8010-108-A-0	TRAFFIC SIGNAL MODIFICATIONS	LS	1	
106	8020-108-B-0	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	200	
107	8020-108-G-0	PAINTED SYMBOLS AND LEGENDS	EA	33	
108	8020-108-K-0	PAVEMENT MARKINGS REMOVED	STA	20	
109	8020-108-L-0	SYMBOLS AND LEGENDS REMOVED	EA	6	
110	8030-108-A-0	TEMPORARY TRAFFIC CONTROL	LS	1	
111	8030-108-X-X	REMOVAL OF SIGN AND SIGN POST	EA	37	
112	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (TYPE 1), FERTILIZING, AND MULCHING	AC	0.01	
113	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (LOW MOW), FERTILIZING, AND MULCHING	AC	0.05	
114	9020-108-A-0	SOD	SQ	164	
115	9030-108-B-0	PERENNIAL GROUND COVER (1 GAL)	EA	1052	
116	9030-108-B-0	DECIDUOUS TREE	EA	42	
117	9030-108-X-X	TREE GRATE AND FRAME	EA	27	
118	9040-108-A-1	SWPPP PREPARATION	LS	1	
119	9040-108-A-2	SWPPP MANAGEMENT	LS	1	
120	9040-108-D-1	FILTER SOCK, 8 INCH	LF	4000	
121	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	LF	444	
122	9040-108-O-1	STABILIZED CONSTRUCTION ENTRANCE	SY	600	
123	9040-108-Q-2	EROSION CONTROL MULCHING, HYDROMULCHING	AC	1	
124	9040-108-T-1	INLET PROTECTION DEVICE,	EA	52	
125	9080-108-B-0	HANDRAIL, STEEL	LF	51	
126	11010-108-A-1	CONSTRUCTION SURVEY	LS	1	
127	11010-108-B-1	MONUMENT PRESERVATION AND REPLACEMENT	LS	1	
128	11020-108-A-1	MOBILIZATION	LS	1	
129	11030-108-A-0	MAINTENANCE OF POSTAL SERVICE	LS	1	
130	11030-108-B-0	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1	
131	11040-108-A-0	TEMPORARY PEDESTRIAN RESIDENTIAL ACCESS	SY	400	
132	11050-108-A-0	CONCRETE WASHOUT	LS	1	
133	12010-108-X-2	MONUMENT FOUNDATION	EA	1	

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
QUANTITIES

SHEET
C.01

134	12020-108-X-1	ROCK MULCH	TON	10	
135	12030-108-X-1	ELECTRICAL CONDUIT, OPEN CUT, HDPE OR PVC, 2-INCH	LF	226	
136	12030-108-X-2	JUNCTION BOX, ELECTRICAL, 12"X18"	EA	2	
137	12030-108-X-3	GFCI RECEPTACLE, PEDESTAL	EA	6	
138	12040-108-X-3	IRRIGATION SYSTEM ADJUSTMENTS	LS	1	
139					
140					
141					

ALTERNATE A

A1	12040-108-X-X	TEMPORARY WATER SERVICE (ADDITIVE)	LS	1	
A2	12040-108-X-X	WATERMAIN FITTINGS (DEDUCT)	LB	-568	
A3	12040-108-X-X	FLUSHING DEVICE - TEMPORARY BLOWOFF HYDRANT (DEDUCT)	EA	-12	
A4					
A5					

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
QUANTITIES

SHEET
C.02

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	DESCRIPTION
1	2010-108-C-0	CLEARING AND GRUBBING THIS ITEM COVERS THE CUTTING OF EXISTING TREES AND REMOVAL OF STUMPS. SEE F SHEETS FOR LOCATIONS.
2	2010-108-D-2	AMENDED PLANTING SOIL A. INCLUDES EXCAVATION FOR, FURNISHING AND PLACEMENT OF AMENDED PLANTING SOIL FOR PLANTING BEDS. B. SOIL MIX IS CALLED OUT ON T.01, LOCATIONS ARE SHOWN ON T SHEETS, SEE B SHEETS FOR DETAILS. SOIL MIX MUST BE APPROVED BY ENGINEER. SUBMIT MATERIAL SOURCE INFO, SOIL ANALYSIS AND SAMPLE OF MIX FOR REVIEW. C. AMENDED PLANTING SOIL SHALL BE MEASURED BY CY INSTALLED.
3	2010-108-D-3	TOPSOIL, OFF-SITE A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, HAULING AND SPREADING TOPSOIL. B. PAYMENT WILL BE BASED ON CONTRACT QUANTITY. QUANTITY IS BASED ON PLACING A MINIMUM 6" DEPTH OF TOPSOIL ON ALL AREAS THAT ARE DISTURBED. QUANTITY IS FOR MATERIAL IN PLACE (SHRINKAGE NOT INCLUDED)
4	2010-108-D-4	STRUCTURAL SOIL A. THIS ITEM INCLUDES EXCAVATION FOR, FURNISHING, MIXING, PLACEMENT, LEVELING, AND COMPACTION OF THE STRUCTURAL SOIL. B. LOCATIONS ARE SHOWN ON THE T SHEETS, SEE B SHEETS FOR DETAILS. C. REFER TO STRUCTURAL SOIL TECHNICAL SPECIFICATIONS. D. STRUCTURAL SOIL SHALL BE MEASURED BY CY INSTALLED.
5	2010-108-E-0	EXCAVATION, CLASS 13 A. THIS ITEM SHALL INCLUDE HAULING AND PLACEMENT OF THE MATERIAL WITHIN THE GRADING LIMITS, HAULING AND PLACEMENT OF EXCESS SOIL (WASTE), HAULING AND PLACEMENT OF BORROW MATERIAL, AND MATERIAL TESTING IN ACCORDANCE WITH THE SPECIFICATIONS AND THESE PLANS. B. ITEM SHALL NOT INCLUDE STRIPPING, STOCKPILING, FURNISHING AND SPREADING OF TOPSOIL. C. THE CONTRACTOR SHALL DISPOSE OF EXCESS MATERIAL AND MATERIAL THAT IS NOT SUITABLE FOR EMBANKMENT CONSTRUCTION TO LOCATIONS AS SECURED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. D. THE FINISHED GRADE SHALL BE OF UNIFORM CROSS-SECTION AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE SUBBASE. E. CONTRACTOR SHALL NOTIFY CITY OF ANY DISPUTE WITH EXCAVATION PLAN QUANTITY PRIOR TO CONSTRUCTION, OTHERWISE PLAN QUANTITY WILL BE USED FOR PAYMENT. PAYMENT SHALL BE PLAN QUANTITY. F. DIRT QUANTITIES ASSUMED AN AVERAGE EXISTING PAVEMENT THICKNESS OF 8". EXCAVATION QUANTITIES WERE CALCULATED FROM BOTTOM OF EXISTING PAVEMENT TO BOTTOM OF EXISTING SUBBASE. CUT = 5,295 CY, FILL + 30% = 458 CY, NET = 4,837 EXCESS
6	2010-108-G-0	SUBGRADE PREPARATION, 12 INCH A. INCLUDES SUBGRADE PREPARATION FOR ALL ROADWAY PAVEMENT TO A DEPTH OF 12 INCHES. B. QUANTITY IS BASED ON THE AREA OF 12 INCH SUBGRADE PREPARATION, COMPLETED IN 2 - 6" LIFTS, EXTENDING 2 FOOT BEYOND THE PAVEMENT EDGE. C. IN INSTANCES OF CONFLICT WITH EXISTING UTILITIES, THE DEPTH MAY BE REDUCED AS DIRECTED BY THE ENGINEER. D. PREPARATION UNDER ENTRANCES, DRIVES, SIDEWALKS, AND PATHS IS INCIDENTAL TO THOSE ITEMS. E. THIS ITEMS INCLUDES ALL MOISTURE AND DENSITY TESTING TO BE PROVIDED BY THE CONTRACTOR. F. PRIOR TO COMPLETING SUBGRADE PREPARATION, THE CONTRACTOR SHALL PROOF ROLL THE AREA. IF THE PROOF ROLL PASSES, THE ENGINEER MAY ELECT TO NOT HAVE SUBGRADE PREPARATION PERFORMED IN THAT AREA. THE PROOF ROLL SHALL BE INCIDENTAL TO EXCAVATION
7	2010-108-H-0	SUBGRADE TREATMENT, CEMENT STABILIZATION A. THIS ITEM SHALL ONLY BE USED IN LOCATIONS AT THE DISCRETION OF THE ENGINEER AT A 5% APPLICATION RATE WHEN SUBGRADE PREPARATION DOES NOT ADDRESS ALL CONCERNS. B. THIS ITEM SHALL INCLUDE FURNISHING, PLACING AND INCORPORATING THE SUBGRADE TREATMENT MATERIAL FLY ASH, AND SUBGRADE COMPACTION. QUANTITY IS BASED ON 35% OF THE SUBGRADE AREA REQUIRING STABILIZATION. FINAL QUANTITY WILL BE BASED ON FIELD INSTALLED LOCATIONS.
8	2010-108-H-0	SUBGRADE TREATMENT, TRIAX GEO-GRID A. THIS PAY ITEM SHALL BE FOR THE FURNISHING AND INSTALLATION OF THE GEOGRID USED IN THE ROADWAY CONSTRUCTION. THIS ITEM SHALL COVER ALL MATERIAL, LABOR AND COSTS ASSOCIATED WITH INSTALLATION OF THE GEOGRID. GEOGRID SHALL BE TRIAX TX160 GEOGRID OR APPROVED EQUAL.
9	2010-108-J-0	SUBBASE, MODIFIED, 4 INCH A. REFER TO B SHEETS FOR TYPICAL SECTIONS. BID ITEM SHALL BE USED UNDER ALL SIDEWALKS AND CYCLE TRACK PAVEMENT SECTIONS.
10	2010-108-J-0	SUBBASE, MODIFIED, 6 INCH A. REFER TO B SHEETS FOR TYPICAL SECTIONS. BID ITEM SHALL BE USED UNDER ALL DRIVEWAY PAVEMENT SECTIONS.
11	2010-108-J-0	SUBBASE, MODIFIED, 8 INCH A. REFER TO B SHEETS FOR TYPICAL SECTIONS. BID ITEM SHALL BE USED UNDER ALL ROADWAY PAVEMENT SECTIONS EXTENDING 2 FEET BEYOND THE PAVEMENT EDGE.
12	2010-108-I-0	SUBBASE, TEMPORARY GRANULAR MATERIAL A. THIS ITEMS SHALL BE FOR FURNISHING AND INSTALLING TEMPORARY GRANULAR MATERIAL AS NEEDED TO MAINTAIN ACCESS DURING CONSTRUCTION. B. MATERIAL SHALL MEET IOWA DOT GRADATION 4020. C. THIS ITEM SHALL BE APPROVED FOR USE BY THE ENGINEER PRIOR TO PLACING.
13	2010-108-J-1	REMOVAL OF STRUCTURE, LIGHT POLE FOOTINGS A. THIS ITEM INCLUDES THE DEMOLITION OF EXISTING LIGHT POLE FOUNDATIONS. THE LIGHT POLES WERE REMOVED IN 2021 WHEN THE NEW LIGHTS ON STATE STREET WERE INSTALLED. THE FOOTING WERE REMOVED TO JUST BELOW GRADE. THIS BID ITEMS INCLUDES FULL REMOVAL OF ALL LIGHT POLE FOOTINGS. B. THIS ITEM TO BE MEASURED BY EACH FOUNDATION REMOVED. C. PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE PER EACH FOUNDATION REMOVED. THIS PAYMENT SHALL BE CONSIDERED FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO REMOVE EACH FOOTING
14	2010-108-M-1	COMPACTION TESTING A. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING FOR THE PROJECT INCLUDING EXCAVATION, SUBGRADE PREP AND SUBBASE MATERIAL PERFORMED BY AN INDEPENDENT TESTING LABORATORY. B. CONTRACTOR SHALL COMPLETE COMPACTION TESTING PER SUDAS. C. THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENTS ASSOCIATED WITH ALL RETESTING RESULTING FROM FAILURE OF INITIAL TESTS.
15	2010-108-X-X	EXPLORATORY EXCAVATION A. THIS ITEM IS FOR THE INVESTIGATION OF LOCATIONS AND ELEVATIONS OF AN EXISTING UTILITY TO VERIFY THE POTENTIAL FOR CONFLICTS AND/OR CONNECTIONS. B. CONTRACTOR HAS THE OPTION TO USE OPEN EXCAVATION OR VACUUM TYPE EQUIPMENT TO PERFORM THE EXCAVATION DEPENDING UPON SITE CONDITIONS. C. PAYMENT INCLUDES THE PROPER BACKFILLING OF THE EXCAVATION AND THE ENGINEER OR THEIR REPRESENTATIVE MUST VERIFY THE CONDITIONS FOUND. D. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED BY ENGINEER PRIOR TO WORK WILL BE PAID.
16	3010-108-C-0	TRENCH FOUNDATION A. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO, REMOVAL AND DISPOSAL OF OVER-EXCAVATED MATERIAL REQUIRED TO STABILIZE TRENCH FOUNDATION BELOW PIPE BEDDING; FURNISHING, HAULING, AND PLACING STABILIZATION MATERIAL. B. STABILIZATION MATERIAL SHALL BE A CLEAN 2 1/2 INCH CRUSHED STONE MEETING THE GRADATION PRESENTED IN TABLE 3010.06 OF THE STANDARD SPECIFICATIONS. C. TRENCH FOUNDATION SHALL BE USED UPON APPROVAL FROM THE ENGINEER.
17	3010-108-D-0	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL A. THIS ITEM WILL BE CUBIC YARD AND USED TO REMOVE AND REPLACE UNSUITABLE MATERIAL DURING STANDARD TRENCH EXCAVATION LOCATED ABOVE TRENCH BACKFILL WHEN EXISTING MATERIAL IS NOT SUITABLE TO BE PLACED BACK IN THE TRENCH. THIS ITEM COVERS REMOVAL OF EXISTING UNSUITABLE MATERIAL, FURNISHING AND PLACING OF SUITABLE MATERIAL MEETING THE REQUIREMENTS OF SUDAS SECTION 2010.203. THE CONTRACTOR SHALL PROVIDE TESTING INFORMATION ON PROPOSED REPLACEMENT MATERIAL PRIOR TO PLACING IN TRENCH B. PRIOR APPROVAL OF THE ENGINEER OR REPRESENTATIVE WILL BE REQUIRED. C. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
18	3010-108-F-0	TRENCH COMPACTION TESTING A. THE CONTRACTOR IS RESPONSIBLE FOR TRENCH COMPACTION TESTING PERFORMED BY AN INDEPENDENT TESTING LABORATORY. B. CONTRACTOR SHALL COMPLETE COMPACTION TESTING PER SUDAS REQUIREMENTS DURING THE CONSTRUCTION PROCESS PRIOR TO COMPLETION OF BACKFILL OPERATIONS UTILIZING MOISTURE AND DENSITY METHODS. C. THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENTS ASSOCIATED WITH ALL RETESTING RESULTING FROM FAILURE OF INITIAL TESTS. D. ENGINEER SHALL BE NOTIFIED IMMEDIATELY WHEN CONDITIONS EXIST THAT PROHIBIT PROPER TRENCH COMPACTION. IT WILL BE NECESSARY FOR THE CONTRACTOR TO REWORK, RECOMPACT AND RETEST AS NECESSARY UNTIL SPECIFIED COMPACTION AND MOISTURE CONTENT IS ACHIEVED IN ALL AREAS OF THE TRENCH. THE ENGINEER MAY REQUIRE RETESTING AS DEEMED NECESSARY.
19	3010-201-X-0	DISPOSAL OF CONTAMINATED SOIL A. THIS ITEM IS FOR ESTABLISHING A UNIT PRICE FOR DISPOSAL OF CONTAMINATED SOILS ENCOUNTERED ON THE PROJECT. B. THIS ITEM SHALL INCLUDE LOADING, HAULING AND DUMPING AT AN APPROVED FACILITY AND REPLACEMENT WITH CLEAN NON-CONTAINED FILL DIRT. C. THIS ITEM INCLUDES HIRING AN ENVIRONMENTAL CONSULTANT TO PROVIDE ON-SITE FIELD SCREENING TO DETERMINE IF SOIL IS CONTAMINATED AND COMPLETING THE REQUIRED TESTING NEEDED ON ANY SUSPECTED CONTAMINATED SOILS PRIOR TO DISPOSAL. D. SOIL SUSPECTED OF BEING CONTAMINATED (I.E., ABOVE IDNR ACTION LEVELS) SHOULD BE SEGREGATED, PROPERLY CONTAINED ON SITE, SAMPLED, AND ANALYZED INITIALLY WITH FIELD SCREENING EQUIPMENT AND SUBSEQUENT LABORATORY ANALYSIS IF WARRANTED AS DETERMINED BY ELEVATED FIELD SCREENING VAPOR ANALYSIS RESULTS. THE CONTRACTOR IS RESPONSIBLE FOR PROPER CONTAINMENT, STAGING, CHARACTERIZATION, AND DISPOSAL OF MATERIALS DETERMINED AS CONTAMINATED. E. IF SUSPECTED GROSS SOIL CONTAMINATION IS CONFIRMED ABOVE IDNR ACTION LEVELS THROUGH SAMPLING AND LABORATORY ANALYSIS, THE CONTRACTOR SHOULD NOTIFY THE PROJECT ENGINEER AND THE IDNR UNDERGROUND STORAGE TANK SECTION AT (515) 281-8011. IF THE IDNR DETERMINES THE SOIL DOES NOT MEET THE DEFINITION OF "HAZARDOUS CONDITION" UNDER 567 IAC CHAPTER 131, THE SOIL MAY BE REGRADED OR CONSOLIDATED ON SITE. F. IF THE SOIL DOES MEET THE DEFINITION OF A HAZARDOUS CONDITION, THE SOIL SHOULD BE DISPOSED OF AT AN IDNR-PERMITTED LAND FARM OR AS OTHERWISE DIRECTED BY THE IDNR G. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT AND IMPLEMENTATION OF A SITE-SPECIFIC HEALTH AND SAFETY PLAN ADDRESSING POTENTIAL HAZARDS ASSOCIATED WITH PETROLEUM IMPACTED SOIL AND/OR GROUNDWATER. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR COMPLETING WORK IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND FOR ENSURING THE HEALTH AND SAFETY OF THEIR EMPLOYEES AND SUBCONTRACTOR'S EMPLOYEES. H. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
20	3010-201-X-0	DISPOSAL OF CONTAMINATED GROUNDWATER A. THIS ITEM IS FOR ESTABLISHING A UNIT PRICE FOR DISPOSAL OF CONTAMINATED GROUND WATER ENCOUNTERED ON THE PROJECT. B. THIS ITEM SHALL INCLUDE LOADING, HAULING AND DISPOSED AT AN APPROPRIATELY PERMITTED WASTEWATER TREATMENT AND DISPOSAL VENDOR. C. THIS ITEM INCLUDES HIRING AN ENVIRONMENTAL CONSULTANT TO PROVIDE ON-SITE FIELD SCREENING TO DETERMINE IF GROUNDWATER IS CONTAMINATED AND COMPLETING THE REQUIRED TESTING NEEDED ON ANY SUSPECTED CONTAMINATED SOILS PRIOR TO DISPOSAL. D. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE PROJECT ENGINEER OF SUSPECTED GROSS GROUNDWATER CONTAMINATION. GROUNDWATER SUSPECTED OF BEING CONTAMINATED DUE TO THE PRESENCE OF STRONG ODORS OR FREE PETROLEUM PRODUCT FLOATING ON THE GROUNDWATER SHOULD BE SAMPLED AND ANALYZED BY THE CONTRACTOR TO DETERMINE PROPER DISPOSAL METHODS. E. IF SUSPECTED GROSS GROUNDWATER CONTAMINATION IS CONFIRMED ABOVE IDNR ACTION LEVELS THROUGH SAMPLING AND LABORATORY ANALYSIS OR THE PRESENCE OF FREE PETROLEUM PRODUCT FLOATING ON THE GROUNDWATER, THE CONTRACTOR SHOULD NOTIFY THE PROJECT ENGINEER AND THE IDNR UNDERGROUND STORAGE TANK SECTION AT (515) 281-8011. DEWATERED CONTAMINATED (I.E., ABOVE IDNR ACTION LEVELS) GROUNDWATER SHOULD BE DISPOSED OF BY AN APPROPRIATELY PERMITTED WASTEWATER TREATMENT AND DISPOSAL VENDOR. F. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT AND IMPLEMENTATION OF A SITE-SPECIFIC HEALTH AND SAFETY PLAN ADDRESSING POTENTIAL HAZARDS ASSOCIATED WITH PETROLEUM IMPACTED SOIL AND/OR GROUNDWATER. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR COMPLETING WORK IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND FOR ENSURING THE HEALTH AND SAFETY OF THEIR EMPLOYEES AND SUBCONTRACTOR'S EMPLOYEES. G. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

SHEET
C.03

21	4010-108-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, SDR 26, 8 INCH A. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO, TRENCH EXCAVATION, DEWATERING, FURNISHING AND PLACEMENT OF BEDDING MATERIAL, FURNISHING AND PLACING SERVICE WYES, CONNECTION TO EXISTING SANITARY SEWER, BYPASS PUMPING, AND TEMPORARY CONNECTIONS TO EXISTING PIPE AT THE END OF THE WORKING DAY. B. PIPE EMBEDMENT SHALL BE CLASS F-3. C. REMOVAL OF EXISTING SANITARY SEWER ON THE SAME ALIGNMENT SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. E. CONNECTION TO EXISTING PIPE SHALL BE MADE WITH A "MAX-ADAPTOR" STYLE CONNECTION OR APPROVED EQUAL. F. SERVICE WYES SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. G. ALL SANITARY SEWER SHALL BE CLEANED AND TELEVISED AT THE CONTRACTOR'S EXPENSE PRIOR TO FINAL APPROVAL. MANDREL TESTING WILL BE REQUIRED AND SHALL BE PAID FOR UNDER THIS BID ITEM. H. SUPPORTING/PROTECTING OTHER UTILITIES DURING SANITARY SEWER INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.
22	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 6 INCH A. CONTRACTOR SHALL FIELD DETERMINE (COORDINATE WITH PROPERTY OWNER) IF EXISTING SERVICES ARE ACTIVE PRIOR TO CONNECTION. B. ALL SANITARY SEWER SERVICE REPLACEMENTS SHALL BE PVC (SDR 26) PREFORMED WYES. USE OF SADDLE WYES WILL NOT BE ALLOWED C. ALL SANITARY SEWER SERVICES SHALL BE PVC (SDR 26) AND EXTEND TO 5 FEET FROM THE PROPERTY LINE. D. CONNECTION SHALL BE BY "MAX-ADAPTOR" STYLE CONNECTION OR APPROVE EQUAL E. FURNISHING AND PLACEMENT OF ELBOWS AND TEES, BEDDING MATERIAL, AND GRANULAR BACKFILL MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM F. ALL VISIBLE LEAKS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL PROVIDE AS-CONSTRUCTED LOCATIONS OF ALL SERVICES. G. CONTRACTOR SHALL MAINTAIN FLOW OF ALL SERVICES AT THE END OF THE WORKING DAY. H. PAYMENT SHALL BE PER EACH SERVICE INSTALLED REGARDLESS OF LENGTH.
23	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 8 INCH A. CONTRACTOR SHALL FIELD DETERMINE (COORDINATE WITH PROPERTY OWNER) IF EXISTING SERVICES ARE ACTIVE PRIOR TO CONNECTION. B. ALL SANITARY SEWER SERVICE REPLACEMENTS SHALL BE PVC (SDR 26) PREFORMED WYES. USE OF SADDLE WYES WILL NOT BE ALLOWED C. ALL SANITARY SEWER SERVICES SHALL BE PVC (SDR 26) AND EXTEND TO 5 FEET FROM THE PROPERTY LINE. D. CONNECTION SHALL BE BY "MAX-ADAPTOR" STYLE CONNECTION OR APPROVE EQUAL E. FURNISHING AND PLACEMENT OF ELBOWS AND TEES, BEDDING MATERIAL, AND GRANULAR BACKFILL MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM F. ALL VISIBLE LEAKS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL PROVIDE AS-CONSTRUCTED LOCATIONS OF ALL SERVICES. G. CONTRACTOR SHALL MAINTAIN FLOW OF ALL SERVICES AT THE END OF THE WORKING DAY. H. PAYMENT SHALL BE PER EACH SERVICE INSTALLED REGARDLESS OF LENGTH.
24	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 10 INCH A. CONTRACTOR SHALL FIELD DETERMINE (COORDINATE WITH PROPERTY OWNER) IF EXISTING SERVICES ARE ACTIVE PRIOR TO CONNECTION. B. ALL SANITARY SEWER SERVICE REPLACEMENTS SHALL BE PVC (SDR 26) PREFORMED WYES. USE OF SADDLE WYES WILL NOT BE ALLOWED C. ALL SANITARY SEWER SERVICES SHALL BE PVC (SDR 26) AND EXTEND TO 5 FEET FROM THE PROPERTY LINE. D. CONNECTION SHALL BE BY "MAX-ADAPTOR" STYLE CONNECTION OR APPROVE EQUAL E. FURNISHING AND PLACEMENT OF ELBOWS AND TEES, BEDDING MATERIAL, AND GRANULAR BACKFILL MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM F. ALL VISIBLE LEAKS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL PROVIDE AS-CONSTRUCTED LOCATIONS OF ALL SERVICES. G. CONTRACTOR SHALL MAINTAIN FLOW OF ALL SERVICES AT THE END OF THE WORKING DAY. H. PAYMENT SHALL BE PER EACH SERVICE INSTALLED REGARDLESS OF LENGTH.
25	4010-108-I-0	SANITARY SEWER CLEANOUT A. REFER TO SHEET M.18 FOR LOCATION. CLEANOUT SHALL COMPLY WITH SUDAS SW-203.
26	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 6 INCH A. REFER TO M.15 FOR LOCATION. B. THIS ITEM SHALL INCLUDETRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING, WYES AND OTHER FITTINGS, PIPE JOINTS, PIPE CONNECTIONS, TESTING, AND INSPECTION. C. THE LENGTH OF ELBOWS AND TEES OF THE PIPES INSTALLED WILL BE INCLUDED IN THE LENGTH OF PIPE MEASURED.
27	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12 INCH A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
28	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15 INCH A. REFER TO C SHEETS FOR TABULATIONS. REFER TO SHEETS M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
29	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 18 INCH A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
30	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 24 INCH A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
31	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 30 INCH A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
32	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 36 INCH A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
33	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 36 INCH EQUIVALENT A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.
34	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 42 INCH EQUIVALENT A. REFER TO C SHEETS FOR TABULATIONS. REFER TO M SHEETS FOR STORM LOCATIONS. B. BEDDING CLASS SHALL BE R-2 FOR ALL RCP PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, JOINT WRAPPING AND OTHER FITTINGS, PIPE JOINTS, EXISTING PIPE CONNECTIONS, TESTING, AND INSPECTION. D. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC AND IN ADDITION WHEN CROSSING WATER MAINS ONE FULL LENGTH OF RCP WITH FLEXIBLE O-RING GASKETED JOINTS WILL BE REQUIRED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. E. CONTRACTOR SHALL TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO CITY UPON COMPLETION OF THE TESTING AND INSPECTION PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE DAMAGE SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE CITY AT NO ADDITIONAL COST. F. BID ITEM INCLUDES SEWER PIPE SUPPORT WHERE SEPARATION IS LESS THAN 18". REFER DETAIL B SHEETS AND M SHEETS FOR LOCATIONS.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	JDA
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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

SHEET
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35	4020-108-C-0	LINEAR TRENCH DRAIN A. THIS ITEM INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT TO FURNISH AND INSTALL TRENCH DRAIN AS DETAILED ON B SHEETS. B. GRATE SHALL BE HEEL PROOF GRATE.
36	4020-108-D-0	REMOVAL OF STORM SEWER, RCP, 36 INCH OR LESS A. REFER TO F SHEETS FOR LOCATIONS. EXISTING PIPE TRENCH SHALL BE FILLED WITH SUITABLE BACKFILL MATERIAL AND SHALL BE INCIDENTAL TO PIPE REMOVAL.
37	4020-108-G-0	STORM SEWER ABANDONMENT, FILL AND PLUG A. REFER TO F SHEETS FOR LOCATION. PIPE SHALL BE CAPPED ON BOTH ENDS AND FILLED WITH FLOWABLE FILL.
38	4040-108-A-0	SUBDRAIN, PVC, 6 INCH A. REFER TO M SHEETS FOR LOCATIONS. SUBDRAIN SHALL BE SUDAS CASE C TYPE 1 SUBDRAIN.
39	4040-108-C-0	SUBDRAIN CLEANOUT, TYPE A-1, 6 INCH A. REFER TO M SHEETS FOR LOCATIONS. THIS ITEM INCLUDES, BUT IS NOT LIMITED TO, PIPE, NON-SHRINK GROUT, AND COUPLING BANDS. B. SUBDRAIN CLEANOUT SHALL BE TYPE A-1
40	4040-108-D-0	SUBDRAIN OUTLETS AND CONNECTIONS A. REFER TO M SHEETS FOR SUBDRAIN LOCATIONS. ALL SUBDRAINS SHALL BE CASE C TYPE 1 ACCORDING TO SUDAS FIGURE 4040.231. B. THIS ITEM SHALL INCLUDE ALL THE LABOR AND MATERIAL NECESSARY TO CONNECT PROPOSED SUBDRAIN PIPE TO PROPOSED STRUCTURE, INCLUDING BUT NOT LIMITED TO CORING OR CUTTING INTO THE EXISTING STRUCTURE, PIPE CONNECTIONS, GROUT AND WATERSTOP (WHEN REQUIRED)
41	4050-108-G-3	BYPASS PUMPING A. THIS ITEM SHALL INCLUDE ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY FOR BYPASS PUMPING FLOW FOR SANITARY SEWER IMPROVEMENTS. B. PAYMENT SHALL BE LUMP SUM
42	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 4 INCH A. REFER TO M SHEETS FOR WATERMAIN LOCATION. B. ALL WATERMAIN WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING AND INSTALLING PIPE, FITTINGS, RESTRAINED JOINTS, TRUST BLOCKS, TRACER WIRE SYSTEM, TESTING, DISINFECTION, AND POLYETHYLENE WRAP FOR DUCTILE IRON FITTINGS AND NITRILE GASKETS. TRACER WIRE SHALL BE TERMINATED AT EACH HYDRANT. TRACER WIRE SHALL NOT BE RUN UP ANY VALVES. D. ALL PIPE MATERIAL SHALL BE A MINIMUM OF AWWA CLASS 350 DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT AND NITRILE GASKETS. E. ALL WATER SHUTDOWN SHALL REQUIRE THE FOLLOWING NOTICES. MARSHALLTOWN WATER WORKS SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY SHUTDOWN. MARSHALLTOWN WATER WORKS SHALL OPERATE ALL EXISTING VALVES. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN TO THE AFFECTED PROPERTIES INCLUDING DOOR TO DOOR COMMUNICATION AND DOOR KNOCKERS LEFT BEHIND. A MAXIMUM OF 8 CONTINUOUS HOUR SHUTDOWN IS ALLOWED FOR ANY SINGLE PROPERTY WHEN MAKING SIDE STREET CONNECTION. A MAXIMUM OF 2 HOURS OF SHUTDOWN FOR ANY SINGLE BUILDING WILL BE ALLOWED WHEN SWITCHING A SERVICE TO THE NEW WATER MAIN.
43	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 6 INCH A. REFER TO M SHEETS FOR WATER MAIN LOCATION. B. ALL WATERMAIN WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING AND INSTALLING PIPE, FITTINGS, RESTRAINED JOINTS, TRUST BLOCKS, TRACER WIRE SYSTEM, TESTING, DISINFECTION, AND POLYETHYLENE WRAP FOR DUCTILE IRON FITTINGS AND NITRILE GASKETS. TRACER WIRE SHALL BE TERMINATED AT EACH HYDRANT. TRACER WIRE SHALL NOT BE RUN UP ANY VALVES. D. ALL PIPE MATERIAL SHALL BE A MINIMUM OF AWWA CLASS 350 DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT AND NITRILE GASKETS. E. ALL WATER SHUTDOWNS SHALL REQUIRE THE FOLLOWING. MARSHALLTOWN WATER WORKS SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY SHUTDOWN. MARSHALLTOWN WATER WORKS SHALL OPERATE ALL EXISTING VALVES. THE CONTRACTOR SHALL NOT OPERATE EXISTING VALVES. A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN TO THE AFFECTED PROPERTIES INCLUDING DOOR TO DOOR COMMUNICATION AND DOOR KNOCKERS LEFT BEHIND. A MAXIMUM OF AN 8 CONTINUOUS HOUR SHUTDOWN IS ALLOWED FOR ANY SINGLE PROPERTY WHEN MAKING SIDE STREET CONNECTION. A MAXIMUM OF 2 HOURS OF SHUTDOWN FOR ANY SINGLE BUILDING WILL BE ALLOWED WHEN SWITCHING A SERVICE TO THE NEW WATER MAIN.
44	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 10 INCH A. REFER TO M SHEETS FOR WATERMAIN LOCATION. B. ALL WATERMAIN WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING AND INSTALLING PIPE, FITTINGS, RESTRAINED JOINTS, TRUST BLOCKS, TRACER WIRE SYSTEM, TESTING, DISINFECTION, AND POLYETHYLENE WRAP FOR DUCTILE IRON FITTINGS AND NITRILE GASKETS. TRACER WIRE SHALL BE TERMINATED AT EACH HYDRANT. TRACER WIRE SHALL NOT BE RUN UP ANY VALVES. D. ALL PIPE MATERIAL SHALL BE A MINIMUM OF AWWA CLASS 350 DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT AND NITRILE GASKETS. E. WATER SHUTDOWNS SHALL REQUIRE THE FOLLOWING. MARSHALLTOWN WATER WORKS SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY SHUTDOWN. MARSHALLTOWN WATER WORKS SHALL OPERATE ALL EXISTING VALVES. THE CONTRACTOR SHALL NOT OPERATE EXISTING VALVES. A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN TO THE AFFECTED PROPERTIES INCLUDING DOOR TO DOOR COMMUNICATION AND DOOR KNOCKERS LEFT BEHIND. A MAXIMUM OF AN 8 CONTINUOUS HOUR SHUTDOWN IS ALLOWED FOR ANY SINGLE PROPERTY WHEN MAKING SIDE STREET CONNECTION. A MAXIMUM OF 2 HOURS OF SHUTDOWN FOR ANY SINGLE BUILDING WILL BE ALLOWED WHEN SWITCHING A SERVICE TO THE NEW WATER MAIN.
45	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 12 INCH A. REFER TO M SHEETS FOR WATER MAIN LOCATION. B. ALL WATERMAIN WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS. C. THIS ITEM SHALL INCLUDE TRENCH EXCAVATION, DEWATERING, FURNISHING AND INSTALLING PIPE, FITTINGS, RESTRAINED JOINTS, TRUST BLOCKS, TRACER WIRE SYSTEM, TESTING, DISINFECTION, AND POLYETHYLENE WRAP FOR DUCTILE IRON FITTINGS AND NITRILE GASKETS. TRACER WIRE SHALL BE TERMINATED AT EACH HYDRANT. TRACER WIRE SHALL NOT BE RUN UP ANY VALVES. D. ALL PIPE MATERIAL SHALL BE A MINIMUM OF AWWA CLASS 350 DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT AND NITRILE GASKETS. E. WATER SHUTDOWNS SHALL REQUIRE THE FOLLOWING. MARSHALLTOWN WATER WORKS SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY SHUTDOWN. MARSHALLTOWN WATER WORKS SHALL OPERATE ALL EXISTING VALVES. THE CONTRACTOR SHALL NOT OPERATE EXISTING VALVES. A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN TO THE AFFECTED PROPERTIES INCLUDING DOOR TO DOOR COMMUNICATION AND DOOR KNOCKERS LEFT BEHIND. A MAXIMUM OF AN 8 CONTINUOUS HOUR SHUTDOWN IS ALLOWED FOR ANY SINGLE PROPERTY WHEN MAKING SIDE STREET CONNECTION. A MAXIMUM OF 2 HOURS OF SHUTDOWN FOR ANY SINGLE BUILDING WILL BE ALLOWED WHEN SWITCHING A SERVICE TO THE NEW WATER MAIN.
46	5010-108-C-2	FITTING, DUCTILE IRON, A. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO, RESTRAINED JOINT FITTINGS AND THRUST BLOCKS. B. EACH TYPE AND SIZE OF FITTING INSTALLED AS SPECIFIED IN THE CONTRACT DOCUMENTS OR AS REQUIRED FOR PROPER INSTALLATION OF THE WATERMAIN WILL BE COUNTED. C. DETERMINATION OF THE TOTAL WEIGHT OF FITTINGS, IN POUNDS, SHALL BE BASED ON THE STANDARD FITTING WEIGHTS PUBLISHED IN AWWA C153 FOR DUCTILE IRON COMPACT FITTINGS.
47	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3/4 INCH A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATERMAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONTRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVICES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCITED WITH ADDITONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR SERVICE INTERRUPTION TO SWITCH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQUIRED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
48	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 INCH A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATERMAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONTRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVICES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCITED WITH ADDITONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR SERVICE INTERRUPTION TO SWITCH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQUIRED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
49	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 1/4 INCH A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATERMAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONTRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVICES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCITED WITH ADDITONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR SERVICE INTERRUPTION TO SWITCH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQUIRED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
50	5010-108-E-1	WATER SERVICE PIPE, COPPER, 2 INCH A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATER MAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVISES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCITED WITH ADDITONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR SERVICE INTERUPTION TO SWTICH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQURIED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
51	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3 INCH A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATERMAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONTRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVICES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCITED WITH ADDITONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR SERVICE INTERRUPTION TO SWITCH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQURIED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
52	5010-108-E-1	WATER SERVICE PIPE, COPPER, 4 INCH FIRE PROTECTION A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATERMAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONTRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVICES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCIATED WITH ADDITIONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR FIRE INTERRUPTION TO SWITCH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQUIRED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

SHEET
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53	5010-108-E-1	WATER SERVICE PIPE, COPPER, 6 INCH FIRE PROTECTION A. THIS ITEM SHALL INCLUDE INSTALLATION OF WATER SERVICE, CONNECTION TO WATERMAIN, ALL NECESSARY FITTINGS FOR CONNECTION AT MAIN, AND CONNECTION TO NEW CURB STOP AND CONNECTION TO EXISTING SERVICE. CURB STOP WILL BE PAID FOR UNDER A SEPARATE BID ITEM. REMOVAL OF EXISTING SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. B. ALL WORK SHALL CONFORM TO MARSHALLTOWN WATER WORKS SPECIFICATIONS C. CONTRACTOR SHALL NOTIFY ENGINEER IF LEAD OR GALVANIZED SERVICES ARE FOUND. IF LEAD OR GALVANIZED SERVICES ARE FOUND MARSHALLTOWN WATER WORKS WILL COORDINATE TO HAVE THE SERVICE LINE REPLACED TO THE FIRST SHUTOFF INSIDE THE BUILDING. NO PAYMENT FOR DELAY ASSOCIATED WITH ADDITIONAL SERVICE WORK WILL BE ALLOWED. D. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR FIRE INTERRUPTION TO SWITCH WATER SERVICE. A MINIMUM OF 48 HOURS OF NOTICE IS REQURIED FOR WATER SHUTOFFS. E. QUANTITY IS ESTIMATED TO ESTABLISH A UNIT PRICE, ONLY QUANTITY APPROVED WILL BE PAID.
54	5010-108-E-3	WATER SERVICE CURB STOP AND BOX A. ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT TO INSTALL CURB STOP AND BOX. PAYMENT SHALL INCLUDE CONNECTION TO EXISTING SERVICE, REGARDLESS OF SIZE. ALL CURB STOPS IN PAVEMENT SHALL HAVE A PVC SLEEVE INSTALLED IN THE PAVEMENT AROUND THE CURB STOP.
55	5010-108-H-1	WATER MAIN REMOVAL A. THIS ITEMS SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL EXISTING WATERMAIN PIPE IN THE PROJECT. B. EXISTING PIPE SHALL NOT BE REMOVED UNTIL NEW WATER MAIN IS INSTALLED. C. EXISTING SERVICE PIPE REMOVAL AND DISPOSAL SHALL BE INCIDENTAL TO THIS ITEM.
56	5020-108-A-0	VALVE, GATE, 6 INCH A. THIS ITEM SHALL INCLUDE ALL COMPONENTS ATTACHED TO THE VALVE OR REQUIRED FOR ITS COMPLETE INSTALLATION, INCLUDING UNDERGROUND OR ABOVE GROUND OPERATOR, SQUARE VALVE OPERATION NUT, VALVE BOX AND COVER, VALVE BOX EXTENSION, AND VALVE STEM EXTENSION. B. THIS ITEM SHALL BE INSTALLED IN ACCORDANCE TO MARSHALLTOWN WATER WORKS SPECIFICATIONS
57	5020-108-A-0	VALVE, GATE, 10 INCH A. THIS ITEM SHALL INCLUDE ALL COMPONENTS ATTACHED TO THE VALVE OR REQUIRED FOR ITS COMPLETE INSTALLATION, INCLUDING UNDERGROUND OR ABOVE GROUND OPERATOR, SQUARE VALVE OPERATION NUT, VALVE BOX AND COVER, VALVE BOX EXTENSION, AND VALVE STEM EXTENSION. B. THIS ITEM SHALL BE INSTALLED IN ACCORDANCE TO MARSHALLTOWN WATER WORKS SPECIFICATIONS
58	5020-108-A-0	VALVE, GATE, 12 INCH A. THIS ITEM SHALL INCLUDE ALL COMPONENTS ATTACHED TO THE VALVE OR REQUIRED FOR ITS COMPLETE INSTALLATION, INCLUDING UNDERGROUND OR ABOVE GROUND OPERATOR, SQUARE VALVE OPERATION NUT, VALVE BOX AND COVER, VALVE BOX EXTENSION, AND VALVE STEM EXTENSION. B. THIS ITEM SHALL BE INSTALLED IN ACCORDANCE TO MARSHALLTOWN WATER WORKS SPECIFICATIONS
59	5020-108-C-0	FIRE HYDRANT ASSEMBLY A. THIS ITEM INCLUDES ALL LABOR AND MATERIAL FOR EXCAVATION, HAULING OFF EXCAVATED SOIL AND MATERIALS TO AN APPROVED LOCATION, BACKFILL, COMPACTION OF BACKFILL, AND INSTALLATION OF FIRE HYDRANT ASSEMBLY INCLUDING THE HYDRANT, VALVE, PIPING, PIPE RESTRAINTS AND CONNECTION TO PIPE. THIS ITEM INCLUDES THE HYDRANT TEE. B.THIS ITEM SHALL BE INSTALLED IN ACCORDANCE TO MARSHALLTOWN WATER WORKS SPECIFICATIONS..
60	5020-108-E-0	FLUSHING DEVICE (TEMPORARY BLOWOFF HYDRANT) A. THIS ITEMS SHALL BE FOR THE INSTALLATION OF A TEMPORARY BLOWOFF HYDRANT FOR USE DURING CONSTRUCTION B. THIS ITEM INCLUDES ALL LABOR AND MATERIAL FOR EXCAVATION, HAULING OFF EXCAVATED SOIL AND MATERIALS TO AN APPROVED LOCATION, BACKFILL, COMPACTION OF BACKFILL, AND INSTALLATION OF TEMPORARY BLOWOFF HYDRANT ASSEMBLY INCLUDING THE HYDRANT, VALVE, PIPING, PIPE RESTRAINTS, CONNECTION TO PIPE AND REMOVAL OF BLOW OFF HYDRANT. THIS ITEM INCLUDES THE HYDRANT TEE, ANY LENGHT OF PIPES NEEDED FOR TEMPORARY PLACMENT AND REMOVAL OF FLUSHING DEVICE. B.THIS ITEM SHALL BE INSTALLED IN ACCORDANCE TO MARSHALLTOWN WATER WORKS SPECIFICATIONS..
61	5020-108-F-0	VALVE BOX ADJUSTMENT A. THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIAL TO ADD A NEW EXTENSION TO THE VALVE BOX IF THE EXISTING VALVE BOX CANNOT BE ADJUSTED ENOUGH TO BE FLUSH WITH FINAL GRADE. THIS ITEM IS A PLACE HOLDER AND SHALL BE USED TO ESTABLISH A UNIT PRICE AND ONL USED UPON APPROVAL OF THE ENGINEER
62	5020-108-G-0	VALVE BOX REPLACEMENT A. THIS ITEM SHALL INCLUDE ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO REPLACE ANY EXISTING VALVE BOX IDENTIFIED AS DAMAGED OR UNABLE TO BE ADJUSTED TO FINAL GRADE PROPERLY.THIS ITEM IS A PLACE HOLDER AND SHALL BE USED TO ESTABLISH A UNIT PRICE AND ONL USED UPON APPROVAL OF THE ENGINEER
63	5020-108-I-0	FIRE HYDRANT ASSEMBLY REMOVAL A. THIS ITEM SHALL INCLUDE ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO REMOVE EXISTING, PIPE, FITTINGS, AND HYDRANT NEEDED FOR PROPER CONNECTION AND INSTALLATION OF NEW HYDRANTS. NEW HYDRANT TO BE PAID AS "FIRE HYDRANT ASSEMBLY".
64	5020-108-J-0	VALVE REMOVAL A. THIS ITEM SHALL INCLUDE ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO REMOVE EXISTING VALVE INCLUDING EXCAVATION, REMAVAL OF VALVE BOX, DISPOSAL OF VALVE BOX BACKFILL AND COMPACTION OF SURROUNDING AREA. NEW VALVES TO BE PAID AS SEPARATE ITEM
65	6010-108-A-0	SANITARY MANHOLE, SW-301, 48 INCH A. REFER TO M2 SHEETS FOR SANITARY LOCATIONS AND PROFILES B. ANY VISIBLE LEAKS SHALL BE REPAIRED. MANHOLE CASTINGS SHALL READ "SANITARY SEWER" AND BE SW-601 TYPE B. INSTALLATION CAN BE PRECAST OR CAST IN PLACE. BOXOUTS SHALL BE CIRCULAR BOXOUTS. C. SANITARY MANHOLE SHALL HAVE INTERNAL CHIMNEY SEAL
66	6010-108-A-0	STORM MANHOLE, SW-401, 48 INCH A. REFER TO M SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "STORM SEWER" AND BE SW-602 TYPE E. C. BOXOUTS SHALL BE CIRCULAR BOXOUTS
67	6010-108-A-0	STORM MANHOLE, SW-401, 60 INCH A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "STORM SEWER" AND BE SW-602 TYPE E. C. BOXOUTS SHALL BE CIRCULAR BOXOUTS
68	6010-108-A-0	STORM MANHOLE, SW-401, 72 INCH A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "STORM SEWER" AND BE SW-602 TYPE E. C. BOXOUTS SHALL BE CIRCULAR BOXOUTS
69	6010-108-A-0	STORM MANHOLE, SW-402, 6'X6' A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "STORM SEWER" AND BE SW-602 TYPE E. C. BOXOUTS SHALL BE CIRCULAR BOXOUTS
70	6010-108-B-0	INTAKE, SW-501 A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
71	6010-108-B-0	INTAKE, SW-505 A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
72	6010-108-B-0	INTAKE, SW-507 A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
73	6010-108-B-0	INTAKE, SW-509 A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
74	6010-108-B-0	INTAKE, SW-510, MODIFIED A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES. REFER TO B SHEETS FOR DETAILS B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
75	6010-108-B-0	INTAKE, SW-541 A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
76	6010-108-B-0	INTAKE, SW-512 A. REFER TO M1 SHEETS FOR STORM SEWER LOCATION AND PROFILES B. MANHOLE CASTINGS SHALL READ "NO DUMP, DRAINS TO WATERWAY". C. INTAKE SHALL BE EITHER CAST-IN-PLACE OR PRECAST. IF THE STRUCTURE IS NOT ABLE TO BE PRECAST THEN IT SHALL BE CAST-IN-PLACE WITH NO ADDITIONAL PAYMENT.
77	6010-108-E-0	MANHOLE ADJUSTMENT, MINOR A. REFER TO D AND M SHEETS FOR LOCATIONS. THIS BID ITEM SHALL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO ADJUST CASTINGS TO FINISHED GRADE. THIS ITEM INCLUDES THE REMOVAL AND REPLACEMENT OF ADJUSTMENT RINGS AND THE INSTALLATION OF NEW CASTINGS. OLD CASTING SHALL BE SALVAGED TO THE CITY. B. ALL SANITARY SEWER MANHOLES SHALL HAVE A NEW 3 PIECE CASTING INSTALLED AS A PART OF THIS BID ITEM C. ENGINEER SHALL MAKE FINAL DETERMINATION WITH THE CONTRACTOR THE DAY OF MODIFICATIONS BEING MADE WHETHER IT MEETS THE STANDARD OF MAJOR OR MINOR ADJUSTMENT. PLAN DETERMINATION WAS MADE FROM CHANGE IN ELEVATION AS IDENTIFIED IN M SHEETS.
78	6010-108-F-0	MANHOLE ADJUSTMENT, MAJOR A. REFER TO D AND M SHEETS FOR LOCATIONS.REMOVAL OF EXISTING CASTING, ADJUSTMENT RINGS, TOP SECTIONS, AND RISERS; EXCAVATION; CONCRETE AND REINFORCING STEEL OR PRECAST SECTIONS; FURNISHING AND INSTALLING NEW ADJUSTMENT RINGS AND CASTING; INSTALLING NEW INFILTRATION BARRIER (SANITARY SEWER MANHOLES ONLY); PLACING BACKFILL MATERIAL; AND COMPACTION. OLD CASTING SHALL BE SALVAGED TO THE CITY. SANITARY SEWER B. ALL SANITARY SEWER MANHOLES SHALL HAVE A NEW 3 PIECE CASTING INSTALLED AS A PART OF THIS BID ITEM C. ENGINEER SHALL MAKE FINAL DETERMINATION WITH THE CONTRACTOR THE DAY OF MODIFICATIONS BEING MADE WHETHER IT MEETS THE STANDARD OF MAJOR OR MINOR ADJUSTMENT. PLAN DETERMINATION WAS MADE FROM CHANGE IN ELEVATION AS IDENTIFIED IN M SHEETS.
79	6010-108-G-0	CONNECTION TO EXISTING MANHOLE A. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO CONNECT TO EXISTING STORM SEWER MANHOLE. B. THIS ITEM SHALL NOT BE USED WHEN CONNECTING TO EXISTING PIPE STUBBED OUT OF MANHOLE.
80	6010-108-H-0	REMOVE MANHOLE A. REFER TO F SHEETS FOR LOCATIONS B. THIS BID ITEM SHALL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO REMOVE ALL COMPONENTS OF THE EXISTING STRUCTURE AND LEGALLY DISPOSING AT AN OFF SITE LOCATION.
81	6010-108-H-0	REMOVE INTAKE A. REFER TO F SHEETS FOR LOCATIONS B. THIS BID ITEM SHALL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO REMOVE ALL COMPONENTS OF THE EXISTING STRUCTURE AND LEGALLY DISPOSING AT AN OFF SITE LOCATION.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	JDA
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CLIENT PROJ. NO.	0A1125646

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

SHEET
C.06

82	7010-108-A-0	PAVEMENT, PCC, 8 INCH A. REFER TO B SHEETS FOR TYPICAL SECTIONS AND D SHEETS FOR STREET PLAN AND PROFILES. ALL CONCRETE SHALL BE CLASS C AND MEET MINIMUM COMPRESSIVE STRENGTH REQUIREMENT OF 4,000 PSI AT 28 DAYS. AREAS NOT MEETING THIS REQUIREMENT WILL BE SUBJECT TO REPAIRS, REPLACEMENT OR REDUCED PAYMENT AS DETERMINED BY THE ENGINEER AND TEST RESULTS WILL REPRESENT ALL CONCRETE PLACED IN THE SAME LOT. GROUND GRANULATED BLAST FURNACE SLAG IS NOT PERMITTED FOR ANY WORK ON THE PROJECT. B. ALL JOINTS SHALL BE SAW CUT TO A DEPTH OF T/3 AND SEALED. LOW AIR TOLERANCE LIMIT PER 7010-3.08-B. C. NO ADDITIONAL PAYMENT WILL BE MADE FOR COLD WEATHER CONCRETE OR COVERING IF REQUIRED. D. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE UNLESS, IN THE JUDGMENT OF THE ENGINEER, THE CRACK CAN BE ROUTED AND SEALED. THICKENED EDGES SHALL BE INCIDENTAL TO THIS BID ITEM, NO ADDITIONAL PAYMENT SHALL BE MADE. E. CONCRETE TESTING WILL BE PROVIDED BY THE CONTRACTOR. F. REFER TO L SHEETS FOR JOINTING DETAILS. PAVING SHALL BE COMPLETED WITH A SLIPFORM PAVER OR LASER SCREED. G. ADJUSTMENT OF CURB BOXES TO FG THAT FALL WITHIN THE PAVEMENT AREA SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.
83	7010-108-E-0	CURB AND GUTTER, PCC, 6 INCH A. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO CONSTRUCT 2' PCC CURB AND GUTTER REGARDLESS OF LOCATION AND METHOD OF PLACEMENT. B. CONCRETE WILL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SLAG IS NOT ALLOWED. CONCRETE TESTING WILL BE PROVIDED BY THE CONTRACTOR. C. ANY VOIDS IN THE BACK OF CURB SHALL BE FILLED WITH GROUT PRIOR TO BACKFILLING THE CURBS
84	7010-108-F-0	BEAM CURB A. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO CONSTRUCT 2' PCC CURB AND GUTTER REGARDLESS OF LOCATION AND METHOD OF PLACEMENT. B. CONCRETE WILL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SLAG IS NOT ALLOWED. CONCRETE TESTING WILL BE PROVIDED BY THE CONTRACTOR. C. ANY VOIDS IN THE BACK OF CURB SHALL BE FILLED WITH GROUT PRIOR TO BACKFILLING THE CURBS
85	7010-108-I-0	PCC PAVEMENT SAMPLES AND TESTING A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CONCRETE TESTING PER IDOT AND SUDAS SECTION 7030.3.11. B. THIS ITEM SHALL INCLUDE TESTING FOR ROADWAY PAVEMENT, VARIABLE WIDTH CONCRETE BANDS, FOUNDATIONS, RAMPS AND STAIRS
86	7020-108-B-0	PAVEMENT, HMA, 5" A. BID ITEM INCLUDES HMA FOR PARKING LOT(S) THAT ARE EXISTING HMA. SEE D SHEETS FOR LOCATIONS. B. HMA MIX SHALL BE HMA ST, 1/2", PG 58-28S C. ITEM SHALL INCLUDE 2" BASE, 1.5" INTERMEDIATE AND 1.5" SURFACE COURSES WITH TACK COATS IN BETWEEN ALL LAYERS AND FOLLOW ALL REQUIREMENTS IN SUDAS 7020.
87	7030-108-A-0	REMOVAL OF SIDEWALK A. THE THICKNESS OF THE EXISTING PAVEMENT IS VARIABLE. FULL DEPTH SAW CUTS SHALL BE INCIDENTAL TO THIS ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REMOVAL, EARTHWORK, SUBGRADE PREPARATION, MODIFIED SUBBASE AND PAVING EXPENSES DUE TO DAMAGED EDGES. ADDITIONAL REMOVAL TO BE DETERMINED BY ENGINEER. PAYMENT SHALL BE MADE FOR THE AREA OF SIDEWALK REMOVED, REGARDLESS OF THICKNESS. B. THIS ITEM SHALL INCLUDE ALL LABOR AND EQUIPMENT NECESSARY TO REMOVE ALL SIDEWALK PAVING AND EARTHWORK NEEDED TO MAKE THE PROPOSED IMPROVEMENTS. REFER TO R SHEETS FOR REMOVAL LIMITS AND SHEET C.10 FOR TABULATIONS. SAW CUTS AND EXCESS EARTH REMOVAL SHALL BE INCIDENTAL TO ITEMS. C. CONTRACTOR SHALL SUBMIT PROPOSED REMOVAL EQUIPMENT TO ENGINEER FOR APPROVAL PRIOR TO ANY REMOVALS. EQUIPMENT SHALL NOT CAUSE ANY DAMAGE TO EXISTING BUILDINGS INCLUDING FOOTING, FOUNDATION WALLS, WALLS, WINDOWS, GLASS OR OTHER DECORATIONS.
88	7030-108-A-0	REMOVAL OF DRIVEWAY A. THE THICKNESS OF THE EXISTING PAVEMENT IS VARIABLE. FULL DEPTH SAW CUTS SHALL BE INCIDENTAL TO THIS ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REMOVAL, EARTHWORK, SUBGRADE PREPARATION, MODIFIED SUBBASE AND PAVING EXPENSES DUE TO DAMAGED EDGES. ADDITIONAL REMOVAL TO BE DETERMINED BY ENGINEER. PAYMENT SHALL BE MADE FOR THE AREA OF DRIVEWAY REMOVED, REGARDLESS OF THICKNESS. B. THIS ITEM SHALL INCLUDE ALL LABOR AND EQUIPMENT NECESSARY TO REMOVE ALL DRIVEWAY PAVING AND EARTHWORK NEEDED TO MAKE THE PROPOSED IMPROVEMENTS. REFER TO R SHEETS FOR REMOVAL LIMITS AND SHEET C.11 FOR TABULATIONS. SAW CUTS AND EXCESS EARTH REMOVAL SHALL BE INCIDENTAL TO ITEMS. C. CONTRACTOR SHALL SUBMIT PROPOSED REMOVAL EQUIPMENT TO ENGINEER FOR APPROVAL PRIOR TO ANY REMOVALS. EQUIPMENT SHALL NOT CAUSE ANY DAMAGE TO EXISTING BUILDINGS INCLUDING FOOTING, FOUNDATION WALLS, WALLS, WINDOWS, GLASS OR OTHER DECORATIONS.
89	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 5 INCH A. THIS ITEM INCLUDES INTEGRALLY COLORED PORTLAND CEMENT CONCRETE. B. CONCRETE WILL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SLAG IS NOT ALLOWED. C. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND B SHEET SERIES FOR INSTALLATION DETAILS. D.CONCRETE COLOR SHALL BE LIQUID CONCRETE PIGMENT AS FOLLOWS: 1) SOLOMON COLORS, COLOR 920 (ONYX), CONTACT 800-624-0261 2) APPROVED EQUAL E. SUBMIT FULL RANGE OF AVAILABLE COLORS TO ENGINEER FOR SELECTION AND APPROVAL. F. CONTRACTOR SHALL PROVIDE (2) 4 FT X 4 FT MOCKUP IN DIFFERENT COLORS, WITH MATTE SEALER FOR FINAL SELECTION AND APPROVAL. SUBMIT PRODUCT INFO FOR MATTE SEALER FOR APPROVAL. G. THIS ITEM TO BE MEASURED BY SQUARE YARD OF INTEGRAL COLORED PORTLAND CEMENT CONCRETE INSTALLED.
90	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 6 INCH A. THIS ITEM INCLUDES INTEGRALLY COLORED PORTLAND CEMENT CONCRETE SIDEWALK AND DRIVEWAYS. B. CONCRETE WILL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SLAG IS NOT ALLOWED. C. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND B SHEET SERIES FOR INSTALLATION DETAILS. D.CONCRETE COLOR SHALL BE LIQUID CONCRETE PIGMENT AS FOLLOWS: 1) SOLOMON COLORS, COLOR 920 (ONYX), CONTACT 800-624-0261 2) APPROVED EQUAL E. SUBMIT FULL RANGE OF AVAILABLE COLORS TO ENGINEER FOR SELECTION AND APPROVAL. F. CONTRACTOR SHALL PROVIDE (2) 4 FT X 4 FT MOCKUP IN DIFFERENT COLORS, WITH MATTE SEALER FOR FINAL SELECTION AND APPROVAL. SUBMIT PRODUCT INFO FOR MATTE SEALER FOR APPROVAL. G. THIS ITEM TO BE MEASURED BY SQUARE YARD OF INTEGRAL COLORED PORTLAND CEMENT CONCRETE INSTALLED.
91	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 8 INCH A. THIS ITEM INCLUDES INTEGRALLY COLORED PORTLAND CEMENT CONCRETE. B. CONCRETE WILL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SLAG IS NOT ALLOWED. C. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND B SHEET SERIES FOR INSTALLATION DETAILS. D.CONCRETE COLOR SHALL BE LIQUID CONCRETE PIGMENT AS FOLLOWS: 1) SOLOMON COLORS, COLOR 920 (ONYX), CONTACT 800-624-0261 2) APPROVED EQUAL E. SUBMIT FULL RANGE OF AVAILABLE COLORS TO ENGINEER FOR SELECTION AND APPROVAL. F. CONTRACTOR SHALL PROVIDE (2) 4 FT X 4 FT MOCKUP IN DIFFERENT COLORS, WITH MATTE SEALER FOR FINAL SELECTION AND APPROVAL. SUBMIT PRODUCT INFO FOR MATTE SEALER FOR APPROVAL. G. THIS ITEM TO BE MEASURED BY SQUARE YARD OF INTEGRAL COLORED PORTLAND CEMENT CONCRETE INSTALLED.
92	7030-108-C-0	CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6 INCH A. THIS ITEM INCLUDES STAMPED INTEGRALLY COLORED PORTLAND CEMENT CONCRETE. B. CONCRETE WILL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SLAG IS NOT ALLOWED. C. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND B SHEET SERIES FOR INSTALLATION DETAILS. D.CONCRETE COLOR SHALL BE LIQUID CONCRETE PIGMENT AS FOLLOWS: 1) SOLOMON COLORS, COLOR 920 (ONYX), CONTACT 800-624-0261 2) APPROVED EQUAL E. SUBMIT FULL RANGE OF AVAILABLE COLORS TO ENGINEER FOR SELECTION AND APPROVAL. F. CONTRACTOR SHALL PROVIDE (2) 4 FT X 4 FT MOCKUP IN DIFFERENT COLORS, WITH MATTE SEALER FOR FINAL SELECTION AND APPROVAL. SUBMIT PRODUCT INFO FOR MATTE SEALER FOR APPROVAL. G. THIS ITEM TO BE MEASURED BY SQUARE YARD OF INTEGRAL COLORED PORTLAND CEMENT CONCRETE INSTALLED.
93	7030-108-E-0	SIDEWALK, PCC, 5 INCH A. CONCRETE SHALL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. B. AREAS NOT MEETING THIS REQUIREMENT SHALL BE SUBJECT TO REPAIRS, REPLACEMENT OR REDUCED PAYMENT AS DETERMINED BY THE ENGINEER AND TEST RESULTS WILL REPRESENT ALL CONCRETE PLACED IN THE SAME LOT. COLD WEATHER CONCRETE WILL BE CONSIDERED INCIDENTAL IF REQUIRED. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE UNLESS, IN THE JUDGMENT OF THE ENGINEER, THE CRACK CAN BE ROUTED AND SEALED. C. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND B SHEET SERIES FOR INSTALLATION DETAILS. D. CONCRETE TESTING SHALL BE PROVIDED BY THE CONTRACTOR
94	7030-108-E-0	SIDEWALK, PCC, 6 INCH A. CONCRETE SHALL BE A C-4 MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. B. AREAS NOT MEETING THIS REQUIREMENT SHALL BE SUBJECT TO REPAIRS, REPLACEMENT OR REDUCED PAYMENT AS DETERMINED BY THE ENGINEER AND TEST RESULTS WILL REPRESENT ALL CONCRETE PLACED IN THE SAME LOT. COLD WEATHER CONCRETE WILL BE CONSIDERED INCIDENTAL IF REQUIRED. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE UNLESS, IN THE JUDGMENT OF THE ENGINEER, THE CRACK CAN BE ROUTED AND SEALED. C. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND B SHEET SERIES FOR INSTALLATION DETAILS. D. CONCRETE TESTING SHALL BE PROVIDED BY THE CONTRACTOR
95	7030-108-F-0	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE A. THIS ITEM INCLUDES SIDEWALK UNIT PAVERS WITH PCC BASE, POLYMERIC SAND FOR JOINTS, SAND SETTING BED, GEOTEXTILE FABRIC, 4 INCH THICK CONCRETE BASE, REBAR, AND AGGREGATE SUBBASE. B. REFER TO T.01 FOR TYPE, FINISH AND COLOR. REFER TO T SERIES SHEETS FOR LOCATION, REFER TO B SHEETS FOR PATTERN, DETAILS AND INCIDENTAL ITEMS. C. SEE SPECIAL PROVISION FOR SPECIFICATION INFORMATION.
96	7030-108-G-0	DETECTABLE WARNING A. REFER TO S SHEETS FOR LOCATIONS. DETECTABLE WARNINGS SHALL BE CAST IRON. REFER TO MARSHALLTOWN SUPPLEMENTAL SPECIFICATIONS FOR ADDITIONAL DETAILS.
97	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6 INCH A. REFER TO D SHEETS FOR LAYOUT. ALL JOINTS SHALL BE CUT TO A DEPTH OF T/3 AND SEALED. B. ALL CONCRETE SHALL BE CLASS C AND MEET MINIMUM COMPRESSIVE STRENGTH REQUIREMENT OF 4,000 PSI AT 28 DAYS. AREAS NOT MEETING THIS REQUIREMENT SHALL BE SUBJECT TO REPAIRS, REPLACEMENT OR REDUCED PAYMENT AS DETERMINED BY THE ENGINEER AND TEST RESULTS WILL REPRESENT ALL CONCRETE PLACED IN THE SAME LOT. CERTIFIED PLANT INSPECTION SHALL BE REQUIRED BY CONTRACTOR. LOW AIR TOLERANCE LIMIT PER 7010-3.08-B. NO ADDITIONAL PAYMENT WILL BE MADE FOR COLD WEATHER CONCRETE OR COVERING IF REQUIRED. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE UNLESS, IN THE JUDGMENT OF THE ENGINEER, THE CRACK CAN BE ROUTED AND SEALED. C. QUANITTY FOR SIDEWALK INCLUDED AN ADDITIONAL 10% OVER TABULATION TO ALLOW FOR UP TO 2 FEET OF DRIVEWAY REPLACMENT BEYOND LIMITS SHOWN IN THE PLANS. THE ADDITIONAL 2 FEET SHALL ONLY BE UTILIZED BASED ON EXISTING DRIVEWAY CONDITION AND UPON APPROAL OF THE ENGINEER
98	7030-108-H-1	DRIVEWAY, PAVED, PCC, 8 INCH A. REFER TO D SHEETS FOR LAYOUT. ALL JOINTS SHALL BE CUT TO A DEPTH OF T/3 AND SEALED. B. ALL CONCRETE SHALL BE CLASS C AND MEET MINIMUM COMPRESSIVE STRENGTH REQUIREMENT OF 4,000 PSI AT 28 DAYS. AREAS NOT MEETING THIS REQUIREMENT SHALL BE SUBJECT TO REPAIRS, REPLACEMENT OR REDUCED PAYMENT AS DETERMINED BY THE ENGINEER AND TEST RESULTS WILL REPRESENT ALL CONCRETE PLACED IN THE SAME LOT. CERTIFIED PLANT INSPECTION SHALL BE REQUIRED BY CONTRACTOR. LOW AIR TOLERANCE LIMIT PER 7010-3.08-B. NO ADDITIONAL PAYMENT WILL BE MADE FOR COLD WEATHER CONCRETE OR COVERING IF REQUIRED. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE UNLESS, IN THE JUDGMENT OF THE ENGINEER, THE CRACK CAN BE ROUTED AND SEALED. C. QUANITTY FOR SIDEWALK INCLUDED AN ADDITIONAL 10% OVER TABULATION TO ALLOW FOR UP TO 2 FEET OF DRIVEWAY REPLACMENT BEYOND LIMITS SHOWN IN THE PLANS. THE ADDITIONAL 2 FEET SHALL ONLY BE UTILIZED BASED ON EXISTING DRIVEWAY CONDITION AND UPON APPROAL OF THE ENGINEER.
99	7030-108-I-0	SIDEWALK ASSURANCE TESTING A. CONTRACTOR SHALL PROVIDE ALL MATERIAL TESTING REQUIRED FOR SIDEWALK PAVEMENT PER SUDAS SECTION 7030.3.11. B. CONTRACTOR SHALL TEST ALL MATERIAL REGARDLESS OF SINGLE DAY POUR VOLUME.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

SHEET
C.07

100	7030-108-I-0	CYCLE ASSURANCE TESTING A. CONTRACTOR SHALL PROVIDE ALL MATERIAL TESTING REQUIRED FOR CYCLE TRACK PAVEMENT PER SUDAS SECTION 7030.3.11. B. CONTRACTOR SHALL TEST ALL MATERIAL REGARDLESS OF SINGLE DAY POUR VOLUME.
101	7030-108-I-0	DRIVEWAY ASSURANCE TESTING A. CONTRACTOR SHALL PROVIDE ALL MATERIAL TESTING REQUIRED FOR DRIVEWAY PAVEMENT PER SUDAS SECTION 7030.3.11. B. CONTRACTOR SHALL TEST ALL MATERIAL REGARDLESS OF SINGLE DAY POUR VOLUME.
102	7030-108-X-0	REINFORCED CONCRETE BAND, VARIABLE WIDTH A. THIS ITEM INCLUDES ALL CONCRETE BANDS INDICATED AS 12", 18" AND 24" WIDTH. VARIATIONS IN THICKNESS AND WIDTH AND NECESSARY REBAR SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. REFER TO T SHEETS FOR LOCATIONS AND SHEET B SHEETS FOR INSTALLATION DETAILS. B. ALL CONCRETE SHALL BE CLASS C AND MEET MINIMUM COMPRESSIVE STRENGTH REQUIREMENT OF 4,000 PSI AT 28 DAYS. AREAS NOT MEETING THIS REQUIREMENT SHALL BE SUBJECT TO REPAIRS, REPLACEMENT OR REDUCED PAYMENT AS DETERMINED BY THE ENGINEER AND TEST RESULTS WILL REPRESENT ALL CONCRETE PLACED IN THE SAME LOT. LOW AIR TOLERANCE LIMIT PER 7010-3.08-B. C. NO ADDITIONAL PAYMENT WILL BE MADE FOR COLD WEATHER CONCRETE OR COVERING IF REQUIRED. D. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE UNLESS, IN THE JUDGMENT OF THE ENGINEER, THE CRACK CAN BE ROUTED AND SEALED. E. THIS ITEM TO BE MEASURED BY SQUARE FOOT OF REINFORCED CONCRETE BAND INSTALLED. F. PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT OF REINFORCED CONCRETE BAND INSTALLED. THIS PAYMENT SHALL BE CONSIDERED FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO INSTALL THE REINFORCED CONCRETE BANDS.
103	7030-108-X-0	CONCRETE RAMP & STAIRS A. THIS ITEMS SHALL BE FOR CONSTRUCTING THE ADA RAMP AND STAIRS FOR MARSHALLTOWN WATER WORKS. B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND ITEMS NECESSARY TO INSTALL RAMP AND STAIRS INCLUDING HEATED PAVEMENT SYSTEM. C. ALL CONCRETE SHALL BE CLASS C AND MEET MINIMUM COMPRESSIVE STRENGTH REQUIREMENT OF 4,000 PSI AT 28 DAYS UTILIZING MACRO FIBERS PER IDOT SPECIFICATIONS. C. THE HEAT SYSTEM SHALL PROVIDE AT A MINIMUM 45 WATTS PER SQUARE FOOT FOR SNOW MELTING. THE CONTRACTOR SHALL PROVIDE A SIGNED AND SEALED DESIGN FOR THE SNOW MELT SYSTEM MEETING THE FOLLOWING REQUIREMENTS. 1. THE HEATING CABLE SHALL CONSIST OF A SINGLE CONDUCTOR SURROUNDED BY MAGNESIUM OXIDE INSULATION WITH A SEAMLESS, LSZH (LOW SMOKE ZERO HALOGEN)-COVERED, COPPER SHEATH AND SHALL OPERATE ON LINE VOLTAGES OF 240 VOLTS WITHOUT THE USE OF TRANSFORMERS. 2. THE HEATING CABLE SHALL BE FACTORY TERMINATED WITH A MINIMUM 7 FOOT COLD LEAD (UNHEATED) LENGTH. 3. SYSTEM SHALL BE CONTROLLED BY A SINGLE CIRCUIT UTILIZING A PAVEMENT TEMPERATURE SENSOR LOCATED IN THE RAMP. 4. THE SYSTEM WILL BE POWERED BY AN EXISTING 240V -30AMP CIRCUIT. 5. COMPLY WITH MANUFACTURER'S RECOMMENDATIONS IN THE MI HEATING CABLE INSTALLATION AND OPERATION MANUAL. THE INSTALLER SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE FUNCTIONAL SYSTEM, INSTALLED IN ACCORDANCE WITH APPLICABLE NATIONAL AND LOCAL REQUIREMENTS. 6. THE SYSTEM SHALL BE COMMISSIONED IN ACCORDANCE TO THE MI HEATING CABLE INSTALLATION AND OPERATION MANUAL. THE HEATING CABLE CIRCUIT INTEGRITY SHALL BE TESTED USING A 1000 VDC MEGOHMMETER. MINIMUM ACCEPTABLE INSULATION RESISTANCE SHALL BE 20 MEGOHMS. CONTRACTOR SHALL SUBMIT TO OWNER RESULTS OF INSTALLATION TESTS REQUIRED BY THE MANUFACTURER. 7. START-UP OF SYSTEM SHALL BE PERFORMED BY FACTORY TECHNICIAN OR FACTORY REPRESENTATIVE PER THE OWNER'S REQUIREMENTS. THE TECHNICIAN SHALL VERIFY THAT THE SNOW/ICING MELTING CONTROLLER PARAMETERS ARE SET TO THE APPLICATION REQUIREMENTS. 8. MANUFACTURER SHALL PROVIDE A STANDARD TEN (10) YEAR LIMITED WARRANTY FOR HEATING CABLES AND COMPONENTS. 10 YEAR WARRANTY SHALL BE OPENLY PUBLISHED ON MANUFACTURER'S WEBSITE. PROVIDE ONE (1) YEAR WARRANTY FOR ALL HEAT TRACE CONTROLLERS. 9. HEATING CABLES SHALL BE LOCATED AT LEAST 6 INCHES FROM EDGE OF RAMP TO PROVIDE CLEARANCE FOR RAILING INSTALLATION. D. LICENSED ELECTRICAN SHALL MAKE CONNECTIONS TO EXISING CIRCUIT IN THE BASEMENT OF MARSHALLTOWN WATER WORKS BUILDING.
104	7040-108-H-0	PAVEMENT REMOVAL A. ALL REMOVALS TO BE MARKED AND MEASURED BY THE ENGINEER. FULL DEPTH SAW CUTS ALONG THE REMOVAL LIMITS ARE INCIDENTAL TO THIS ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REMOVAL, EARTHWORK, SUBGRADE PREPARATION, MODIFIED SUBBASE AND PAVING EXPENSES DUE TO DAMAGED EDGES. ADDITIONAL REMOVAL TO BE DETERMINED BY ENGINEER. PAYMENT SHALL BE MADE FOR THE AREA OF PAVEMENT REMOVED, REGARDLESS OF THICKNESS. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS AT AN OFF-SITE WASTE AREA. B. THIS ITEMS INCLUDES REMOVAL OF ANY BRICK LOCATED UNDER THE EXISTING ROADWAY.
105	8010-108-A-0	TRAFFIC SIGNAL MODIFICATIONS ITEM INCLUDES REMOVAL AND SALVAGE OF THE TWO EXISTING VIDEO DETECTION CAMERAS FROM THE TRAFFIC SIGNAL MAST ARMS AT STATE STREET AND N 3RD AVENUE. CONTRACTOR SHALL RETURN CAMERAS TO THE CITY. ITEM ALSO INCLUDES THE REMOVAL OF THE EXISTING VIDEO DETECTION CAMERA CABLING FROM THE TRAFFIC SIGNAL POLES AND CONDUIT SYSTEM. CONTRACTOR SHALL SUPPLY AND INSTALL TWO VIDEO DETECTION CAMERAS (ITERIS PART NUMBER: NEXT-CAM-BH-PAK) WITH THE CAPABILITY OF DETECTING VEHICLES AND BICYCLES IN THE SAME LOCATIONS AS THE EXISTING CAMERAS. CONTRACTOR SHALL SUPPLY AND INSTALL A SHELF MOUNT CCU (ITERIS PART NUMBER: NEXT-CCU-SM4-TS2-PAK) IN THE TRAFFIC SIGNAL CABINET FOR THE OPERATION OF THE VIDEO DETECTION SYSTEM AND PROGRAM THE VIDEO DETECTION SYSTEM. CONTRACTOR SHALL ALSO SUPPLY AND INSTALL SHIELDED CAT5 CABLE PER MANUFACTURER'S SPECIFICATIONS FROM THE VIDEO DETECTION CAMERAS ON THE TRAFFIC SIGNAL MAST ARMS TO THE TRAFFIC SIGNAL CABINET WITHOUT SPLICES. SHIELDED CAT5 CABLE QUANTITY ESTIMATE IS 330'. CONTRACTOR SHALL PROVIDE TEMPORARY TRAFFIC CONTROL NECESSARY TO COMPLETE THE WORK CONFORMING TO THE MOST CURRENT VERSION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE TRAFFIC SIGNAL MODIFICATIONS SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, BRACKETS, AND MATERIALS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL TRAFFIC SIGNAL INSTALLATION CAPABLE OF DETECTING BOTH VEHICLES AND BICYCLES IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.
106	8020-108-B-0	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE A. REFER TO C SHEETS FOR TABULATIONS AND K SHEETS FOR LOCATIONS. B. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC), CHAPTER 130.
107	8020-108-G-0	PAINTED SYMBOLS AND LEGENDS A. REFER TO C SHEETS FOR TABULATIONS AND K SHEETS FOR LOCATIONS. B. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC), CHAPTER 130.
108	8020-108-K-0	PAVEMENT MARKINGS REMOVED A. REFER F & K SHEETS FOR REMOVALS. B. REMOVALS SHALL BE PER SUDAS 8020
109	8020-108-L-0	SYMBOLS AND LEGENDS REMOVED A. REFER F & K SHEETS FOR REMOVALS. B. REMOVALS SHALL BE PER SUDAS 8020
110	8030-108-A-0	TEMPORARY TRAFFIC CONTROL A. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO INSTALL, MAINTAIN, AND REMOVE TEMPORARY TRAFFIC CONTROL AS NEEDED THROUGHOUT THE PROJECT DURATION. TEMPORARY TRAFFIC CONTROL SIGNS INSTALLED FOR MORE THAN 1 WEEK SHALL BE POST MOUNTED. PAYMENT SHALL BE LUMP SUM, REGARDLESS OF THE NUMBER OF MOBILIZATIONS TO THE SITE. B. REFER TO J SHEETS FOR STAGING AND TRAFFIC CONTROL NOTES. C. ALL ROADWAY AND PEDESTRIAN CLOSURES SHALL BE INCLUDED IN THIS ITEM D. THIS ITEMS INCLUDES ANY REQUIRED PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
111	8030-108-X-X	REMOVAL OF SIGN AND SIGN POST A. THIS ITEM INCLUDES THE REMOVAL OF EXISTING CITY OWNED STREET SIGNS AND POSTS. EXISTING SIGNS SHALL BE SALVAGED TO THE CITY. THIS BID ITEM INCLUDES REMOVAL OF THE EXISTING SIGNS, POLES AND SALVAGED TO THE CITY, DELIVERED TO THE MARSHALLTOWN PUBLIC WORKS BUILDING B. THIS ITEM TO BE MEASURED BY EACH SIGN REMOVED. C. PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE PER EACH SIGN REMOVED. THIS PAYMENT SHALL BE CONSIDERED FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO REMOVE EACH SIGN.
112	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (TYPE 1), FERTILIZING, AND MULCHING A. INCLUDES SEEDING OF ALL DISTURBED AREAS OF THE PROJECT. THE AREAS SHALL BE SEEDED WITH TYPE (1) LAWN MIXTURE. B. WATERING SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ROCK PICKING, FINISH GRADING, RESODDING AS DIRECTED BY THE ENGINEER ARE CONSIDERED INCIDENTAL TO THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR RESEEDED AREAS. C. THE CONTRACTOR IS RESPONSIBLE FOR MOWING AND MAINATINING SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. SEEDING OF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. D. THE SEEDING RATE SHALL BE AT LEAST 300 LBS/ACRE.
113	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (LOW MOW), FERTILIZING, AND MULCHING A. INCLUDES SEEDING OF DISTURBED AREAS WHERE INDICATED ON PLANS. REFER TO CE SHEETS AND T SHEETS FOR SEEDING NOTES. THE AREAS SHALL BE SEEDED WITH TYPE (1) LAWN MIXTURE. B. WATERING SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ROCK PICKING, FINISH GRADING, RESEEDING AS DIRECTED BY THE ENGINEER ARE CONSIDERED INCIDENTAL TO THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR RESEEDED AREAS. C. THE CONTRACTOR IS RESPONSIBLE FOR MOWING AND MAINTAINING SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. SEEDING OF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. D. THE SEEDING RATE SHALL BE AT LEAST 300 LBS/ACRE.
114	9020-108-A-0	SOD A. INCLUDES SEEDING OF AREA INDICATED ON SHEET CE.03 - EROSION CONTROL PLAN. REFER TO CE SHEETS AND T SHEETS FOR SEEDING NOTES. THE AREA SHALL BE SEEDED WITH LOW-GROW FESCUE MIX, PER NOTES ON SHEET T.00. B. WATERING SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ROCK PICKING, FINISH GRADING, RESEEDING AS DIRECTED BY THE ENGINEER ARE CONSIDERED INCIDENTAL TO THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR RESEEDED AREAS. C. THE CONTRACTOR IS RESPONSIBLE FOR MOWING AND MAINTAINING SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. SEEDING OF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. D. THE SEEDING RATE SHALL BE AT LEAST 45 LBS/ACRE.
115	9030-108-B-0	PERENNIAL GROUND COVER (1 GAL) A. SOD ALL AREAS WHERE INDICATED ON PLANS. WATERING SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ROCK PICKING, FINISH GRADING, AND REWORK, INCLUDING REGRADING AND ADJUSTING GRADING, ARE CONSIDERED INCIDENTAL TO THIS ITEM. B. AN AERATION PASS WILL BE REQUIRED PRIOR TO SOD PLACEMENT. THE SOD BED SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLACING SOD. C. CONTRACTOR RESPONSIBLE FOR PROTECTING, WATERING, MOWING AND MAINTAINING SODDED AREAS THRU ESTABLISHMENT AND ACCEPTANCE. SODDING OF AREAS OUTSIDE OF CONSTRUCTION LIMITS SHALL BE RESPONSIBILITY OF CONTRACTOR AT NO ADDITIONAL COST TO OWNER. D. SOD WILL BE MEASURED AND PAID PER SQUARE OF SOD INSTALLED
116	9030-108-B-0	DECIDUOUS TREE A. THIS ITEM INCLUDES LABOR, EXCAVATION, MATERIAL, AND EQUIPMENT TO FURNISH AND INSTALL DECIDUOUS TREES IN ACCORDANCE WITH SUDAS SECTION 9030 AND AMENDED AS FOLLOWS: PLANTINGS SHALL HAVE ONE YEAR WARRANTY FROM DATE OF FINAL ACCEPTANCE FOR ALL PLANTINGS IN THE PROJECT. B. ACCEPTANCE OF PLANT MATERIALS CONSTRUES FULL PAYMENT (MINUS ANY PROJECT RETAINAGE). C. AMENDED PLANTING SOIL BACKFILL, MULCHING, STAKING, MAINTENANCE, WATERING AND WARRANTY/REJECTION REPLACEMENTS ARE CONSIDERED INCIDENTAL. D. SEE SUPPLEMENTAL SPECIFICATION - SECTION 9030 FOR ADDITIONAL INFORMATION.
117	9030-108-X-X	TREE GRATE AND FRAME A. THIS ITEM INCLUDES LABOR, MATERIALS AND EQUIPMENT TO FURNISH AND INSTALL TREE GRATE AND FRAME. SEE T SHEETS FOR LOCATIONS AND B SHEETS FOR DETAILS. B. ANY FRAME/GRATE THAT DOES NOT MATCH FLUSH WITH ADJACENT PAVEMENT MAY BE REJECTED AND WILL REQUIRE ADJUSTING OR RESETTING AT CONTRACTOR'S EXPENSE. INSTALL PER MANUFACTURER STANDARD SPECIFICATIONS. C. ITEM IS TO BE PAID ON A COUNT BASIS PER EACH INSTALLED TREE GRATE AND FRAME.
118	9040-108-A-1	SWPPP PREPARATION A. THIS ITEM INCLUDES DEVELOPMENT OF A SWPPP BY THE CONTRACTOR MEETING ALL LOCAL AND STATE AGENCY REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLY FOR OBTAINING NPDES GENERAL PERMIT #2. PERMIT SHALL BE OBTAINED AND A COPY PROVIDED TO THE CITY PRIOR TO ANY WORK ON THE PROJECT.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

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119	9040-108-A-2	SWPPP MANAGEMENT A. THIS ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL WORK REQUIRED TO COMPLY WITH THE ADMINISTRATIVE PROVISIONS OF THE IOWA DNR NPDES GENERAL PERMIT NO. 2; INCLUDING RECORD KEEPING, DOCUMENTATION, UPDATING THE SWPPP, FILING THE NOTICE OF DISCONTINUATION, ETC. WEEKLY INSPECTION REPORTS SHALL BE SENT TO THE ENGINEER 48 HOURS AFTER INSPECTION.
120	9040-108-D-1	FILTER SOCK, 8 INCH A. THIS ITEM INCLUDES, BUT IS NOT LIMITED TO, ANCHORING STAKES, MAINTENANCE, REPLACEMENT OF DEFICIENT FILTER SOCK, RESTORATION OF THE AREA TO FINISHED GRADE, AND OFF-SITE DISPOSAL OF THE FILTER SOCK AND ACCUMULATED SEDIMENT.
121	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK A. ITEM INCLUDES INSTALLATION, MAINTENANCE AND REMOVAL OF SILT FENCE. B. PAYMENT QUANTITY SHALL BE LIMITED TO THE EXTENTS SHOWN ON THE CE SHEETS. IF CONTRACTOR DETERMINES THAT ADDITIONAL QUANTITY IS REQUIRED TO PROPERLY PROTECT THE SITE AS REQUIRED BY THE NPDES GENERAL PERMIT NO. 2, THEY MUST NOTIFY THE ENGINEER AND HAVE APPROVAL PRIOR TO THE INSTALLATION. C. ANY QUANTITY ABOVE PLAN QUANTITY INSTALLED PRIOR TO ENGINEER APPROVAL MAY NOT BE PAID.
122	9040-108-O-1	STABILIZED CONSTRUCTION ENTRANCE A. ITEM INCLUDES THE INSTALLATION AND REMOVAL OF THE ROCK AND SUBGRADE STABILIZATION FABRIC FOR STABILIZED CONSTRUCTION ENTRANCES.
123	9040-108-Q-2	EROSION CONTROL MULCHING, HYDROMULCHING A. ITEM SHALL BE USED TO STABILIZE ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE OUTSIDE OF SEEDING/SODDING DATES.
124	9040-108-T-1	INLET PROTECTION DEVICE, A. THIS ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL LABOR AND MATERIALS NECESSARY FOR INSTALLATION, REMOVAL AND OFF-SITE DISPOSAL OF ACCUMULATED SEDIMENT, AND REMOVAL OF DEVICE UPON COMPLETION OF THE PROJECT. B. PROTECTION DEVICES SHALL BE UTILIZED ON OPEN THROAT INTAKE
125	9080-108-B-0	HANDRAIL, STEEL A. REFER TO B SHEETS FOR DETAILS
126	11010-108-A-1	CONSTRUCTION SURVEY A. THIS ITEM IS FOR ALL SURVEY WORK NECESSARY FOR CONSTRUCTION OF THIS PROJECT AS DETAILED ON THE CONSTRUCTION DOCUMENTS AND APPROVED REVISIONS. ELECTRONIC DRAWING ARE AVAILABLE FOR THE CONTRACTORS USE.
127	11010-108-B-1	MONUMENT PRESERVATION AND REPLACEMENT A. THE CONTRACTOR SHALL PROVIDE MONUMENT PRESERVATION FOR ANY DISTURBED AREA ON THE PROJECT PER SUDAS 11,010. B. ALL EXISTING FOUND MONUMENTS SHOWN ON G SHEETS SHALL BE PROTECTED AND IF DISTURBED RESET WITH A MONUMENT PRESERVATION PLAT.
128	11020-108-A-1	MOBILIZATION A. THIS ITEM IS FOR ALL PREPARATORY WORK AND COSTS INCURRED BEFORE BEGINNING THE WORK ON THE PROJECT AND DURING THE PROJECT. THIS ITEM SHALL ALSO INCLUDE THE COSTS FOR ANY STAGED CONSTRUCTION AND EQUIPMENT SET UP TO COMPLETE THE WORK. NO CHANGE IN CONTRACT PRICE WILL BE MADE FOR ANY ADDITIONAL WORK ADDED TO THE CONTRACT. PROJECT CONSTRUCTION IS ANTICIPATED TO BE MULTIPLE CONSTRUCTION SEASONS AND NO ADDITIONAL PAYMENT WILL BE MADE FOR MOBILIZATION BEYOND THE CONTRACT UNIT PRICE.
129	11030-108-A-0	MAINTENANCE OF POSTAL SERVICE A. MAIL DELIVERY SHALL BE COORDINATED WITH USPS PRIOR TO EACH PHASE. B. POSTAL SERVICE MAINTENANCE SHALL BE PER SUDAS SECTION 11030
130	11030-108-B-0	MAINTENANCE OF SOLID WASTE COLLECTION A. CONTRACTOR SHALL PROVIDE SOLID WASTE COLLECTION AT LEAST ONCE PER WEEK FOR EACH AFFECTED PROPERTY. CONTRACTOR SHALL COORDINATE DAYS, TIMES AND LOCATIONS BASED ON THE HAULERS REGULAR ROUTE. B. PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT LUMP SUM PRICE TO MAINTAIN SOLID WASTE COLLECTION ON THE PROJECT SITE. THIS PAYMENT SHALL BE CONSIDERED FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO MAINTAIN THE SOLID WASTE COLLECTION FOR ALL AFFECTED PROPERTIES.
131	11040-108-A-0	TEMPORARY PEDESTRIAN RESIDENTIAL ACCESS A. THIS ITEM SHALL BE UTILIZED AS DIRECTED BY THE OWNER OR ENGINEER.
132	11050-108-A-0	CONCRETE WASHOUT A. CONTRACTOR TO PROVIDE AND MAINTAIN A TEMPORARY CONCRETE WASHOUT CONTAINMENT AREA LOCATED WITHIN PROJECT LIMITS.
133	12010-108-X-2	MONUMENT FOUNDATION A. INCLUDES LABOR, MATERIALS AND EQUIPMENT TO INSTALL MONUMENT FOUNDATION. SEE SHEET T.05 FOR LOCATION AND SHEET B.16 FOR DETAILS. ITEM IS TO BE PAID ON A COUNT BASIS PER EACH. B. ITEM SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE INSTALLATION OF MONUMENT FOUNDATION; INCLUDING BUT NOT LIMITED TO THE FOLLOWING: EXCAVATION FOR FOOTING, REMOVAL AND DISPOSAL OF EXCAVATED MATERIAL, REINFORCED CONCRETE FOOTING, CONCRETE BASE, AND ELECTRICAL CONDUIT. C. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REINFORCING AND FOOTING
134	12020-108-X-1	ROCK MULCH A. INCLUDES LABOR, MATERIALS AND EQUIPMENT TO FURNISH AND INSTALL ROCK MULCH IN LANDSCAPE BED WHERE INDICATED ON SHEET T.04. REFER TO B SERIES FOR DETAIL. B. ROCK MULCH SHALL CONSIST OF 2 INCH TO 3 INCH, LOCALLY SOURCED, WASHED RIVER ROCK. C. EXCAVATION AND DISPOSAL OF EXCAVATED MATERIAL, FURNISH AND PLACEMENT OF 5 OZ., WOVEN, COMMERCIAL GRADE LANDSCAPE FABRIC IS CONSIDERED INCIDENTAL. D. ITEM SHALL BE MEASURED AND PAID BY THE TON OF INSTALLED ROCK MULCH.
135	12030-108-X-1	ELECTRICAL CONDUIT, OPEN CUT, HDPE OR PVC, 2-INCH A. MEASUREMENT WILL BE PER LINEAL FOOT FOR EACH SIZE MEASURED ALONG THE CENTERLINE OF THE CONDUIT BETWEEN THE CENTERLINE OF UTILIZATION EQUIPMENT OR HANDHOLES AS INSTALLED. PAYMENT AT THE BID UNIT PRICE SHALL BE FULL COMPENSATION FOR THE COST OF CONDUIT, CONDUIT SLEEVES, COUPLINGS, ELBOWS, BUSHINGS, SEALING AROUND THE CONDUIT WHERE IT ENTERS A PULL BOX, GROUNDING AND BONDING, AND OTHER MISCELLANEOUS ITEMS REQUIRED FOR A COMPLETE INSTALLATION OF THE CONDUIT. B. THE MATERIAL SHALL BE 2-INCH HDPE OR PVC. IN EACH CONDUIT INSTALL 1/2 INCH DETECTABLE POLYESTER PULLING TAPE WITH A MINIMUM BREAKING STRENGTH OF 1,000 LB AND MEASUREMENT MARKINGS. BOTH ENDS OF CONDUIT SHALL BE SEALED.
136	12030-108-X-2	JUNCTION BOX, ELECTRICAL, 12"X18" A. REFER TO T SHEETS FOR LAYOUT. B. THIS ITEM INCLUDES EXCAVATION, GRANULAR BASE, SUITABLE BACKFILL, AND COMPACTION. FURNISH AND INSTALL JUNCTION BOX AND LID.
137	12030-108-X-3	GFCI RECEPTACLE, PEDESTAL A. THIS ITEM INCLUDES FURNISH AND INSTALL OF THE GFCI RECEPTACLE AND HOUSING, AND CONCRETE BASE/FOOTING AS SHOWN ON B.14. B. ALL ITEMS, INCLUDING CONCRETE FOOTING AND ATTACHMENT HARDWARE, SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. MEASUREMENT AND PAYMENT WILL BE PER EACH INSTALLED GFCI RECEPTACLE.
138	12040-108-X-3	IRRIGATION SYSTEM ADJUSTMENTS A. THIS ITEM SHALL COVER THE NECESSARY ADJUSTEMENT TO THE EXISTING IRRIGATION SYSTEM LOCATED AT 201 W. STATE STREET. THIS ITEM COVERS ALL PARTS, LABOR AND OTHER ITEMS NECESSARY TO ADJUST THE EXISTING IRRIGATION SYSTEM. B. THE EXISTING IRRIGATION SYSTEM EXTENDS BEYOND THE PROPERTY LINE IS LOCATED IN ROW IN THE AREA BETWEEN THE BACK OF CURB AND THE SIDEWALK. THIS BID ITEM SHALL COVER RECONFIGURATION OF THE EXISTING IRRIGATION SYSTEM TO REMOVE THE PIPING AND SPRINKER HEADS IN THE ROW. C. THE CONTRACTOR SHALL CORRDINATE WITH PROPERTY OWNER AND THE IRRIGATION SYSTEM MAINTENANCE COMPANY TO LOCATE ALL EXISTING PIPE, SPRINKLER HEADS AND OTHER IRRIGATION SYSTEM RELATED ITEMS. D.THE IRRIGATION SYSTEM SHALL BE REMOVED TO BEHIND THE PROPOSED SIDEWALK AND RECONFIGURED/LOOPED TO ENSURE PROPER OPERATION. THE CONTRACTOR SHALL PRESENT THE PROPSOED MODIFICATION TO THE OWNER AND THE CITY PRIOR TO ANY IRRIGATION SHUTDOWNS. THE IRRIGATION SYSTEM SHALL ONLY BE SHUT DOWN FOR A MAXIMUM OF 5 DAYS DURING THE WORK.
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ESTIMATE REFERENCE INFORMATION (ALTERNATE A)

ITEM NO.	ITEM CODE	DESCRIPTION
A1	12040-108-X-X	TEMPORARY WATER SERVICE (ADDITIVE) A. THIS ITEMS SHALL BE FOR ESTABLISHING, OPERATING AND MAINTAINING TEMPORARY WATER SERVICE FOR THE PROJECT. B.BEFORE PROCEEDING WITH THE PROJECT THE CONTRACTOR SHALL ESTABLISH A WORK PLAN AND SUBMIT THE PLAN TO THE UTILITY PERSONNEL AND ENGINEER FOR REVIEW AND COMMENT. THE PLAN SHALL OUTLINE THE METHOD TO BE USED TO MAINTAIN SERVICE INCLUDING BOTH DOMESTIC AND FIRE PROTECTION TO THE AFFECTED CONSUMERS AND ESTIMATE THE DURATION OF ANY ANTICIPATED INTERRUPTIONS OF SERVICE. THE PLAN SHALL INCLUDE PROVISIONS TO FULLY DISINFECT ALL TEMPORARY PIPING, VALVES, AND FITTINGS IN ACCORDANCE WITH SUDAS 5030. THE CONTRACTOR IS THE SOLE PARTY RESPONSIBLE TO NOTIFY THE UTILITY AND CONSUMERS WHO MAY BE AFFECTED BY LIMITATIONS AND/OR INTERRUPTION OF WATER SERVICE. PLANNED SERVICE INTERRUPTIONS SHALL NOT EXCEED 6 HOURS IN ANY 72 HOUR PERIOD UNLESS PREVIOUSLY APPROVED BY THE UTILITY. C. THE CONTRACTOR SHALL COORDINATE WATERMAIN SHUT-DOWNS WITH THE WATER UTILITY AT LEAST 24 HOURS PRIOR TO THE REQUESTED SHUT-DOWN. D. IF THE CONTRACTOR FAILS TO PROVIDE WATER SERVICE TO AFFECTED RESIDENTS WITHIN THE CONSTRAINTS SPECIFIED ABOVE, AN AMOUNT EQUAL TO $500.00 MAY BE DEDUCTED FROM THE AMOUNT DUE THE CONTRACTOR FOR EACH OCCURRENCE.
A2	12040-108-X-X	WATERMAIN FITTINGS (DEDUCT) A. IF TEMPORARY WATER SERVICE IS UTILIZED ALL OF THE SIDE STREET WATERMAIN HORIZONTAL OFFSETS SHALL BE REMOVED TO ELIMINATE THE HORIZONTAL OFFSET AND MATCH THE EXISTING WATERMAIN LAYOUT. THIS WILL INCLUDE REMOVAL OF 4 - 45 DEGREE BENDS FOR EACH CROSS STREET.
A3	12040-108-X-X	FLUSHING DEVICE - TEMPORARY BLOWOFF HYDRANT (DEDUCT) A. IF TEMPORARY WATER SERVICE IS UTILIZED ALL OF THE TEMPORARY BLOW OFF HYDRANTS ON THE SIDE STREETS SHALL BE REMOVED FROM THE CONTRACT.

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
ESTIMATE REFERENCE NOTES

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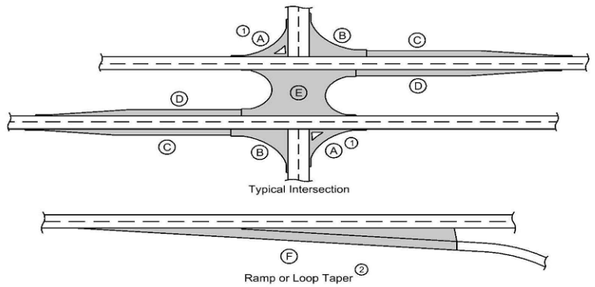
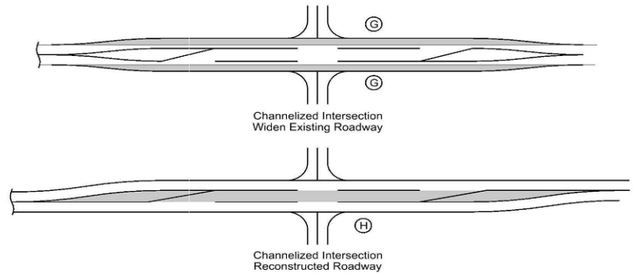
C.09

PCC PAVEMENT





1. Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
2. Refer to PV-410, PV-411, PV-412, and PV-414.
3. Quantity includes Pavement Header.

Location				Mainline			Area (3)								Total Area By Pavement Thickness		Special Backfill	Modified Subbase	Granular Subbase	Remarks
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	A (1)	B	C	D	E	F (2)	G	H	SY					
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	8 IN	0	TONS	SY	SY	
STATE STREET	BOTH	10+21.09	11+06.41	22.0	85.3	208.5									208.5					
STATE STREET	EB	11+06.41	11+42.41	VAR	36.0		25.9								25.9					
STATE STREET	EB	11+42.41	14+40.77	VAR	298.4				295.2						295.2					
STATE STREET	BOTH	11+06.41	14+73.60	VAR	367.2	1032.1									1032.1					
STATE STREET	EB	14+40.77	14+73.60	VAR	32.8			20.9							20.9					
STATE STREET	BOTH	14+73.60	15+59.60	22.0	86.0	210.0									210.0					
STATE STREET	EB	15+59.60	15+99.59	VAR	40.0		22.9								22.9					
STATE STREET	EB	15+99.59	18+98.62	VAR	299.0				282.4						282.4					
STATE STREET	EB	18+98.62	19+19.62	VAR	21.0			14.7							14.7					
STATE STREET	BOTH	15+59.60	19+19.62	VAR	360.0	1026.5									1026.5					
STATE STREET	BOTH	19+19.62	19+97.12	22.0	77.5	189.4									189.4					
STATE STREET	EB	19+97.12	20+08.56	VAR	7.1		7.1								7.1					
STATE STREET	EB	20+08.56	23+09.70	VAR	287.7				287.7						287.7					
STATE STREET	EB	23+09.70	23+64.70	VAR	26.1			26.1							26.1					
STATE STREET	BOTH	19+97.12	23+64.70	VAR	367.6	1036.0									1036.0					
STATE STREET	BOTH	23+64.70	24+53.20	22.0	88.5	216.3									216.3					
STATE STREET	EB	24+53.20	25+10.47	VAR	57.3		28.8								28.8					
STATE STREET	EB	25+10.47	27+81.62	VAR	271.2				259.4						259.4					
STATE STREET	EB	27+81.62	28+18.62	VAR	37.0			33.4							33.4					
STATE STREET	BOTH	24+53.20	28+18.62	VAR	365.4	1031.4									1031.4					
STATE STREET	BOTH	28+18.62	28+98.62	22.0	80.0	195.6									195.6					
STATE STREET	EB	28+98.62	29+34.89	VAR	36.3		22.2								22.2					
STATE STREET	EB	29+34.89	32+10.39	VAR	275.5				266.9						266.9					
STATE STREET	EB	32+10.39	32+60.08	VAR	49.7			40.6							40.6					
STATE STREET	BOTH	28+98.62	32+60.08	VAR	361.5	1018.4									1018.4					
STATE STREET	BOTH	32+60.08	33+43.08	22.0	83.0	202.9									202.9					
STATE STREET	EB	33+43.08	33+81.88	VAR	38.8		24.8								24.8					
STATE STREET	EB	33+81.88	36+98.88	VAR	317.0				344.5						344.5					
STATE STREET	BOTH	33+43.08	37+23.88	VAR	380.8	987.9									987.9					
STATE STREET	WB	34+85.83	36+98.88	VAR	213.1					94.0					94.0					
STATE STREET	EB	36+98.88	37+26.04	VAR	27.2			43.1							43.1					
STATE STREET	WB	36+98.88	37+25.79	VAR	26.9		32.0								32.0					
3RD STREET	NB	303+87.64	304+39.00	VAR	51.4		106.5								106.5					
3RD STREET	SB	303+87.64	304+39.00	VAR	51.4			111.8							111.8					
3RD STREET	NB	304+61.00	305+08.60	VAR	47.6			87.4							87.4					
3RD STREET	SB	304+61.00	305+08.60	VAR	47.6		111.9								111.9					
2ND STREET	NB	403+82.28	403+98.78	VAR	16.5				8.2						8.2					
2ND STREET	NB	403+86.18	404+39.00	VAR	52.8		114.2								114.2					
2ND STREET	SB	403+86.18	404+39.00	VAR	52.8			112.6							112.6					
2ND STREET	NB	404+61.00	405+10.18	VAR	49.2			94.7							94.7					
2ND STREET	SB	404+61.00	405+10.18	VAR	49.2		100.9								100.9					
1ST STREET	NB	503+81.80	504+39.00	VAR	57.2		121.0								121.0					
1ST STREET	SB	503+81.80	504+39.00	VAR	57.2			124.8							124.8					
1ST STREET	NB	504+61.01	505+32.62	VAR	71.6			142.8							142.8					
1ST STREET	SB	504+61.01	505+32.62	VAR	71.6		174.9								174.9					
CENTER STREET	NB	603+81.85	604+39.00	VAR	57.2		151.6								151.6					
CENTER STREET	SB	603+81.85	604+39.00	VAR	57.2			151.2							151.2					
CENTER STREET	NB	604+61.00	605+21.19	VAR	60.2			151.4							151.4					
CENTER STREET	SB	604+61.00	605+21.19	VAR	60.2		143.1								143.1					
1ST AVENUE	NB	703+80.67	704+38.99	VAR	58.3		124.1								124.1					
1ST AVENUE	SB	703+80.67	704+38.99	VAR	58.3			128.9							128.9					
1ST AVENUE	NB	704+61.01	705+29.66	VAR	68.7			134.9							134.9					
1ST AVENUE	SB	704+61.01	705+29.66	VAR	68.7		163.1								163.1					
2ND AVENUE	NB	803+82.56	804+39.00	VAR	56.4		118.9								118.9					
2ND AVENUE	SB	803+82.56	804+39.00	VAR	56.4			124.3							124.3					
2ND AVENUE	NB	804+61.00	805+32.29	VAR	71.3			144.9							144.9					
2ND AVENUE	SB	804+61.00	805+32.29	VAR	71.3		173.7								173.7					
														TOTAL	12650.0					

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	REV	DESCRIPTION	DATE
JDA			
DRAWN			
DEM			
CHECKED			
GAB			
CLIENT PROJ. NO.			
0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.10

102-3
10-16-18

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening (1)			W	(1)(2) PR	(2) SR	Pipe Culvert (3)					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1¼" Dropped Curb	3" Dropped Curb				H	Size	Pipe Length	Lt.	Rt.		HMA	PCC		
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	
11+37.93	LT															59.6		211 W STATE PARKING, HMA
11+93.64	RT			26.0		18.0										20.6		6" DRIVEWAY
12+32.08	LT			32.0		24.0										39.1		6" DRIVEWAY
12+32.08	LT			32.0		24.0										21.3		6" CYCLE TRACK
12+64.80	LT			0.0		0.0										62.7		6" DRIVEWAY
12+64.80	LT			0.0		0.0										36.8		6" CYCLE TRACK
12+92.06	RT			24.0		16.0										18.4		8" DRIVEWAY
12+98.53	LT			34.0		26.0										42.2		8" DRIVEWAY
12+98.53	LT			34.0		26.0										23.1		8" CYCLE TRACK
16+01.68	LT			21.0		13.0										22.0		6" DRIVEWAY
16+01.68	LT			21.0		13.0										11.6		6" CYCLE TRACK
16+20.18	RT			31.0		24.0										54.6		6" DRIVEWAY
16+93.72	RT			0.0		0.0										62.0		6" DRIVEWAY, BEHIND SIDEWALK
17+40.31	RT			32.0		24.0										48.6		8" DRIVEWAY
17+83.14	RT			0.0		0.0										5.0		6" DRIVEWAY, INTAKE BOXOUT
20+21.97	RT			31.1		24.0										47.7		6" DRIVEWAY
21+80.89	RT			23.0		15.0										29.9		8" DRIVEWAY
21+80.89	LT			23.0		15.0										33.4		8" DRIVEWAY
21+80.89	LT			23.0		15.0										13.3		8" CYCLE TRACK
22+78.91	LT			32.0		24.0										52.4		6" DRIVEWAY
22+78.91	LT			32.0		24.0										21.3		6" CYCLE TRACK
25+38.72	LT			26.0		18.0										29.8		6" DRIVEWAY
25+38.72	LT			26.0		18.0										16.0		6" CYCLE TRACK
25+97.82	RT			42.0		24.0										81.5		6" DRIVEWAY
26+39.53	LT			27.0		19.0										31.3		8" DRIVEWAY
26+39.53	LT			27.0		19.0										16.9		8" CYCLE TRACK
29+86.09	LT			30.0		22.0										36.0		6" DRIVEWAY
29+86.09	LT			30.0		22.0										19.6		6" CYCLE TRACK
29+98.29	RT			40.0		32.0										71.6		6" DRIVEWAY
30+43.85	RT			28.0		20.0										111.8		6" DRIVEWAY, INCLUDES BEHIND SIDEWALK
30+45.43	LT			28.0		20.0										32.9		6" DRIVEWAY
30+45.43	LT			28.0		20.0										17.8		6" CYCLE TRACK
31+81.74	RT			31.0		23.0										25.8		6" DRIVEWAY
35+27.72	RT			23.0		15.0										36.9		6" DRIVEWAY
35+62.39	RT			23.0		15.0										70.8		6" DRIVEWAY, INCLUDES BEHIND SIDEWALK
36+76.88	RT			32.0		24.0										26.9		6" DRIVEWAY
403+90.18	RT															8.2		6" DRIVEWAY, 2ND ST.
605+20.65	RT			29.0		20.0										23.6		6" DRIVEWAY, CENTER ST.

FIRE HYDRANTS

NO.	EXISTING HYDRANT LOCATION STA.	PROPOSED HYDRANT LOCATION STA.	OFFSET FT	SIDE	REMARKS
1	10+90.38	10+90.08	38.87	LT	WM-201
2	15+41.45	15+40.55	33	RT	WM-201
3	19+81.23	19+44.42	40	LT	WM-201
4	24+40.38	24+41.46	32.99	RT	WM-201
5	28+25.36	28+24.84	23	RT	WM-201
6	33+37.66	33+35.75	23	RT	WM-201

104-5C
10-17-17

LIST OF SUBDRAIN WORK

Possible Standards: DR-121, DR-201, DR-203, DR-301, DR-302, DR-303, DR-305 and DR-306. Possible Detail: 500-10.

* Not a bid item

Location			Pipe			Aprons		Outlets				Connected Pipe Joints*		Trench Drain	Granular Material	Porous Backfill*	Class "A" Crushed Stone*	Remarks
No.	Station to Station		Type of Installation	Concrete, C.M.P., or Plastic	Dia.	Length	DR-201	DR-203	500-10	DR-305		DR-306	DR-121			Blanket			
			DR-301, DR-302, DR-303		IN	LF	No.	No.	No.	Type	No.	No.	Type	No.	LF	CY	CY	CY	
1	10+87.54	11+46.17		PLASTIC	6.0	59													
2	11+53.83	12+03.44		PLASTIC	6.0	50													
3	12+11.10	13+50.44		PLASTIC	6.0	139													
4	13+58.10	13+88.38		PLASTIC	6.0	30													
5	13+96.05	15+78.58		PLASTIC	6.0	184													
6	15+78.58	17+83.14		PLASTIC	6.0	206													
7	17+83.14	20+47.55		PLASTIC	6.0	264													
8	20+51.55	21+67.19		PLASTIC	6.0	116													
9	21+67.19	24+77.44		PLASTIC	6.0	311													
10	24+86.44	26+70.03		PLASTIC	6.0	185													
11	26+77.69	27+84.84		PLASTIC	6.0	107													
12	27+92.51	29+02.51		PLASTIC	6.0	111													
13	29+11.51	29+59.33		PLASTIC	6.0	49													
14	29+67.00	30+73.95		PLASTIC	6.0	107													
15	30+81.62	32+13.56		PLASTIC	6.0	132													
16	32+21.22	33+46.29		PLASTIC	6.0	126													
17	33+55.29	34+75.03		PLASTIC	6.0	120													
18	34+82.19	37+01.04		PLASTIC	6.0	223													

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
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DESIGNED JDA
DRAWN DEM
CHECKED GAB
CLIENT PROJ. NO. 0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.11

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area SY	Saw Cut* LF	Remarks
10+21.10	11+07.35	BOTH	HMA	713.4		INCLUDES N 3RD ST
11+07.35	20+71.13	BOTH	HMA	6001.9		INCLUDES N 2ND ST & N 1ST ST
20+71.13	27+91.53	BOTH	HMA	4223.4		INCLUDES N CENTER ST
27+91.53	37+23.88	BOTH	HMA	5800.5		INCLUDES N 1ST AVE & N 2ND AVE & N 3RD AVE
			TOTAL	**16739**		

SIDEWALK REMOVAL

* Not a bid item

Begin Station	End Station	Area SY	Saw Cut* LF	Remarks
10+14.98	10+53.37	27.0		STATE STREET
10+19.39	10+52.78	33.2		STATE STREET
10+84.97	11+34.75	34.6		STATE STREET
10+91.08	11+84.91	46.1		STATE STREET
11+59.75	12+20.25	39.8		STATE STREET
12+02.51	12+83.81	45.6		STATE STREET
13+01.43	14+98.28	127.4		STATE STREET
13+11.53	14+99.15	89.5		STATE STREET
15+30.32	15+99.32	47.3		STATE STREET
15+39.09	16+06.95	61.1		STATE STREET
16+08.18	19+32.91	324.3		STATE STREET
16+49.94	17+28.13	117.1		STATE STREET
17+52.31	19+36.86	172.7		STATE STREET
19+83.09	20+10.78	30.1		STATE STREET
19+83.67	21+72.88	220.2		STATE STREET
20+36.74	21+73.43	141.3		STATE STREET
21+88.57	22+34.61	51.4		STATE STREET
22+33.61	23+82.73	227.9		STATE STREET
22+59.72	23+04.89	51.3		STATE STREET
23+29.99	23+80.18	54.4		STATE STREET
24+38.69	24+56.85	19.7		STATE STREET
24+38.85	24+77.88	153.5		STATE STREET
24+70.11	26+29.99	68.0		STATE STREET
26+01.14	27+09.68	110.1		STATE STREET
27+33.23	27+91.83	57.6		STATE STREET
28+06.57	28+35.45	27.3		STATE STREET
28+82.67	29+57.89	80.9		STATE STREET
28+84.22	29+75.19	131.4		STATE STREET
29+70.61	29+82.15	11.7		STATE STREET
29+96.44	30+35.62	43.3		STATE STREET
30+14.85	30+33.55	21.4		STATE STREET
30+54.11	30+74.02	22.2		STATE STREET
30+54.91	30+74.26	21.0		STATE STREET
30+91.02	31+08.56	20.0		STATE STREET
30+95.22	31+74.51	84.9		STATE STREET
31+33.14	31+56.65	26.3		STATE STREET
31+86.48	32+36.29	53.4		STATE STREET
31+93.26	32+83.20	96.5		STATE STREET
32+64.44	32+79.36	14.9		STATE STREET
33+26.49	35+20.34	228.6		STATE STREET
33+30.60	35+19.64	127.6		STATE STREET
35+33.35	35+89.56	69.5		STATE STREET
35+34.90	35+55.06	21.9		STATE STREET
35+69.73	35+96.88	32.6		STATE STREET
36+28.29	37+24.64	125.4		STATE STREET
36+43.43	37+21.99	77.4		STATE STREET
303+88.92	304+19.14	20.2		N 3RD STREET
303+94.46	304+18.41	10.7		N 3RD STREET
304+83.85	305+07.83	15.5		N 3RD STREET
304+83.99	305+07.57	15.3		N 3RD STREET
403+90.43	404+19.19	19.1		N 2ND STREET
403+97.94	404+18.98	17.8		N 2ND STREET
404+84.42	405+04.87	13.5		N 2ND STREET
404+84.48	404+99.01	9.7		N 2ND STREET
503+73.16	504+18.91	44.9		N 1ST STREET
503+84.53	504+18.98	30.6		N 1ST STREET
504+85.10	505+38.47	36.9		N 1ST STREET
504+86.36	505+33.54	58.4		N 1ST STREET
603+74.31	604+19.21	60.6		N CENTER ST
604+15.09	603+81.80	48.5		N CENTER ST
604+85.09	605+34.65	59.1		N CENTER ST
604+85.12	605+20.23	40.2		N CENTER ST
703+78.89	704+19.58	43.9		N 1ST AVE
703+80.67	704+19.49	26.9		N 1ST AVE
704+89.18	705+29.46	33.7		N 1ST AVE
803+83.18	804+19.14	24.2		N 2ND AVE
803+88.25	804+19.12	20.4		N 2ND AVE
804+84.75	805+26.67	31.0		N 2ND AVE
804+85.00	805+38.86	39.7		N 2ND AVE
	TOTAL	4411		

REMOVAL OF CONCRETE DRIVES

* Not a Bid Item

Location Station	Side	Area SY	Saw Cut* LF	Remarks
11+47.19	L	150.2		STATE ST
11+93.64	R	17.5		STATE ST
12+32.08	L	30.4		STATE ST
12+92.06	R	17.9		STATE ST
12+98.53	L	77.5		STATE ST
16+01.68	L	10.2		STATE ST
16+20.18	R	120.0		STATE ST
17+40.31	R	53.1		STATE ST, PARKING LOT
20+21.97	R	48.6		STATE ST
21+80.89	L	26.5		STATE ST
21+80.89	R	113.1		STATE ST
22+47.32	L	76.7		STATE ST, PARKING LOT
23+19.33	L	126.6		STATE ST, PARKING LOT
25+38.72	L	129.7		STATE ST
25+97.82	R	72.8		STATE ST
26+39.53	L	23.6		STATE ST
27+22.27	R	103.6		STATE ST
27+99.87	R	17.6		STATE ST
29+64.05	R	16.1		STATE ST
29+86.09	L	25.0		STATE ST
29+98.29	R	79.9		STATE ST
30+43.85	R	96.3		STATE ST
30+45.43	L	21.5		STATE ST
30+83.10	L	19.2		STATE ST
30+87.10	R	60.0		STATE ST
31+19.95	L	79.5		STATE ST, PARKING LOT
31+69.74	L	33.7		STATE ST
31+81.74	R	23.7		STATE ST
32+51.87	L	31.7		STATE ST
35+27.72	R	42.1		STATE ST
35+28.01	L	22.9		STATE ST
35+62.39	R	73.5		STATE ST
36+08.79	L	55.9		STATE ST
36+21.97	R	58.7		STATE ST
403+87.05	R	9.2		N 2ND ST
TOTAL		**1965.0**		

SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL

* Not a bid item

Location/Description	Sanitary or Storm Sewer	Abandonment, Plug Only or Abandonment, Plug and Fill or Removal	Length of Pipe ≤ 36 inch diameter LF	Length of Pipe > 36 inch diameter LF	Fill Material* Flowable Mortar or CLSM CY	Remarks
STATE STREET STA. 10+27.83 TO STA. 10+59.14	Sanitary Sewer	Removal	31			
STATE STREET STA. 10+59.14 TO STA. 12+80.94	Sanitary Sewer	Removal	222			
STATE STREET STA. 10+31.09 TO STA. 10+88.17	Storm Sewer	Removal	57			
STATE STREET STA. 10+86.71 TO STA. 10+88.17	Storm Sewer	Removal	37			
STATE STREET STA. 10+86.71 TO STA. 10+89.13	Storm Sewer	Removal	5			
STATE STREET STA. 10+88.17 TO STA. 11+07.75	Storm Sewer	Removal	20			
STATE STREET STA. 10+88.17 TO STA. 15+33.19	Storm Sewer	Removal	445			
STATE STREET STA. 12+80.94 TO STA. 12+97.62	Sanitary Sewer	Removal	17			
STATE STREET STA. 15+14.66 TO STA. 17+65.61	Sanitary Sewer	Removal	251			
STATE STREET STA. 15+33.19 TO STA 15+50.43	Storm Sewer	Removal	17			
STATE STREET STA. 15+33.19 TO STA. 15+51.12	Storm Sewer	Removal	40			
STATE STREET STA. 15+51.12 TO 17+55.90	Storm Sewer	Removal	205			
STATE STREET STA. 17+55.90 TO STA. 19+34.47	Storm Sewer	Removal	179			
STATE STREET STA. 17+65.61 TO STA. 17+98.27	Sanitary Sewer	Removal	33			
STATE STREET STA. 19+34.47 TO STA. 19+77.59	Storm Sewer	Removal	43			
STATE STREET STA. 19+58.23 TO STA. 20+93.73	Sanitary Sewer	Removal	136			
STATE STREET STA. 19+77.59 TO STA. 19+78.47	Storm Sewer	Removal	29			
STATE STREET STA. 19+78.47 TO STA. 20+00.43	Storm Sewer	Removal	24			
STATE STREET STA. 20+00.43 TO STA. 20+48.83	Storm Sewer	Removal	48			
STATE STREET STA. 20+93.73 TO STA. 24+09.55	Sanitary Sewer	Removal	316			
STATE STREET STA. 22+80.52 TO STA. 24+33.32	Storm Sewer	Removal	153			
STATE STREET STA. 24+09.55 TO STA. 28+59.86	Sanitary Sewer	Removal	450			
STATE STREET STA. 24+33.32 TO STA. 24+57.54	Storm Sewer	Removal	24			
STATE STREET STA. 24+57.54 TO STA. 27+30.99	Storm Sewer	Removal	273			
STATE STREET STA. 26+75.59 TO STA. 27+49.73	Storm Sewer	Removal	94			
STATE STREET STA. 27+30.99 TO STA. 27+31.34	Storm Sewer	Removal	21			
STATE STREET STA. 27+30.99 TO STA. 28+16.52	Storm Sewer	Removal	86			
STATE STREET STA. 28+16.52 TO STA. 28+37.17	Storm Sewer	Removal	30			
STATE STREET STA. 28+59.86 TO STA. 30+83.63	Sanitary Sewer	Removal	224			
STATE STREET STA. 28+76.85 TO STA 29+04.05	Storm Sewer	Removal	59			
STATE STREET STA. 28+76.85 TO STA. 28+98.56	Storm Sewer	Removal	26			
STATE STREET STA. 28+82.69 TO STA. 29+04.05	Storm Sewer	Removal	31			
STATE STREET STA. 28+98.56 TO STA. 30+88.88	Storm Sewer	Removal	191			
STATE STREET STA. 30+83.63 TO STA. 33+05.21	Sanitary Sewer	Removal	222			
STATE STREET STA. 30+88.88 TO STA. 30+90.30	Storm Sewer	Removal	35			
STATE STREET STA. 30+88.88 TO STA. 32+67.99	Storm Sewer	Removal	179			
STATE STREET STA. 32+15.91 TO STA. 32+82.89	Storm Sewer	Abandonment, Plug and Fill	67			
STATE STREET STA. 32+67.99 TO STA. 32+86.86	Storm Sewer	Removal	30			
STATE STREET STA. 33+22.59 TO STA. 33+56.77	Storm Sewer	Removal	42			
STATE STREET STA. 33+05.21 TO STA. 37+09.96	Sanitary Sewer	Removal	405			
STATE STREET STA. 33+26.54 TO STA. 33+55.55	Storm Sewer	Abandonment, Plug and Fill	39			
STATE STREET STA. 33+55.55 TO STA. 33+56.77	Storm Sewer	Removal	45			
STATE STREET STA. 33+55.55 TO STA. 35+25.94	Storm Sewer	Removal	171			
STATE STREET STA. 35+25.94 TO STA. 37+12.34	Storm Sewer	Removal	186			
3RD STREET STA. 303+98.25 TO STA. 304+51.89	Sanitary Sewer	Removal	54			
3RD STREET STA. 304+51.89 TO STA. 305+05.71	Sanitary Sewer	Removal	54			
2ND STREET STA. 404+16.83 TO STA. 404+30.53	Storm Sewer	Removal	17			
2ND STREET STA. 404+16.37 TO STA. 404+33.59	Storm Sewer	Removal	17			
2ND STREET STA. 404+52.30 TO STA. 405+04.73	Sanitary Sewer	Removal	52			
1ST STREET STA. 504+13.46 TO STA. 504+42.50	Storm Sewer	Removal	29			
1ST STREET STA. 504+17.90 TO STA. 504+52.64	Sanitary Sewer	Removal	35			
1ST STREET STA. 504+52.64 TO STA. 505+22.94	Sanitary Sewer	Removal	70			
CENTER STREET STA. 604+52.09 TO STA. 605+06.45	Sanitary Sewer	Removal	54			
1ST AVENUE STA. 703+88.43 TO STA. 704+52.50	Sanitary Sewer	Removal	64			
1ST AVENUE STA. 704+09.03 TO STA. 704+09.74	Storm Sewer	Removal	46			
1ST AVENUE STA. 704+52.50 TO STA. 705+23.99	Sanitary Sewer	Removal	72			
1ST AVENUE STA. 704+84.74 TO STA. 705+21.19	Storm Sewer	Removal	36			
2ND AVENUE STA. 804+01.25 TO STA. 804+01.44	Storm Sewer	Removal	44			
2ND AVENUE STA. 804+95.34 TO STA. 804+95.67	Storm Sewer	Removal	36			

REMOVAL OF LIGHT POLES AND CONCRETE FOOTINGS

Location No.	Station	Offset Left	Offset Right	Removal of Light Pole	Removal of Concrete Footing for Light Pole	Remarks
1	15+49.52		24.99		1	
2	19+25.28		25.16		1	
3	19+93.51	27.76			1	
4	20+88.96		23.55		1	
5	23+66.84	26.97			1	
6	28+96.53	27.7			1	
7	32+70.06	27.51			1	
8	37+11.62	26.65			1	
				TOTAL	**8**	

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	REV	DESCRIPTION	DATE
JDA			
DRAWN			
DEM			
CHECKED			
GAB			
CLIENT PROJ. NO.			
0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.12

110-15
04-16-13

REMOVAL OF INTAKES AND UTILITY ACCESSES

No.	Location/Description	Type	Remarks
1	STATE STREET STA. 10+59.14 1.86'L	Utilities	SANITARY MANHOLE
2	STATE STREET STA. 10+86.71 20.33'L	Utilities	STORM MANHOLE
3	STATE STREET STA. 10+88.17 16.27'R	Utilities	STORM MANHOLE
4	STATE STREET STA. 10+89.13 24.33'L	Intakes	
5	STATE STREET STA. 11+07.75 22.21'R	Intakes	
6	STATE STREET STA. 12+97.62 1.26'L	Utilities	SANITARY MANHOLE
7	STATE STREET STA. 15+14.66 2.30'L	Utilities	SANITARY MANHOLE
8	STATE STREET STA. 15+33.19 16.38'R	Utilities	STORM MANHOLE
9	STATE STREET STA. 15+50.43 15.10'R	Intakes	
10	STATE STREET STA. 15+51.12 19.87'L	Intakes	
11	STATE STREET STA. 17+55.90 19.88'L	Intakes	
12	STATE STREET STA. 19+34.47 25.79'L	Intakes	
13	STATE STREET STA. 19+58.48 32.09'R	Utilities	SANITARY MANHOLE
14	STATE STREET STA. 19+77.59 21.35'L	Intakes	
15	STATE STREET STA. 19+78.47 7.38'R	Utilities	STORM MANHOLE
16	STATE STREET STA. 20+00.43 18.35'R	Utilities	STORM MANHOLE
17	STATE STREET STA. 20+48.83 20.31'R	Intakes	
18	STATE STREET STA. 22+80.52 15.66'R	Intakes	
19	STATE STREET STA. 24+09.55 2.09'L	Utilities	SANITARY MANHOLE
20	STATE STREET STA. 24+33.32 16.59'R	Utilities	STORM MANHOLE
21	STATE STREET STA. 24+57.54 21.34'R	Intakes	
22	STATE STREET STA. 27+30.99 17.79'R	Utilities	STORM MANHOLE
23	STATE STREET STA. 27+31.34 38.81R	Utilities	STORM MANHOLLE
24	STATE STREET STA. 28+16.52 19.44'R	Intakes	
25	STATE STREET STA. 28+59.86 2.49'L	Utilities	SANITARY MANHOLE
26	STATE STREET STA. 28+76.85 34.78'L	Utilities	STORM MANHOLE
27	STATE STREET STA. 28+98.56 24.15'L	Intakes	
28	STATE STREET STA. 29+04.05 17.17'R	Intakes	
29	STATE STREET STA. 30+83.63 1.27'L	Utilities	SANITARY MANHOLE
30	STATE STREET STA. 30+88.88 20.94'L	Intakes	
31	STATE STREET STA. 30+90.30 14.05'R	Intakes	
32	STATE STREET STA. 32+67.99 22.09'L	Utilities	STORM MANHOLE
33	STATE STREET STA. 33+05.21 2.19'L	Utilities	SANITARY MANHOLE
34	STATE STREET STA. 33+55.55 22.14'R	Intakes	
35	STATE STREET STA. 33+56.77 22.71'L	Intakes	
36	STATE STREET STA. 35+25.94 22.18'R	Utilities	STORM MANHOLE
37	STATE STREET STA. 37+12.34 24.88'R	Utilities	STORM MANHOLE
38	2ND STREET STA. 404+16.37 12.60'R	Intakes	
39	2ND STREET STA. 404+16.83 20.29'L	Intakes	
40	1ST STREET STA. 504+13.46 20.36'R	Utilities	STORM MANHOLE
41	1ST AVENUE STA. 704+09.03 22.68'L	Intakes	
42	1ST AVENUE STA. 704+09.74 22.80'R	Intakes	
43	2ND AVENUE STA. 804+01.25 21.82'L	Intakes	
44	2ND AVENUE STA. 804+01.44 21.82'R	Intakes	
45	2ND AVENUE STA. 804+95.34 21.11'R	Intakes	
46	2ND AVENUE STA. 804+95.67 23.63'L	Intakes	

* INCLUDES DIRECTIONAL ARROW

108-29
04-21-15

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location: Station	Location: Side	STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	DOUBLE TURN BIKE BOX	SINGLE TURN BIKE BOX	SLSW *	CYCLE TRACK *	BIKE BOX	WCSW	WPSB	SCLW	XNGW	STPW	AHDW	ONLW	BIKW	LANW	XITW	Groove Cuts: EACH	Remarks
STATE STREET	11+30.04	LT											1													
STATE STREET	11+36.04	LT											1													
STATE STREET	14+50.08	LT											1													
STATE STREET	14+56.07	LT											1													
STATE STREET	15+79.68	LT											1													
STATE STREET	15+85.67	LT											1													
STATE STREET	18+93.54	LT											1													
STATE STREET	18+99.53	LT											1													
STATE STREET	20+23.01	LT											1													
STATE STREET	20+29.00	LT											1													
STATE STREET	23+37.56	LT											1													
STATE STREET	23+43.55	LT											1													
STATE STREET	24+75.74	LT											1													
STATE STREET	24+81.73	LT											1													
STATE STREET	27+95.89	LT											1													
STATE STREET	28+01.58	LT											1													
STATE STREET	29+24.77	LT											1													
STATE STREET	29+30.76	LT											1													
STATE STREET	32+39.99	LT											1													
STATE STREET	32+45.99	LT											1													
STATE STREET	33+70.02	LT											1													
STATE STREET	33+76.01	LT											1													
STATE STREET	35+82.21	RT			1																					
STATE STREET	36+69.82	RT			1																					
STATE STREET	36+81.11	LT											1													
STATE STREET	36+87.10	LT											1													
STATE STREET	37+00.29	RT												1												
STATE STREET	37+83.29	LT												1												
STATE STREET	38+04.99	RT										1														
STATE STREET	34+14.18	RT			1																					
3RD STREET	304+73.74	LT									1															
CENTER STREET	604+06.65	LT										1														
CENTER STREET	604+65.22	LT								1																
	TOTALS	33			3					1	1	2	24	2												

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	REV	DESCRIPTION	DATE
JDA			
DRAWN			
DEM			
CHECKED			
GAB			
CLIENT PROJ. NO.			
0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.13

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

SLW2: Stop Line (White) @ 6.00
SLW4: Solid Lane Line (White) @ 1.00
CBW6: Crosswalk Bar (White) @ 15.00
CBG6: GREEN CROSSWALK BAR
DCY4: Double Centerline (Yellow) @ 2.00
CHW4: WHITE PARKING LINE
STY6: Standard Curb 6" (Yellow) @ 3.03
CHW8: Channelizing Line (White) @ 2.00

Location								Length by Line Type (Unfactored)														
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			SLW2	CBW6	DCY4	STY6	CHW8	SLW4	CBG6	CHW4							Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
STATE STREET	10+21.09	10+35.35	BOTH	Waterborne/Solvent Paint		X				0.14												
STATE STREET	10+33.35	10+35.35	EB	Waterborne/Solvent Paint			X	0.13														
STATE STREET	10+39.35	10+45.34	BOTH	Waterborne/Solvent Paint		X			0.30													3RD STREET WEST CROSSWALK BARS
STATE STREET	10+98.09	11+04.08	BOTH	Waterborne/Solvent Paint		X			0.30													3RD STREET EAST CROSSWALK BARS
STATE STREET	11+08.08	11+10.08	WB	Waterborne/Solvent Paint	X			0.12														
STATE STREET	11+08.08	11+78.53	BOTH	Waterborne/Solvent Paint		X				0.70												
STATE STREET	11+53.64	11+53.64	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	11+57.38	11+76.38		Waterborne/Solvent Paint											0.76							211 STATE STREET PARKING LOT
STATE STREET	11+75.64	11+75.64	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	11+75.64	11+80.64	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	12+06.64	12+10.35	EB	Waterborne/Solvent Paint			X				0.04											
STATE STREET	12+10.35	12+10.35	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	12+32.35	12+32.35	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	12+54.35	12+54.35	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	12+76.35	12+76.35	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	12+76.35	12+80.06	EB	Waterborne/Solvent Paint			X				0.04											
STATE STREET	13+04.06	13+09.06	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	13+09.06	13+09.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	13+31.06	13+31.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	13+53.06	13+53.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	13+75.06	13+75.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	13+97.06	13+97.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	14+19.06	14+19.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	14+41.06	14+41.06	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	15+57.66	19+22.33	BOTH	Waterborne/Solvent Paint		X				3.65												
STATE STREET	16+35.68	16+52.43	EB	Waterborne/Solvent Paint			X				0.17											
STATE STREET	16+52.43	16+52.43	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	16+74.43	16+74.43	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	16+96.43	16+96.43	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	17+18.43	17+18.43	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	17+18.43	17+24.31	EB	Waterborne/Solvent Paint			X				0.06											
STATE STREET	17+56.31	17+66.53	EB	Waterborne/Solvent Paint			X				0.10											
STATE STREET	17+66.53	17+66.53	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	17+88.53	17+88.53	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	18+10.53	18+10.53	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	18+32.53	18+32.53	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	18+54.43	18+54.43	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	18+76.53	18+76.53	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	19+98.89	23+65.74	BOTH	Waterborne/Solvent Paint		X				3.67												
STATE STREET	20+37.97	20+54.39	EB	Waterborne/Solvent Paint			X				0.16											
STATE STREET	20+54.39	20+54.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	20+76.39	20+76.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	20+98.39	20+98.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	21+20.39	21+20.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	21+42.39	21+42.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	21+64.39	21+64.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	21+64.39	21+69.39	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	21+92.39	21+97.39	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	21+97.39	21+97.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	22+19.39	22+19.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	22+41.39	22+41.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	22+63.39	22+63.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	22+85.39	22+85.39	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	23+63.74	23+65.74	EB	Waterborne/Solvent Paint			X	0.13														
STATE STREET	23+69.74	23+75.74	BOTH	Waterborne/Solvent Paint		X			0.30													CENTER STREET WEST CROSSWALK BARS
STATE STREET	24+43.78	24+49.78	BOTH	Waterborne/Solvent Paint		X			0.30													CENTER STREET EAST CROSSWALK BARS
STATE STREET	24+53.78	24+55.78	WB	Waterborne/Solvent Paint		X		0.12														
STATE STREET	24+53.78	28+21.86	BOTH	Waterborne/Solvent Paint		X				3.68												
STATE STREET	25+27.82	25+27.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	25+49.82	25+49.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	25+71.82	25+71.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	25+71.82	25+76.82	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	25+77.84	25+85.84		Waterborne/Solvent Paint											0.56							17 E STATE STREET PARKING LOT
STATE STREET	26+18.82	26+23.82	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	26+23.82	26+23.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	26+45.82	26+45.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	26+67.82	26+67.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	26+89.82	26+89.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	27+11.82	27+11.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	27+33.82	27+33.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	27+55.82	27+55.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	27+77.82	27+77.82	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	29+04.67	32+66.17	BOTH	Waterborne/Solvent Paint		X				3.62												
STATE STREET	29+51.29	29+51.29	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	29+73.29	29+73.29	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	29+73.29	29+78.29	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	30+15.50	30+34.50		Waterborne/Solvent Paint											0.57							107 E STATE STREET PARKING LOT

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED JDA
DRAWN DEM
CHECKED GAB
CLIENT PROJ. NO. 0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET C.14

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

SLW2: Stop Line (White) @ 6.00
SLW4: Solid Lane Line (White) @ 1.00
CBW6: Crosswalk Bar (White) @ 15.00
CBG6: GREEN CROSSWALK BAR
DCY4: Double Centerline (Yellow) @ 2.00
CHW4: WHITE PARKING LINE
STY6: Standard Curb 6" (Yellow) @ 3.03
CHW8: Channelizing Line (White) @ 2.00

Location								Length by Line Type (Unfactored)														
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			SLW2	CBW6	DCY4	STY6	CHW8	SLW4	CBG6	CHW4							Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
STATE STREET	30+18.29	30+29.85	EB	Waterborne/Solvent Paint			X				0.12											
STATE STREET	30+57.85	30+68.04	EB	Waterborne/Solvent Paint			X				0.10											
STATE STREET	30+68.04	30+68.04	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	30+90.04	30+90.04	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	31+12.04	31+12.04	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	31+34.04	31+34.04	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	31+56.04	31+56.04	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	31+56.04	31+66.24	EB	Waterborne/Solvent Paint			X				0.10											
STATE STREET	31+97.24	32+05.69	EB	Waterborne/Solvent Paint			X				0.08											
STATE STREET	32+05.69	32+05.69	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	33+49.92	36+92.54	BOTH	Waterborne/Solvent Paint		X				3.43												
STATE STREET	33+79.22	33+79.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	34+01.22	34+01.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	34+23.22	34+23.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	34+45.22	34+45.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	34+67.22	34+67.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	34+89.22	34+89.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	35+11.22	35+11.22	EB	Waterborne/Solvent Paint			X								0.09							
STATE STREET	35+11.22	35+16.22	EB	Waterborne/Solvent Paint			X				0.05											
STATE STREET	35+39.22	35+50.89	EB	Waterborne/Solvent Paint			X				0.12											
STATE STREET	35+73.89	36+60.88	EB	Waterborne/Solvent Paint			X				0.87											
STATE STREET	35+76.21	36+90.54	EB	Waterborne/Solvent Paint		X							1.14									
STATE STREET	36+90.54	36+92.54	EB	Waterborne/Solvent Paint		X		0.22														
STATE STREET	36+98.04	37+04.04	BOTH	Waterborne/Solvent Paint		X								0.24								3RD AVENUE WEST CROSSWALK BARS (GREEN)
STATE STREET	37+04.04	37+10.08	BOTH	Waterborne/Solvent Paint		X			0.36													3RD AVENUE WEST CROSSWALK BARS (WHITE)
STATE STREET	27+91.46	28+33.23	BOTH	Waterborne/Solvent Paint		X				0.42												
STATE STREET	37+91.52	37+93.52	WB	Waterborne/Solvent Paint		X		0.27														
STATE STREET	37+93.47	38+33.16	WB	Waterborne/Solvent Paint		X							0.40									
3RD STREET	304+13.00	304+15.00	NB	Waterborne/Solvent Paint		X		0.13														
3RD STREET	304+19.02	304+25.02	BOTH	Waterborne/Solvent Paint		X			0.30													3RD STREET SOUTH CROSSWALK BARS
3RD STREET	304+69.97	304+77.97	BOTH	Waterborne/Solvent Paint		X								0.24								3RD STREET NORTH CROSSWALK BARS (GREEN)
3RD STREET	304+77.97	304+84.97	BOTH	Waterborne/Solvent Paint		X			0.35													3RD STREET NORTH CROSSWALK BARS (WHITE)
3RD STREET	304+88.97	304+90.97	SB	Waterborne/Solvent Paint	X			0.13														
2ND STREET	404+13.00	404+15.00	NB	Waterborne/Solvent Paint			X	0.13														
2ND STREET	404+19.02	404+25.02	BOTH	Waterborne/Solvent Paint		X			0.30													2ND STREET SOUTH CROSSWALK BARS
2ND STREET	404+70.00	404+78.00	BOTH	Waterborne/Solvent Paint		X								0.40								2ND STREET NORTH CROSSWALK BARS (GREEN)
2ND STREET	404+78.00	404+85.00	BOTH	Waterborne/Solvent Paint		X			0.35													2ND STREET NORTH CROSSWALK BARS (WHITE)
2ND STREET	404+89.02	404+91.02	SB	Waterborne/Solvent Paint	X			0.13														
1ST STREET	504+13.00	504+15.00	NB	Waterborne/Solvent Paint			X	0.13														
1ST STREET	504+18.99	504+24.99	BOTH	Waterborne/Solvent Paint		X			0.30													1ST STREET SOUTH CROSSWALK BARS
1ST STREET	504+69.99	504+77.99	BOTH	Waterborne/Solvent Paint		X								0.40								1ST STREET NORTH CROSSWALK BARS (GREEN)
1ST STREET	504+77.99	504+84.99	BOTH	Waterborne/Solvent Paint		X			0.35													1ST STREET NORTH CROSSWALK BARS (WHITE)
1ST STREET	504+88.98	504+90.98	SB	Waterborne/Solvent Paint	X			0.13														
CENTER STREET	601+38.69	602+38.69	BOTH	Waterborne/Solvent Paint		X						2.71										
CENTER STREET	602+38.69	603+81.85	BOTH	Waterborne/Solvent Paint		X				1.43												
CENTER STREET	604+13.00	604+15.00	NB	Waterborne/Solvent Paint			X	0.18														
CENTER STREET	604+18.94	604+24.94	BOTH	Waterborne/Solvent Paint		X			0.42													CENTER STREET SOUTH CROSSWALK BARS
CENTER STREET	604+69.96	604+77.96	BOTH	Waterborne/Solvent Paint		X								0.40								CENTER STREET NORTH CROSSWALK BARS (GREEN)
CENTER STREET	604+77.96	604+84.96	BOTH	Waterborne/Solvent Paint		X			0.35													CENTER STREET NORTH CROSSWALK BARS (WHITE)
CENTER STREET	604+88.94	604+90.94	SB	Waterborne/Solvent Paint	X			0.13														
1ST AVENUE	704+13.00	704+15.00	NB	Waterborne/Solvent Paint			X	0.13														
1ST AVENUE	704+19.03	704+25.03	BOTH	Waterborne/Solvent Paint		X			0.30													1ST AVENUE SOUTH CROSSWALK BARS
1ST AVENUE	704+70.04	704+78.04	BOTH	Waterborne/Solvent Paint		X								0.40								1ST AVENUE NORTH CROSSWALK BARS (GREEN)
1ST AVENUE	704+78.03	704+85.03	BOTH	Waterborne/Solvent Paint		X			0.35													1ST AVENUE NORTH CROSSWALK BARS (WHITE)
1ST AVENUE	704+89.04	704+91.04	SB	Waterborne/Solvent Paint	X			0.13														
2ND AVENUE	804+13.00	804+15.00	NB	Waterborne/Solvent Paint			X	0.14														
2ND AVENUE	804+19.00	804+25.00	BOTH	Waterborne/Solvent Paint		X			0.30													2ND AVENUE SOUTH CROSSWALK BARS
2ND AVENUE	804+70.00	804+78.00	BOTH	Waterborne/Solvent Paint		X								0.40								2ND AVENUE SOUTH CROSSWALK BARS (GREEN)
2ND AVENUE	804+78.00	804+85.00	BOTH	Waterborne/Solvent Paint		X			0.35													2ND AVENUE SOUTH CROSSWALK BARS (WHITE)
2ND AVENUE	804+89.01	804+91.01	SB	Waterborne/Solvent Paint	X			0.14														
				Factored Total: Waterborne/Solvent Paint				15.75	83.69	41.47	7.14	5.42	1.54	37.20	6.99	-	-	-	-	-	-	-	
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							199.20											

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
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www.bolton-menk.com

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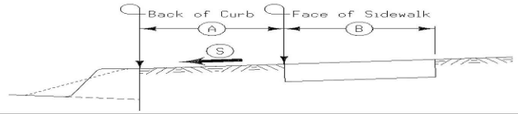
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.15

SIDEWALKS

See MI-220 and S Sheets



Road Identification	Station to Station		Side	A	B	S	5" PCC Sidewalk	6" PCC Sidewalk	8" PCC Sidewalk	10" PCC Sidewalk	Detectable Warnings	Remarks
				FT	FT	%	SY	SY	SY	SY	SF	
STATE STREET	10+14.98	10+38.46	RT	10.50	6.00	VAR	15.7					6' PCC SIDEWALK
STATE STREET	10+14.98	10+37.47	RT	VAR	VAR	VAR	8.0					TRANSITION SIDEWALK PAVEMENT
STATE STREET	10+19.39	10+39.35	LT	11.00	6.00	VAR	13.3					6' PCC SIDEWALK
STATE STREET	10+21.09	10+39.35	LT	VAR	VAR	VAR	5.8					TRANSITION SIDEWALK PAVEMENT
STATE STREET	10+38.46	10+57.89	RT	VAR	VAR	VAR		19.2			24	SW 3RD STREET ADA RAMPS
STATE STREET	10+44.46	10+54.15	RT	VAR	VAR	VAR	5.3					SW 3RD STREET TRANSITION IN RAMP AREA
STATE STREET	10+39.35	10+54.10	LT	VAR	VAR	VAR		15.7			24	NW 3RD STREET ADA RAMPS
STATE STREET	10+45.35	10+50.55	LT	VAR	VAR	VAR	1.6					NW 3RD STREET TRANSITION IN RAMP AREA
STATE STREET	10+82.44	11+04.08	LT	VAR	VAR	VAR		27.9			26	NE 3RD STREET PCC ADA RAMPS
STATE STREET	10+83.08	10+98.08	LT	VAR	VAR	VAR		12.0			19	NE 3RD STREET COLOR PCC ADA RAMP
STATE STREET	10+87.91	10+98.08	LT	VAR	VAR	VAR	4.3					NE 3RD STREET TRANSITION IN RAMP AREA
STATE STREET	10+87.69	11+04.76	RT	VAR	VAR	VAR		17.8			24	SE 3RD STREET ADA RAMPS
STATE STREET	10+91.24	10+98.76	RT	VAR	VAR	VAR	3.5					SE 3RD STREET TRANSITION IN RAMP AREA
STATE STREET	11+04.08	12+20.08	LT	16.00	6.00	VAR	77.3					6' PCC SIDEWALK
STATE STREET	11+04.08	12+20.08	LT	12.00	4.00	VAR	19.5					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	11+04.08	12+20.08	LT	VAR	8.00	VAR	103.5					8' COLORED PCC CYLE TRACK
STATE STREET	11+04.08	12+20.08	LT	0.00	VAR	VAR	27.6					TRANSITION CURB/CYCLE TRACK
STATE STREET	11+04.76	11+84.64	RT	VAR	VAR	VAR	53.3					PCC SIDEWALK
STATE STREET	11+04.76	11+84.64	RT	0.00	VAR	VAR	33.5					TRANSITION CURB/SIDEWALK
STATE STREET	12+02.64	12+84.06	RT	3.50	6.00	VAR	54.3					6' PCC SIDEWALK
STATE STREET	12+02.64	12+84.06	RT	0.00	VAR	VAR	30.1					TRANSITION CURB/SIDEWALK
STATE STREET	13+00.06	14+81.92	RT	VAR	VAR	VAR	125.1					6' PCC SIDEWALK
STATE STREET	13+00.06	14+81.92	RT	0.00	VAR	VAR	94.0					TRANSITION CURB/SIDEWALK
STATE STREET	13+11.53	14+82.25	LT	16.00	6.00	VAR	113.8					6' PCC SIDEWALK
STATE STREET	13+11.53	14+82.25	LT	VAR	VAR	VAR	28.1					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	13+11.53	14+82.25	LT	VAR	8.00	VAR	152.2					8' COLORED PCC CYLE TRACK
STATE STREET	13+11.53	14+82.25	LT	0.00	VAR	VAR	52.0					TRANSITION CURB/CYCLE TRACK
STATE STREET	14+81.92	15+04.35	RT	VAR	VAR	VAR		22.5			24	2ND STREET SW ADA RAMPS
STATE STREET	14+87.92	15+00.80	RT	VAR	VAR	VAR	8.7					SW 2ND STREET TRANSITION IN RAMP AREA
STATE STREET	14+82.25	15+03.35	LT	VAR	VAR	VAR		26.3			27	2ND STREET NW ADA RAMPS
STATE STREET	14+88.25	15+01.45	LT	VAR	VAR	VAR		9.7			20	NW 2ND STREET COLOR PCC ADA RAMP
STATE STREET	14+88.25	14+95.15	LT	VAR	VAR	VAR	2.1					NW 2ND STREET TRANSITION IN RAMP AREA
STATE STREET	15+30.71	15+53.71	LT	VAR	VAR	VAR		27.9			27	2ND STREET NE ADA RAMPS
STATE STREET	15+32.62	15+47.71	LT	VAR	VAR	VAR		11.4			20	NE 2ND STREET COLOR PCC ADA RAMP
STATE STREET	15+38.92	15+47.71	LT	VAR	VAR	VAR	3.1					NE 2ND STREET TRANSITION IN RAMP AREA
STATE STREET	15+33.98	15+53.55	RT	VAR	VAR	VAR		19.8			24	2ND STREET SE ADA RAMPS
STATE STREET	15+37.53	15+47.55	RT	VAR	VAR	VAR	5.9					SE 2ND STREET TRANSITION IN RAMP AREA
STATE STREET	15+53.55	16+08.68	RT	VAR	6.00	VAR	36.8					6' PCC SIDEWALK
STATE STREET	15+53.55	16+08.68	RT	0.00	VAR	VAR	49.1					TRANSITION CURB/SIDEWALK
STATE STREET	15+53.71	15+95.18	LT	16.00	6.00	VAR	27.6					6' PCC SIDEWALK
STATE STREET	15+53.71	15+95.18	LT	12.00	4.00	VAR	8.1					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	15+53.71	15+95.18	LT	4.00	8.00	VAR	37.3					8' COLORED PCC CYLE TRACK
STATE STREET	15+53.71	15+95.18	LT	0.00	VAR	VAR	10.1					TRANSITION CURB/CYCLE TRACK
STATE STREET	16+08.18	19+25.71	LT	16.00	6.00	VAR	218.8					6' PCC SIDEWALK
STATE STREET	16+08.18	19+25.71	LT	12.00	4.00	VAR	54.1					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	16+08.18	19+25.71	LT	VAR	8.00	VAR	282.7					8' COLORED PCC CYLE TRACK
STATE STREET	16+08.18	19+25.71	LT	0.00	VAR	VAR	97.6					TRANSITION CURB/CYCLE TRACK
STATE STREET	16+31.68	17+28.31	RT	3.50	6.00	VAR	64.4					6' PCC SIDEWALK
STATE STREET	16+31.68	17+28.31	RT	0.00	VAR	VAR	36.0					TRANSITION CURB/SIDEWALK
STATE STREET	17+52.31	19+24.04	RT	VAR	6.00	VAR	114.5					6' PCC SIDEWALK
STATE STREET	17+52.31	19+24.04	RT	VAR	VAR	VAR	79.2					TRANSITION CURB/SIDEWALK
STATE STREET	19+24.04	19+46.01	RT	VAR	VAR	VAR		22.1			24	SW 1ST STREET PCC ADA RAMP
STATE STREET	19+30.04	19+42.46	RT	VAR	VAR	VAR	8.2					SW 1ST STREET TRANSITION IN RAMP AREA
STATE STREET	19+25.71	19+50.23	LT	VAR	VAR	VAR		29.4			27	NW 1ST STREET PCC ADA RAMP
STATE STREET	19+31.71	19+48.33	LT	VAR	VAR	VAR		13.1			20	NW 1ST STREET COLOR PCC ADA RAMP
STATE STREET	19+31.71	19+42.03	LT	VAR	VAR	VAR	3.8					NW 1ST STREET TRANSITION IN RAMP AREA
STATE STREET	19+75.64	19+97.67	RT	VAR	VAR	VAR		22.1			24	SE 1ST STREET PCC ADA RAMP
STATE STREET	19+79.19	19+91.67	RT	VAR	VAR	VAR	8.3					SE 1ST STREET TRANSITION IN RAMP AREA
STATE STREET	19+77.41	19+97.04	LT	VAR	VAR	VAR		26.0			26	NE 1ST STREET PCC ADA RAMP
STATE STREET	19+78.04	19+91.04	LT	VAR	VAR	VAR		10.2			19	NE 1ST STREET COLOR PCC ADA RAMP
STATE STREET	19+82.88	19+91.04	LT	VAR	VAR	VAR	3.1					NE 1ST STREET TRANSITION IN RAMP AREA
STATE STREET	19+97.04	21+73.39	LT	16.00	VAR	VAR	136.9					6' PCC SIDEWALK
STATE STREET	19+97.04	21+73.39	LT	12.00	4.00	VAR	25.0					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	19+97.04	21+73.39	LT	VAR	8.00	VAR	157.2					8' COLORED PCC CYLE TRACK
STATE STREET	19+97.04	21+73.39	LT	0.00	VAR	VAR	57.7					TRANSITION CURB/CYCLE TRACK
STATE STREET	19+97.67	20+09.97	RT	VAR	6.00	VAR	8.2					6' PCC SIDEWALK
STATE STREET	19+97.67	20+09.97	RT	0.00	VAR	VAR	9.7					TRANSITION CURB/SIDEWALK
STATE STREET	20+33.97	21+73.39	RT	3.50	VAR	VAR	72.2					PCC SIDEWALK
STATE STREET	20+33.97	21+73.39	RT	0.00	VAR	VAR	52.7					TRANSITION CURB/SIDEWALK
STATE STREET	21+88.39	22+66.91	LT	16.00	6.00	VAR	52.3					6' PCC SIDEWALK
STATE STREET	21+88.39	22+66.91	LT	12.00	4.00	VAR	9.9					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	21+88.39	22+66.91	LT	4.00	8.00	VAR	69.8					8' COLORED PCC CYLE TRACK
STATE STREET	21+88.39	22+66.91	LT	0.00	VAR	VAR	29.6					TRANSITION CURB/CYCLE TRACK

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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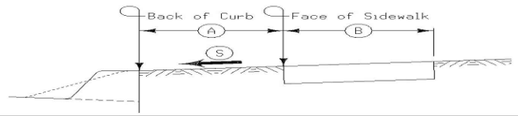
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.16

SIDEWALKS

See MI-220 and S Sheets



Road Identification	Station to Station		Side	A	B	S	5" PCC Sidewalk	6" PCC Sidewalk	8" PCC Sidewalk	10" PCC Sidewalk	Detectable Warnings	Remarks
				FT	FT	%	SY	SY	SY	SY	SF	
STATE STREET	21+88.39	23+69.77	RT	3.50	VAR	VAR	231.6					PCC SIDEWALK
STATE STREET	21+88.39	23+20.92	RT	0.00	VAR	VAR	52.5					TRANSITION CURB/SIDEWALK
STATE STREET	23+20.92	23+24.31	RT	0.00	VAR	VAR		5.5			10	ADA RAMP TO ON STREET PARKING
STATE STREET	23+24.31	23+69.77	RT	0.00	VAR	VAR	29.8					TRANSITION CURB/SIDEWALK
STATE STREET	22+90.91	23+69.74	LT	16.00	6.00	VAR	52.5					6' PCC SIDEWALK
STATE STREET	22+90.91	23+69.74	LT	12.00	4.00	VAR	12.2					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	22+90.91	23+69.74	LT	VAR	8.00	VAR	70.5					8' COLORED PCC CYLE TRACK
STATE STREET	22+90.91	23+69.74	LT	0.00	VAR	VAR	18.8					TRANSITION CURB/CYCLE TRACK
STATE STREET	23+69.74	23+95.68	LT	VAR	VAR	VAR		30.7			27	NW CENTER STREET PCC ADA RAMP
STATE STREET	23+75.74	23+93.78	LT	VAR	VAR	VAR		14.2			20	NW CENTER STREET COLOR PCC ADA RAMP
STATE STREET	23+75.74	23+87.48	LT	VAR	VAR	VAR	5.0					NW CENTER STREET TRANSITION IN RAMP AREA
STATE STREET	23+69.77	23+90.23	RT	VAR	VAR	VAR		20.6			24	SW CENTER STREET PCC ADA RAMP
STATE STREET	23+75.77	23+86.68	RT	VAR	VAR	VAR	6.7					SW CENTER STREET TRANSITION IN RAMP AREA
STATE STREET	24+24.04	24+49.78	LT	VAR	VAR	VAR		30.5			27	NE CENTER STREET PCC ADA RAMP
STATE STREET	24+25.95	24+43.78	LT	VAR	VAR	VAR		14.0			20	NE CENTER STREET COLOR PCC ADA RAMP
STATE STREET	24+32.25	24+43.78	LT	VAR	VAR	VAR	4.8					NE CENTER STREET TRANSITION IN RAMP AREA
STATE STREET	24+28.55	24+49.47	RT	VAR	VAR	VAR		20.8			24	SE CENTER STREET PCC ADA RAMP
STATE STREET	24+32.41	24+43.47	RT	VAR	VAR	VAR	6.8					SE CENTER STREET TRANSITION IN RAMP AREA
STATE STREET	24+49.47	25+85.82	RT	VAR	VAR	VAR	96.2					PCC SIDEWALK
STATE STREET	24+49.47	25+85.82	RT	0.00	VAR	VAR	61.6					TRANSITION CURB/SIDEWALK
STATE STREET	24+49.78	25+29.72	LT	16.00	6.00	VAR	53.3					6' PCC SIDEWALK
STATE STREET	24+49.78	25+29.72	LT	12.00	4.00	VAR	12.3					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	24+49.78	25+29.72	LT	VAR	8.00	VAR	71.5					8' COLORED PCC CYLE TRACK
STATE STREET	24+49.78	25+29.72	LT	0.00	VAR	VAR	23.8					TRANSITION CURB/CYCLE TRACK
STATE STREET	25+47.72	26+30.03	LT	16.00	6.00	VAR	54.9					6' PCC SIDEWALK
STATE STREET	25+47.72	26+30.03	LT	12.00	4.00	VAR	10.8					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	25+47.72	26+30.03	LT	4.00	8.00	VAR	73.2					8' COLORED PCC CYLE TRACK
STATE STREET	25+47.72	26+30.03	LT	0.00	VAR	VAR	30.4					TRANSITION CURB/CYCLE TRACK
STATE STREET	26+09.82	28+26.84	RT	VAR	6.00	VAR	144.3					6' PCC SIDEWALK
STATE STREET	26+09.82	28+26.84	RT	0.00	VAR	VAR	98.5					TRANSITION CURB/SIDEWALK
STATE STREET	26+49.03	28+27.76	LT	16.00	6.00	VAR	119.1					6' PCC SIDEWALK
STATE STREET	26+49.03	28+27.76	LT	12.00	4.00	VAR	31.2					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	26+49.03	28+27.76	LT	4.00	VAR	VAR	159.3					8' COLORED PCC CYLE TRACK
STATE STREET	26+49.03	28+27.76	LT	0.00	VAR	VAR	55.3					TRANSITION CURB/CYCLE TRACK
STATE STREET	28+26.84	28+45.04	RT	VAR	VAR	VAR		18.4			24	SW 1ST AVE PCC ADA RAMPS
STATE STREET	28+32.84	28+41.50	RT	VAR	VAR	VAR	4.7					SW 1ST AVE TRANSITION IN RAMP AREA
STATE STREET	28+27.76	28+51.21	LT	VAR	VAR	VAR		28.3			27	NW 1ST AVE PCC ADA RAMPS
STATE STREET	28+33.76	28+49.30	LT	VAR	VAR	VAR		11.8			20	NW 1ST AVE COLOR PCC ADA RAMP
STATE STREET	28+33.76	28+43.00	LT	VAR	VAR	VAR	3.4					NW 1ST AVE TRANSITION IN RAMP AREA
STATE STREET	28+74.68	28+98.52	RT	VAR	VAR	VAR		23.2			24	SE 1ST AVE PCC ADA RAMPS
STATE STREET	28+78.23	28+92.52	RT	VAR	VAR	VAR	10.4					SE 1ST AVE TRANSITION IN RAMP AREA
STATE STREET	28+78.40	28+98.80	LT	VAR	VAR	VAR		26.7			26	NE 1ST AVE PCC ADA RAMPS
STATE STREET	28+79.04	28+92.80	LT	VAR	VAR	VAR		10.8			19	NW 1ST AVE COLOR PCC ADA RAMP
STATE STREET	28+83.87	28+92.80	LT	VAR	VAR	VAR	3.6					NE 1ST AVE TRANSITION IN RAMP AREA
STATE STREET	28+98.52	29+82.29	RT	6.00	VAR	VAR	55.8					6' PCC SIDEWALK
STATE STREET	28+98.52	29+82.29	RT	0.00	VAR	VAR	48.2					TRANSITION CURB/SIDEWALK
STATE STREET	28+98.80	29+75.09	LT	16.00	VAR	VAR	76.3					6' PCC SIDEWALK
STATE STREET	28+98.80	29+75.09	LT	12.00	4.00	VAR	10.6					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	28+98.80	29+75.09	LT	VAR	8.00	VAR	68.2					8' COLORED PCC CYLE TRACK
STATE STREET	28+98.80	29+75.09	LT	0.00	VAR	VAR	17.7					TRANSITION CURB/CYCLE TRACK
STATE STREET	29+97.09	30+35.43	LT	16.00	6.00	VAR	25.6					6' PCC SIDEWALK
STATE STREET	29+97.09	30+35.43	LT	12.00	4.00	VAR	4.6					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	29+97.09	30+35.43	LT	4.00	8.00	VAR	34.1					8' COLORED PCC CYLE TRACK
STATE STREET	29+97.09	30+35.43	LT	0.00	VAR	VAR	15.3					TRANSITION CURB/CYCLE TRACK
STATE STREET	30+14.29	30+33.85	RT	3.50	6.00	VAR	13.0					6' PCC SIDEWALK
STATE STREET	30+14.29	30+33.85	RT	0.00	VAR	VAR	6.1					TRANSITION CURB/SIDEWALK
STATE STREET	30+53.85	31+70.24	RT	3.50	6.00	VAR	77.6					6' PCC SIDEWALK
STATE STREET	30+53.85	31+70.24	RT	0.00	VAR	VAR	43.7					TRANSITION CURB/SIDEWALK
STATE STREET	30+55.43	32+72.17	LT	16.00	6.00	VAR	144.5					6' PCC SIDEWALK
STATE STREET	30+55.43	32+72.17	LT	12.00	4.00	VAR	39.2					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	30+55.43	32+72.17	LT	VAR	8.00	VAR	193.1					8' COLORED PCC CYLE TRACK
STATE STREET	30+55.43	32+72.17	LT	0.00	VAR	VAR	63.3					TRANSITION CURB/CYCLE TRACK
STATE STREET	31+93.24	32+72.02	RT	VAR	6.00	VAR	52.5					6' PCC SIDEWALK
STATE STREET	31+93.24	32+72.02	RT	0.00	VAR	VAR	56.7					TRANSITION CURB/SIDEWALK
STATE STREET	32+72.02	32+89.90	RT	VAR	VAR	VAR		18.0			24	SW 2ND AVE PCC ADA RAMPS
STATE STREET	32+78.02	32+86.35	RT	VAR	VAR	VAR	4.4					SW 2ND AVE TRANSITION IN RAMP AREA
STATE STREET	32+72.17	32+96.26	LT	VAR	VAR	VAR		29.0			27	NW 2ND AVE PCC ADA RAMPS
STATE STREET	32+78.17	32+94.35	LT	VAR	VAR	VAR		12.4			20	NW 2ND AVE COLOR PCC ADA RAMP
STATE STREET	32+78.17	32+88.05	LT	VAR	VAR	VAR	3.8					NW 2ND AVE TRANSITION IN RAMP AREA
STATE STREET	33+19.53	33+43.75	RT	VAR	VAR	VAR		23.5			24	SE 2ND AVE PCC ADA RAMPS
STATE STREET	33+23.08	33+37.75	LT	VAR	VAR	VAR	10.9					SE 2ND AVE TRANSITION IN RAMP AREA
STATE STREET	33+23.44	33+44.05	LT	VAR	VAR	VAR		26.6			26	NE 2ND AVE PCC ADA RAMPS
STATE STREET	33+24.07	33+38.05	LT	VAR	VAR	VAR		11.1			19	NW 2ND AVE COLOR PCC ADA RAMP

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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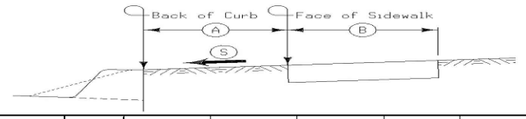
REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET C.17

SIDEWALKS

See MI-220 and S Sheets



Road Identification	Station to Station		Side	(A)	(B)	(S)	5" PCC Sidewalk	6" PCC Sidewalk	8" PCC Sidewalk	10" PCC Sidewalk	Detectable Warnings	Remarks
				FT	FT	%	SY	SY	SY	SY	SF	
STATE STREET	33+28.91	33+38.05	LT	VAR	VAR	VAR	3.7					NE 2ND AVE TRANSITION IN RAMP AREA
STATE STREET	33+43.75	35+20.22	RT	VAR	VAR	VAR	103.6					PCC SIDEWALK (DOES NOT INCLUDE STAIRS)
STATE STREET	33+43.75	35+20.22	RT	0.00	VAR	VAR	84.0					TRANSITION CURB/SIDEWALK
STATE STREET	33+44.05	36+98.04	LT	VAR	6.00	VAR	236.0					6' PCC SIDEWALK
STATE STREET	33+44.05	36+98.04	LT	VAR	VAR	VAR	47.4					TRANSITION SIDEWALK/CYCLE TRACK
STATE STREET	33+44.05	36+98.04	LT	VAR	8.00	VAR	315.3					8' COLORED PCC CYLE TRACK
STATE STREET	33+44.05	36+98.04	LT	0.00	VAR	VAR	100.7					TRANSITION CURB/CYCLE TRACK
STATE STREET	35+35.22	35+54.89	RT	3.50	6.00	VAR	13.1					6' PCC SIDEWALK
STATE STREET	35+35.22	35+54.89	RT	0.00	VAR	VAR	6.1					TRANSITION CURB/SIDEWALK
STATE STREET	35+69.89	36+64.88	RT	3.50	6.00	VAR	63.3					6' PCC SIDEWALK
STATE STREET	35+69.89	36+64.88	RT	0.00	VAR	VAR	35.4					TRANSITION CURB/SIDEWALK
STATE STREET	36+88.88	37+04.04	RT	3.50	6.00	VAR	10.1					6' PCC SIDEWALK
STATE STREET	36+88.88	37+04.04	RT	0.00	VAR	VAR	5.1					TRANSITION CURB/SIDEWALK
STATE STREET	36+98.04	37+04.04	LT	0.00	VAR	VAR		6.9				NW 3RD AVE COLOR PCC ADA RAMP
STATE STREET	36+98.04	37+23.86	LT	VAR	VAR	VAR		43.2			44	NW 3RD AVE PCC ADA RAMPS
STATE STREET	37+10.04	37+14.88	LT	VAR	VAR	VAR		0.9				NW 3RD AVE TRANSITION IN RAMP AREA
	37+10.04	37+19.18	LT	VAR	VAR	VAR		3.5				W 3RD AVE COLOR PCC ADA RAMP
STATE STREET	37+04.04	37+24.04	RT	VAR	VAR	VAR		20.1			37	SW 3RD AVE PCC ADA RAMPS
3RD STREET	303+88.92	304+19.09	LT	VAR	6.00	VAR	20.1					6' PCC SIDEWALK
3RD STREET	303+88.92	304+19.09	LT	0.00	VAR	VAR	30.6					TRANSITION CURB/SIDEWALK
3RD STREET	303+94.46	304+18.94	RT	VAR	VAR	VAR	15.7					PCC SIDEWALK
3RD STREET	303+94.46	304+18.94	RT	0.00	VAR	VAR	7.7					TRANSITION CURB/SIDEWALK
3RD STREET	304+84.07	305+07.57	LT	VAR	VAR	VAR	20.2					PCC SIDEWALK (INCLUDES NW TIE INTO EXISTING)
3RD STREET	304+84.07	305+07.57	LT	0.00	VAR	VAR	8.8					TRANSITION CURB/SIDEWALK
3RD STREET	304+84.93	305+07.62	RT	VAR	6.00	VAR	15.1					6' PCC SIDEWALK
3RD STREET	304+84.93	305+07.62	RT	0.00	VAR	VAR	8.8					TRANSITION CURB/SIDEWALK
2ND STREET	403+90.44	404+19.06	LT	VAR	6.00	VAR	19.1					6' PCC SIDEWALK
2ND STREET	403+97.94	404+18.95	RT	VAR	VAR	VAR	12.7					PCC SIDEWALK
2ND STREET	403+97.94	404+18.95	RT	0.00	VAR	VAR	18.6					TRANSITION CURB/SIDEWALK
2ND STREET	404+84.96	405+04.88	RT	VAR	6.00	VAR	13.3					6' PCC SIDEWALK
2ND STREET	404+85.06	404+99.01	LT	VAR	6.00	VAR	9.3					6' PCC SIDEWALK
1ST STREET	503+73.08	504+19.04	RT	VAR	6.00	VAR	32.6					6' PCC SIDEWALK
1ST STREET	503+81.86	504+19.04	RT	0.00	VAR	VAR	30.1					TRANSITION CURB/SIDEWALK
1ST STREET	503+84.53	504+18.96	LT	VAR	6.00	VAR	23.0					6' PCC SIDEWALK
1ST STREET	503+84.53	504+18.96	LT	0.00	VAR	VAR	29.5					TRANSITION CURB/SIDEWALK
1ST STREET	504+84.86	505+38.47	LT	VAR	6.00	VAR	35.7					6' PCC SIDEWALK
1ST STREET	504+84.86	505+32.62	LT	0.00	VAR	VAR	55.8					TRANSITION CURB/SIDEWALK
1ST STREET	504+85.02	505+33.54	RT	VAR	VAR	VAR	60.2					PCC SIDEWALK
1ST STREET	504+85.02	505+13.54	RT	0.00	VAR	VAR	14.7					TRANSITION CURB/SIDEWALK
CENTER STREET	603+74.31	604+19.17	RT	VAR	6.00	VAR	29.9					6' PCC SIDEWALK
CENTER STREET	603+74.31	604+19.17	RT	0.00	VAR	VAR	35.4					TRANSITION CURB/SIDEWALK
CENTER STREET	603+81.80	604+18.86	LT	VAR	VAR	VAR	31.6					PCC SIDEWALK (INCLUDES AROUND STAIRS)
CENTER STREET	603+81.80	603+95.86	LT	0.00	VAR	VAR	12.5					TRANSITION CURB/SIDEWALK
CENTER STREET	603+92.91	604+00.86	LT	0.00	VAR	VAR		7.3			10	CENTER STREET ON STREET ADA RAMP
CENTER STREET	603+98.97	604+18.86	LT	0.00	VAR	VAR	14.3					TRANSITION CURB/SIDEWALK
CENTER STREET	604+84.86	605+20.23	LT	VAR	6.00	VAR	23.6					6' PCC SIDEWALK
CENTER STREET	604+84.77	604+99.77	LT	VAR	VAR	VAR	11.6					LANDSCAPING AREA SIDEWALK
CENTER STREET	604+84.86	605+20.23	LT	0.00	VAR	VAR	36.5					TRANSITION CURB/SIDEWALK
CENTER STREET	604+85.17	605+10.65	RT	VAR	6.00	VAR	17.0					6' PCC SIDEWALK
CENTER STREET	604+85.17	605+10.65	RT	0.00	VAR	VAR	24.7					TRANSITION CURB/SIDEWALK
1ST AVENUE	703+78.89	704+19.08	LT	VAR	6.00	VAR	26.8					6' PCC SIDEWALK
1ST AVENUE	703+80.99	704+19.08	LT	0.00	VAR	VAR	41.6					TRANSITION CURB/SIDEWALK
1ST AVENUE	703+81.89	704+18.92	RT	VAR	6.00	VAR	24.7					6' PCC SIDEWALK
1ST AVENUE	703+81.89	704+18.92	RT	0.00	VAR	VAR	37.6					TRANSITION CURB/SIDEWALK
1ST AVENUE	704+84.94	705+29.49	RT	VAR	VAR	VAR	46.8					PCC SIDEWALK
1ST AVENUE	704+84.94	705+12.01	RT	0.00	VAR	VAR	11.4					TRANSITION CURB/SIDEWALK
1ST AVENUE	704+85.11	705+31.21	LT	VAR	6.00	VAR	30.7					6' PCC SIDEWALK
1ST AVENUE	704+85.11	705+29.66	LT	0.00	VAR	VAR	51.0					TRANSITION CURB/SIDEWALK
2ND AVENUE	803+82.27	804+18.99	RT	VAR	6.00	VAR	24.5					6' PCC SIDEWALK
2ND AVENUE	803+88.25	804+19.01	LT	VAR	6.00	VAR	20.5					6' PCC SIDEWALK
2ND AVENUE	804+84.99	805+38.86	RT	VAR	VAR	VAR	37.6					PCC SIDEWALK
2ND AVENUE	804+84.99	805+14.88	RT	0.00	VAR	VAR	17.8					TRANSITION CURB/SIDEWALK
2ND AVENUE	804+85.01	805+26.67	LT	VAR	6.00	VAR	27.8					6' PCC SIDEWALK
2ND AVENUE	804+85.01	805+26.67	LT	0.00	VAR	VAR	53.8					TRANSITION CURB/SIDEWALK

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

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REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.18

MATERIALS FOR TYPE 'A' SIGNS

TYPE A SIGNING TYPICALS	SIGN NUMBER	DIR OF TRAVEL	SIGN LOCATION	WOOD POSTS			PERFORATED SQUARE STEEL TUBE						Steel Rect. Tube			TYPE A SIGN MOUNTING BRACKETS						INSTALLATION			REMARKS
				NO. OF POSTS	4 x 6		LEG 1	LEG 2	LEG 3	ANCHOR			NO. OF POSTS	POST LENGTH	ANCHORS	ONE POST BRACKET	TWO POST	AUXILIARY	H	F	F1	TYPE	SF	DIMENSIONS	
			STATION		LEG 1 FT	LEG 2 FT	FT	FT	FT	CONC	SOIL	SLIPBASE		FT	EACH										
STOP SIGN	R1-1	EB	10+26.91										1									1	6.25	30x30	STATE STREET
ALL WAY	R1-3P	EB	10+26.91																			1	0.75	18x6	STATE STREET
STOP SIGN	R1-1	WB	11+10.27										1									1	6.25	30x30	STATE STREET
ALL WAY	R1-3P	WB	11+10.27																			1	0.75	18x6	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	11+29.02										1									1	1.5	12x18	STATE STREET
3 HR PARKING	R7-108SP	EB	11+53.66										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	12+65.79										1									1	1.5	12x18	STATE STREET
SPEED LIMIT 20	R2-1	EB	12+75.37										1									1	5	24x30	STATE STREET
STOP AHEAD	W3-1	WB	13+35.48										1									1	6.25	30x30	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	14+57.10										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	15+81.28										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	17+18.29										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	19+03.41										1									1	1.5	12x18	STATE STREET
PUBLIC PARKING		EB	19+07.80										1									1	3	24x18	STATE STREET
3 HOUR PARKING	R7-108SP	EB	19+07.80																			1	3	24x18	STATE STREET
NO PARKING 2:30 TO 5:30	R7-2SP	EB	19+07.80																			1	3	24x18	STATE STREET
NO DOUBLE PARKING	R8-3ASP	EB	19+07.80																			1	1.5	12x18	STATE STREET
NO PARKING HERE TO CORNER	R7-1SP	EB	19+07.80																			1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	20+20.61										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	21+57.37										1									1	1.5	12x18	STATE STREET
PUBLIC PARKING LOT T		NB	22+04.49										1									1	4	24x24	STATE STREET
COLISEUM PARKING ONLY		NB	22+04.49																			1	1.5	12x18	STATE STREET
COLISEUM PARKING ONLY		NB	22+04.49																			1	1.5	12x18	STATE STREET
30 MINUTE PARKING	R7-5SP	EB	22+85.41										1									1	1.5	12x18	STATE STREET
NO PARKING 2:30 TO 5:30	R7-2SP	EB	22+85.41																			1	1.5	12x18	STATE STREET
RESERVED PARKING	R7-8SP	EB	23+11.28										1									1	1.5	12x18	STATE STREET
SPEED LIMIT 20	R2-1	WB	23+11.28										1									1	5	24x30	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	23+43.89										1									1	5	12x18	STATE STREET
STOP SIGN	R1-1	EB	23+64.33										1									1	6.25	30x30	STATE STREET
ALL WAY	R1-3P	EB	23+64.33																			1	0.75	18x6	STATE STREET
E STATE ST & N CENTER ST		WB	24+55.72										1									1			STATE STREET
STOP SIGN	R1-1	WB	24+55.72																			1	6.25	30x30	STATE STREET
ALL WAY	R1-3P	WB	24+55.72																			1	0.75	18x6	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	24+74.73										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	26+02.71										1									1	1.5	12x18	STATE STREET
SPEED LIMIT 20	R2-1	EB	26+20.56																			1	5	24x30	STATE STREET
PUBLIC PARKING LOT J		SB	26+56.00																			1	4	24x24	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	27+98.46										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	29+21.74										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	30+65.51										1									1	1.5	12x18	STATE STREET
PUBLIC PARKING LOT Z		NB	31+49.02										1									1	4	24x24	STATE STREET
THE TALLCORN RESIDENT PARKING ONLY		SB	31+96.62										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	32+49.81										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	33+66.69										1									1	1.5	12x18	STATE STREET
30 MINUTE PARKING	R7-5SP	EB	34+67.24										1									1	1.5	12x18	STATE STREET
30 MINUTE PARKING	R7-5SP	EB	34+89.24										1									1	1.5	12x18	STATE STREET
NO DOUBLE PARKING	R8-3ASP	EB	34+89.24																			1	1.5	12x18	STATE STREET
SPEED LIMIT 20	R2-1	WB	35+03.44										1									1	5	24x30	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	35+03.44																			1	1.5	12x18	STATE STREET
30 MINUTE PARKING	R7-5SP	EB	35+11.24										1									1	1.5	12x18	STATE STREET
NO PARKING THIS SIDE	R7-13	WB	36+86.74										1									1	1.5	12x18	STATE STREET
STOP SIGN	R1-1	NB	304+14.60										1									1	6.25	30x30	N 3RD STREET
ALL WAY	R1-3P	NB	304+14.60																			1	0.75	18x6	N 3RD STREET
N 3RD ST & W STATE ST		SB	304+89.05										1									1			N 3RD STREET
STOP SIGN	R1-1	SB	304+89.05																			1	6.25	30x30	N 3RD STREET
ALL WAY	R1-3P	SB	304+89.05																			1	0.75	18x6	N 3RD STREET
BIKE ROUTE	D11-1	NB	305+15.49										1									1	3	24x18	N 3RD STREET
NO PARKING HERE TO CORNER	R7-2SP	NB	305+15.49																			1	1.5	12x18	N 3RD STREET
3 HOUR PARKING EX. HOLIDAYS & SUN.	R7-108SP	SB	403+81.18										1									1	3	24x18	N 2ND STREET
NO PARKING 2:30 TO 5:30	R7-2BSP	SB	403+81.18																			1	1.75	14x18	N 2ND STREET
STOP SIGN	R1-1	NB	404+14.91										1									1	6.25	30x30	N 2ND STREET
W STATE ST & N 2ND ST		SB	404+90.24										1									1			N 2ND STREET
STOP SIGN	R1-1	SB	404+90.24																			1	6.25	30x30	N 2ND STREET
NO PARKING	R8-3ASP	NB	405+18.56										1									1	1.5	12x18	N 2ND STREET
STOP SIGN	R1-1	NB	504+15.02										1									1	6.25	30x30	N 1ST STREET
W STATE ST & N 1ST ST		SB	504+90.45										1									1			N 1ST STREET
STOP SIGN	R1-1	SB	504+90.45																			1	6.25	30x30	N 1ST STREET
3 HOUR PARKING EX. HOLIDAYS & SUN.	R7-108SP	NB	505+07.66										1									1	1.5	12x18	N 1ST STREET
3 HOUR PARKING EX. HOLIDAYS & SUN.	R7-108SP	SB	505+22.19										1									1	1.5	12x18	N 1ST STREET
RESERVED PARKING	R7-8SP	SB	603+80.06										1									1	1.5	12x18	N CENTER STRI
STOP SIGN	R1-1	NB	604+15.09										1									1	6.25	30x30	N CENTER STRI
ALL WAY	R1-3P	NB	604+15.09																			1	0.75	18x6	N CENTER STRI
W STATE ST & N CENTER ST		SB	604+90.89										1									1			N CENTER STRI
STOP SIGN	R1-1	SB	604+90.89																			1	6.25	30x30	N CENTER STRI
ALL WAY	R1-3P	SB	604+90.89																			1	0.75	18x6	N CENTER STRI
STOP SIGN	R1-1	NB	704+13.47										1									1	6.25	30x30	N 1ST AVENUE
E STATE ST & N 1ST AVE		SB	704+91.31										1									1			N 1ST AVENUE
STOP SIGN	R1-1	SB	704+91.31																			1	6.25	30x30	N 1ST AVENUE
STOP SIGN	R1-1	NB	804+14.99										1									1	6.25	30x30	N 2ND AVENUE
W STATE ST & N 2ND AVE		SB	804+89.02										1									1			N 2ND AVENUE
STOP SIGN	R1-1	SB	804+89.02																			1	6.25	30x30	N 2ND AVENUE

CITY TO INSTALL AFTER PROJECT
TABLE FOR REFERENCE ONLY

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	REV	DESCRIPTION	DATE
JDA			
DRAWN DEM			
CHECKED GAB			
CLIENT PROJ. NO. 0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

STORM SEWER STRUCTURES

Struc NO.	STATION	OFFSET	TYPE	RIM/FG ELEV	OUTLET ELEV
BEND - 1	35+19.31	28.00' R		932.16	931.57
CO - 2	34+57.87	23.25' R		932.05	931.46
CO - 3	34+78.36	23.25' R		931.94	931.36
DOWN - 1	34+57.87	32.17' R		932.09	931.50
DOWN - 2	35+19.31	32.09' R		932.17	931.59
INT - 1	10+31.09	14.49' R	SW-510	930.53	926.28
INT - 2	10+59.56	41.89' R	SW-507	931.00	926.72
INT - 3	10+93.68	21.34' R	SW-541	931.26	926.55
INT - 4	10+92.13	-15.86' L	SW-541	931.09	925.40
INT - 5	11+50.00	-13.00' L	SW-510	931.09	925.42
INT - 6	11+50.00	12.00' R	SW-505	931.09	925.74
INT - 7	12+07.27	-13.00' L	SW-510	931.36	925.58
INT - 8	12+07.27	12.00' R	SW-505	931.36	927.06
INT - 9	13+54.27	-13.00' L	SW-510	931.56	926.15
INT - 10	13+54.27	12.00' R	SW-505	931.56	927.58
INT - 11	13+92.21	-13.00' L	SW-510	931.73	926.31
INT - 12	13+92.21	12.00' R	SW-505	931.73	927.71
INT - 13	15+05.67	41.46' R	SW-507	932.66	928.27
INT - 14	16+27.09	-13.00' L	SW-510	931.93	926.99
INT - 15	16+56.82	-13.00' L	SW-510	931.79	927.12
INT - 16	17+03.48	-13.00' L	SW-510	932.01	927.31
INT - 17	17+83.14	32.95' R	SW-501	933.19	928.53
INT - 18	18+54.59	-13.00' L	SW-509	932.24	927.83
INT - 19	18+92.12	-13.00' L	SW-509	932.41	927.99
INT - 20	19+47.32	41.53' R	SW-507	933.58	929.14
INT - 21	19+78.34	53.50' R	SW-507	933.42	929.40
INT - 22	20+49.55	-13.00' L	SW-509	933.35	929.53
INT - 23	20+49.55	12.00' R	SW-501	933.83	930.09
INT - 24	22+33.21	-13.00' L	SW-509	934.13	928.65
INT - 25	23+03.61	-13.00' L	SW-509	935.05	928.25
INT - 26	23+91.54	39.91' R	SW-507	935.90	930.37
INT - 27	24+27.54	39.64' R	SW-507	935.95	930.65
INT - 28	24+81.94	-13.00' L	SW-509	934.76	927.43
INT - 29	24+81.94	14.00' R	SW-509	935.41	928.90
INT - 30	26+73.86	-13.00' L	SW-509	933.90	926.90
INT - 31	26+73.86	12.00' R	SW-505	933.90	927.58
INT - 32	26+95.92	39.00' R	SW-512 (18IN)	933.58	927.85
INT - 33	27+88.67	-13.00' L	SW-509	932.78	926.56
INT - 34	27+88.67	12.00' R	SW-505	932.78	926.73
INT - 35	28+73.37	41.57' R	SW-507	932.58	927.15
INT - 36	29+07.01	-13.00' L	SW-510	931.78	926.48
INT - 37	29+07.01	14.00' R	SW-509	931.76	926.72
INT - 38	29+63.17	-13.00' L	SW-510	932.04	926.73
INT - 39	29+63.17	12.00' R	SW-505	932.03	928.03
INT - 40	30+77.79	-13.00' L	SW-510	932.67	927.35
INT - 41	30+77.79	12.00' R	SW-505	932.66	928.70
INT - 42	32+17.39	-13.00' L	SW-510	933.43	928.12
INT - 43	32+17.39	12.00' R	SW-505	933.43	929.50
INT - 44	32+91.22	41.49' R	SW-507	934.06	928.92
INT - 45	33+18.22	41.51' R	SW-507	934.11	929.16

STORM SEWER STRUCTURES

Struc NO.	STATION	OFFSET	TYPE	RIM/FG ELEV	OUTLET ELEV
INT - 46	33+51.55	-13.00' L	SW-509	933.75	928.70
INT - 47	33+51.41	14.00' R	SW-509	933.73	930.39
INT - 48	34+13.45	-13.00' L	SW-509	934.34	928.87
INT - 49	34+78.36	-13.00' L	SW-509	935.18	929.34
INT - 50	34+78.36	12.00' R	SW-505	935.18	931.20
INT - 51	35+68.39	-15.29' L	SW-541	936.15	929.84
INT - 54	36+92.33	-15.50' L	SW-541	937.30	930.53
MH - 1	10+84.54	14.15' R	SW-402 N - 6'x6'	931.33	925.16
MH - 2	10+88.89	-6.50' L	SW-402 N - 6'x6'	931.47	925.25
MH - 3	15+05.84	-13.00' L	SW-401 (72IN)	932.43	926.60
MH - 4	17+83.14	-14.50' L	SW-401 (48IN)	933.01	927.58
MH - 5	19+46.87	-13.00' L	SW-401 (60IN)	932.77	928.19
MH - 6	???	??? ???	SW-401 (48IN)	934.68	928.89
MH - 7	23+91.87	-13.00' L	SW-401 (48IN)	935.24	927.89
MH - 8	28+77.22	-71.23' L	SW-401 (72IN)	931.59	926.80
MH - 9	28+77.22	-14.50' L	SW-402 N - 6'x6'	931.94	925.84
MH - 10	28+82.74	40.19' R	SW-401 (60IN)	932.93	927.00
MH - 11	32+91.39	-13.00' L	SW-401 (72IN)	933.87	928.50

STORM SEWER PIPES

FROM STRUCTURE	TO STRUCTURE	PIPE DIA	Length	PIPE GRADE	START INV	END INV
	INT - 41	15" RCP	29 LF	0.50%	928.95	928.80
	INT - 25	24" RCP	24 LF	0.50%	928.28	928.16
	INT - 13	15" RCP	14 LF	0.50%	928.44	928.37
	INT - 23	12" RCP	8 LF	9.74%	930.90	930.09
	INT - 54	12" RCP	45 LF	4.90%	934.57	932.36
BEND - 1	CO - 4	6" PVC	7 LF	0.50%	931.57	931.54
CO - 3	INT - 50	6" PVC	11 LF	0.50%	931.36	931.30
DOWN - 1	CO - 2	6" PVC	9 LF	0.50%	931.50	931.46
DOWN - 2	BEND - 1	6" PVC	4 LF	0.50%	931.59	931.57
EX - 1	INT - 43	15" RCP	36 LF	0.50%	929.78	929.60
INT - 2	INT - 3	15" RCP	40 LF	0.50%	926.72	926.52
INT - 3	MH - 1	15" RCP	12 LF	0.50%	926.55	926.49
INT - 4	MH - 2	15" RCP	10 LF	0.50%	925.40	925.35
INT - 5	MH - 2	51"	61 LF	0.20%	925.42	925.30
INT - 6	INT - 5	15" RCP	25 LF	0.50%	925.74	925.62
INT - 7	INT - 5	51"	57 LF	0.20%	925.58	925.47
INT - 8	INT - 7	15" RCP	25 LF	0.50%	927.06	926.94
INT - 9	INT - 7	51"	147 LF	0.35%	926.15	925.63
INT - 10	INT - 9	15" RCP	25 LF	0.50%	927.58	927.45
INT - 11	INT - 9	36" RCP	38 LF	0.30%	926.31	926.20
INT - 12	INT - 11	15" RCP	25 LF	0.50%	927.71	927.59
INT - 13	MH - 3	24" RCP	54 LF	0.50%	928.27	928.00
INT - 14	MH - 3	44"	121 LF	0.28%	926.99	926.65
INT - 15	INT - 14	44"	30 LF	0.28%	927.12	927.04
INT - 16	INT - 15	44"	47 LF	0.28%	927.31	927.17
INT - 17	MH - 4	15" RCP	47 LF	0.50%	928.53	928.29
INT - 18	MH - 4	30" RCP	71 LF	0.28%	927.83	927.63
INT - 19	INT - 18	30" RCP	38 LF	0.28%	927.99	927.88
INT - 20	MH - 5	24" RCP	55 LF	0.50%	929.14	928.87
INT - 21	INT - 20	15" RCP	33 LF	0.50%	929.40	929.23
INT - 22	MH - 5	18" RCP	103 LF	1.00%	929.53	928.50
INT - 23	INT - 22	15" RCP	25 LF	2.02%	930.09	929.58
INT - 24	INT - 25	15" RCP	70 LF	0.50%	928.65	928.30
INT - 25	MH - 7	24" RCP	88 LF	0.35%	928.25	927.94
INT - 26	MH - 7	18" RCP	53 LF	1.82%	930.37	929.41
INT - 27	INT - 26	15" RCP	36 LF	0.50%	930.65	930.47
INT - 28	INT - 30	24" RCP	192 LF	0.25%	927.43	926.95
INT - 29	INT - 28	15" RCP	27 LF	0.50%	928.90	928.76
INT - 30	INT - 33	30" RCP	115 LF	0.25%	926.90	926.61
INT - 31	INT - 30	15" RCP	25 LF	0.50%	927.58	927.46
INT - 32	INT - 31	15" RCP	35 LF	0.50%	927.85	927.68
INT - 33	MH - 9	30" RCP	89 LF	0.25%	926.56	926.34
INT - 34	INT - 33	15" RCP	25 LF	0.50%	926.73	926.61
INT - 35	MH - 10	24" RCP	9 LF	0.50%	927.15	927.10
INT - 36	MH - 9	51"	30 LF	0.30%	926.48	926.39
INT - 37	INT - 36	24" RCP	27 LF	0.50%	926.72	926.58
INT - 38	INT - 36	44"	56 LF	0.35%	926.73	926.53
INT - 39	INT - 38	15" RCP	25 LF	0.50%	928.03	927.91
INT - 40	INT - 38	44"	115 LF	0.50%	927.35	926.78
INT - 41	INT - 40	15" RCP	25 LF	0.50%	928.70	928.58

STORM SEWER PIPES

FROM STRUCTURE	TO STRUCTURE	PIPE DIA	Length	PIPE GRADE	START INV	END INV
INT - 42	INT - 40	36" RCP	140 LF	0.50%	928.12	927.42
INT - 43	INT - 42	15" RCP	25 LF	0.50%	929.50	929.38
INT - 44	MH - 11	30" RCP	54 LF	0.50%	928.92	928.65
INT - 46	MH - 11	24" RCP	60 LF	0.25%	928.70	928.55
INT - 47	INT - 46	15" RCP	27 LF	0.50%	930.39	930.25
INT - 48	INT - 46	24" RCP	62 LF	0.20%	928.87	928.75
INT - 49	INT - 48	24" RCP	65 LF	0.65%	929.34	928.92
INT - 50	INT - 49	15" RCP	25 LF	0.50%	931.20	931.08
INT - 51	INT - 49	15" RCP	90 LF	0.50%	929.84	929.39
INT - 54	INT - 51	15" RCP	124 LF	0.50%	930.53	929.91
MH - 1	INT - 1	51" RCAP	53 LF	0.30%	925.16	925.00
MH - 2	MH - 1	51"	21 LF	0.20%	925.25	925.21
MH - 3	INT - 11	36" RCP	114 LF	0.21%	926.60	926.36
MH - 4	INT - 16	30" RCP	80 LF	0.28%	927.58	927.36
MH - 5	INT - 19	24" RCP	55 LF	0.28%	928.19	928.04
MH - 6	INT - 24	15" RCP	29 LF	0.50%	928.89	928.75
MH - 7	INT - 28	24" RCP	90 LF	0.45%	927.89	927.48
MH - 9	MH - 8	51"	57 LF	0.60%	925.84	925.50
MH - 10	INT - 37	24" RCP	36 LF	0.50%	927.00	926.82
MH - 11	INT - 42	30" RCP	74 LF	0.45%	928.50	928.17

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	REV	DESCRIPTION	DATE
JDA			
DRAWN			
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CLIENT PROJ. NO.			
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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET
C.20

SANITARY SEWER STRUCTURES

Struc NO.	STATION	OFFSET	TYPE	RIM ELEV	OUTLET ELEV
EX - C	28+60.32	-73.98' L	SW-301-E	931.66	922.18
J06-006T	19+58.23	-2.65' L	SW-301-E	933.00	924.15
J06-008	19+58.48	32.09' R	SW-301 (48IN)	933.59	924.41
J06-028	10+59.14	-1.86' L	SW-301 (48IN)	931.40	922.18 922.16
J06-033	12+80.94	-1.33' L	SW-301-E	932.02	925.05
J06-034	12+97.62	-1.26' L	SW-301 (48IN)	932.05	925.46
J06-062	20+93.73	-1.24' L	SW-301-E	933.84	925.16 928.46
J06-080	15+14.66	-2.30' L	SW-301 (48IN)	932.72	922.81
J06-081	17+65.61	-2.02' L	SW-301-E	932.59	925.33
J06-082	17+98.27	-2.04' L	SW-301-E	932.71	925.80
K06-013	28+59.86	-2.49' L	SW-301 (48IN)	932.28	922.88
K06-021	30+83.63	-1.27' L	SW-301 (48IN)	932.92	924.32
K06-022	33+05.21	-2.19' L	SW-301 (48IN)	934.07	925.64
K06-030	24+09.55	-2.09' L	SW-301 (48IN)	935.44	926.28 926.23
MH - A	26+37.16	-2.29' L	SW-301 (48IN)	934.46	924.50
MH - B	35+25.76	-1.75' L	SW-301 (48IN)	936.01	927.24

SANITARY SEWER PIPES

FROM STRUCTURE	TO STRUCTURE	PIPE DIA	Length	PIPE GRADE	START INV	END INV
1ST AVE (S)	K06-013	8" PVC	64 LF	0.50%	923.30	922.98
3RD ST (S)	J06-028	8" PVC	54 LF	0.88%	922.65	922.18
J06-006T	1ST ST (N)	8" PVC	78 LF	0.40%	924.15	923.84
J06-008	J06-006T	8" PVC	35 LF	0.75%	924.41	924.15
J06-028	3RD ST (N)	8" PVC	54 LF	0.76%	922.16	921.75
J06-028	STATE ST (W)	8" PVC	31 LF	1.12%	922.18	921.83
J06-033	J06-028	8" PVC	222 LF	1.29%	925.05	922.18
J06-034	J06-033	8" PVC	17 LF	3.06%	925.46	924.95
J06-062	K06-030	8" PVC	316 LF	0.64%	928.46	926.45
J06-062	J06-006T	8" PVC	136 LF	0.67%	925.16	924.25
J06-080	2ND ST (N)	8" PVC	52 LF	0.74%	922.81	922.42
J06-081	J06-080	8" PVC	251 LF	0.63%	925.33	923.76
J06-082	J06-081	8" PVC	33 LF	1.44%	925.80	925.33
K06-013	EX - C	8" PVC	71 LF	0.50%	922.88	922.52
K06-021	K06-013	8" PVC	224 LF	0.60%	924.32	922.98
K06-022	K06-021	8" PVC	222 LF	0.55%	925.64	924.42
K06-030	MH - A	8" PVC	228 LF	0.72%	926.23	924.60
K06-030	CENTER ST (N)	8" PVC	59 LF	0.50%	926.28	925.99
MH - A	K06-013	8" PVC	223 LF	0.68%	924.50	922.98
MH - B	K06-022	8" PVC	221 LF	0.68%	927.24	925.74
STATE ST (E)	MH - B	8" PVC	184 LF	0.73%	928.68	927.34

WATER SERVICES

STATION	SIDE	ADDRESS	SERVICE LENGTH	DOMESTIC SIZE	FIRE SIZE	REMARKS
11+67.48	RT	210 W STATE	14	UNKNOWN		
12+36.51	RT	208 W STATE	14	UNKNOWN		
13+32.73	LT	201 W STATE	24		6"	
13+37.73	LT	201 W STATE	24	UNKNOWN		
13+45.64	RT	204 W STATE	14		6"	
13+49.61	RT	204 W STATE	14	UNKNOWN		
15+81.95	LT	111 W STATE	36		6"	
16+19.35	LT	107 W STATE	36	3/4"		
16+81.07	RT	110 W STATE	14	3/4"		
16+95.07	RT	108 W STATE	14	3/4"		
17+34.33	LT	111 W STATE	24	3"		
17+64.47	RT	104 W STATE	14	UNKNOWN		
20+37.39	LT	35 W STATE	34	UNKNOWN		
21+16.70	LT	19 W STATE	34	3/4"		
21+23.72	RT	20 W STATE	4	UNKNOWN		
21+52.90	RT	20 W STATE	4	UNKNOWN		
21+66.29	LT	19 W STATE	34	UNKNOWN		
21+83.94	RT		4	UNKNOWN		
22+41.49	RT	24 N CENTER	4	UNKNOWN		
22+45.77	RT	24 N CENTER	4	UNKNOWN		
23+02.88	RT	24 N CENTER	4	2"		
25+55.34	RT	11 E STATE	4		6"	
25+60.34	RT	11 E STATE	4	3/4"		
25+94.63	LT	16 E STATE	46	UNKNOWN		
26+62.27	LT		34		6"	
29+25.65	LT	102 E STATE	46		6"	
29+94.29	RT	107 E STATE	4		6"	
29+99.29	RT	107 E STATE	4	UNKNOWN		
31+23.99	RT	119 E STATE	4		6"	
31+28.99	RT	119 E STATE	4	UNKNOWN		
33+69.93	RT	201 E STATE	4		6"	
34+94.06	RT	205 E STATE	4	3/4"		
35+04.40	RT	205 E STATE	4	2"		
36+28.49	RT	12 N 3RD AVENUE	4	UNKNOWN		
505+16.97	RT	35 W STATE	11	UNKNOWN		

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DRAWN DEM
CHECKED GAB
CLIENT PROJ. NO. 0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TABULATIONS

SHEET C.21

3RD ST

105 N 3RD ST

207-209 W STATE ST

ALLEY 3 WEST

201 W STATE ST

103 N 2ND ST

N. 3RD ST.

N. 2ND ST.

301 W STATE ST

211 W STATE ST

111 W STATE ST

INSTALL 0.79 SQ SOD

INSTALL 0.79 SQ SOD

INSTALL 10.76 SQ SOD

INSTALL 1.09 SQ SOD

INSTALL 3.75 SQ SOD

INSTALL 5.90 SQ SOD

INSTALL 3.34 SQ SOD

INSTALL 2.63 SQ SOD

INSTALL 1.42 SQ SOD

STATE ST.

INT - 1

INT - 2

INT - 3

INT - 4

INT - 5

INT - 6

INT - 7

INT - 8

INT - 9

INT - 10

INT - 11

INT - 12

INT - 13

MH - 1

MH - 2

MH - 3

SB1

SB2

SB3

SB4

10+00

11+00

12+00

13+00

14+00

15+00

16+00

304+50

306+00

305+00

304+00

303+00

406+00

405+00

404+00

403+00

931

932

933

INSTALL 0.92 SQ SOD

INSTALL 0.29 SQ SOD

INSTALL 1.32 SQ SOD

INSTALL 4.06 SQ SOD

INSTALL 5.61 SQ SOD

INSTALL 5.47 SQ SOD

8 N 3RD ST

212 W STATE ST

210 W STATE ST

208 W STATE ST

204 W STATE ST

202 W STATE ST

7 N 3RD ST

EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- INLET PROTECTION
- SOD
- LOW MOW GRASS
- TYPE 1 SEED

HORZ. SCALE 0 20 40 FEET

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REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
EROSION CONTROL SHEETS

SHEET CE.01

ND ST

107 W
STATE ST

104 N 1ST ST

111 W
STATE ST

105 W
STATE ST

103 W
STATE ST

102 N
1ST ST

N. 1ST ST.

35 W STATE ST

19 W STATE ST

ALLEY 1 WEST

15 W STATE ST

SQ SOD

INSTALL 1.42 SQ SOD

INSTALL 3.12 SQ SOD

INSTALL 4.96 SQ SOD

INSTALL 14.74 SQ SOD

101 W
STATE ST

506+00

505+00

504+50

504+00

503+00

933

INT - 14

INT - 15

INT - 16

MH - 4

INT - 18

INT - 19

MH - 5

INT - 22

INT - 23

INT - 17

INT - 20

INT - 21

SB5

SB6

SB7

SB8

932

934

16+00

17+00

18+00

19+00

20+00

21+00

22+00

STATE ST.

INSTALL 6.77 SQ SOD

110 W
STATE ST

108 W
STATE ST

ALLEY 2 WEST

104 W
STATE ST

35 N 1ST ST

20 W STATE ST

ALLEY 1 WEST

25 N 1ST ST

EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- INLET PROTECTION
- SOD
- LOW MOW GRASS
- TYPE 1 SEED

HORZ. 0 20 40
SCALE FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
EROSION CONTROL SHEETS

SHEET
CE.02

CENTER ST
104B N CENTER ST
104 N CENTER ST
105 N CENTER ST
606+00
605+00
604+00
603+00
ALLEY 1 WEST
15 W STATE ST
13 W STATE ST
1-3 W STATE ST
N. CENTER ST.
101 N CENTER ST
16 E STATE ST
ALLEY 1 EAST
100 N 1ST AVE
28 N 1ST AVE
17 E STATE ST
9-11 E STATE ST
7 1/2 E STATE ST
31 N CENTER ST
24 N CENTER ST
27 N CENTER ST
25 N CENTER ST
23 N CENTER ST
22 N
19 N
STATE ST.
INSTALL 0.52 SQ SOD
INSTALL 3.93 SQ SOD
INSTALL 2.69 SQ SOD
INSTALL 0.96 SQ SOD
INSTALL 8.50 SQ SOD
INSTALL LOW MOW GRASS
INSTALL SEEDING (TYPE 1)
SB9
SB10
SB11
SB12
SB13
SB14
SB15
INT - 24
INT - 25
MH - 6
MH - 7
INT - 26
INT - 27
INT - 28
INT - 29
INT - 30
INT - 31
INT - 32
INT - 33
INT - 34
935
936
934
933
22+00
23+00
24+00
25+00
26+00
27+00
28+00

EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- INLET PROTECTION
- SOD
- LOW MOW GRASS
- TYPE 1 SEED

HORZ. SCALE 0 20 40 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
EROSION CONTROL SHEETS

SHEET CE.03

106 N 2ND AVE

103 N 2ND AVE

N. 1ST AVE.

N. 2ND AVE.

102 E
STATE ST

132 E
STATE ST

STATE ST.

INSTALL 13.22 SQ SOD

MH - 8

MH - 9

MH - 10

MH - 11

INT - 33

INT - 34

INT - 35

INT - 36

INT - 37

INT - 38

INT - 39

INT - 40

INT - 41

INT - 42

INT - 43

INT - 44

INT - 45

INT - 46

INT - 47

INT - 48

SB16

SB17

SB18

SB19

706+00

705+00

704+50

704+00

703+00

805+00

804+50

804+00

803+00

28+00

29+00

30+00

31+00

32+00

33+00

34+00

932

933

934

28 N 1ST AVE

31 N 1ST AVE

27 N 1ST AVE

26 N
1ST AVE

107 E
STATE ST

ALLEY 2 EAST

119 E
STATE ST

134#2 E
MAIN ST

129 E
STATE ST

201 E
STATE ST

INSTALL 12.79 SQ SOD

INSTALL 3.17 SQ SOD

INSTALL 1.04 SQ SOD

INSTALL 0.63 SQ SOD

INSTALL 3.55 SQ SOD

EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- INLET PROTECTION
- SOD
- LOW MOW GRASS
- TYPE 1 SEED

HORZ. SCALE 0 20 40 FEET

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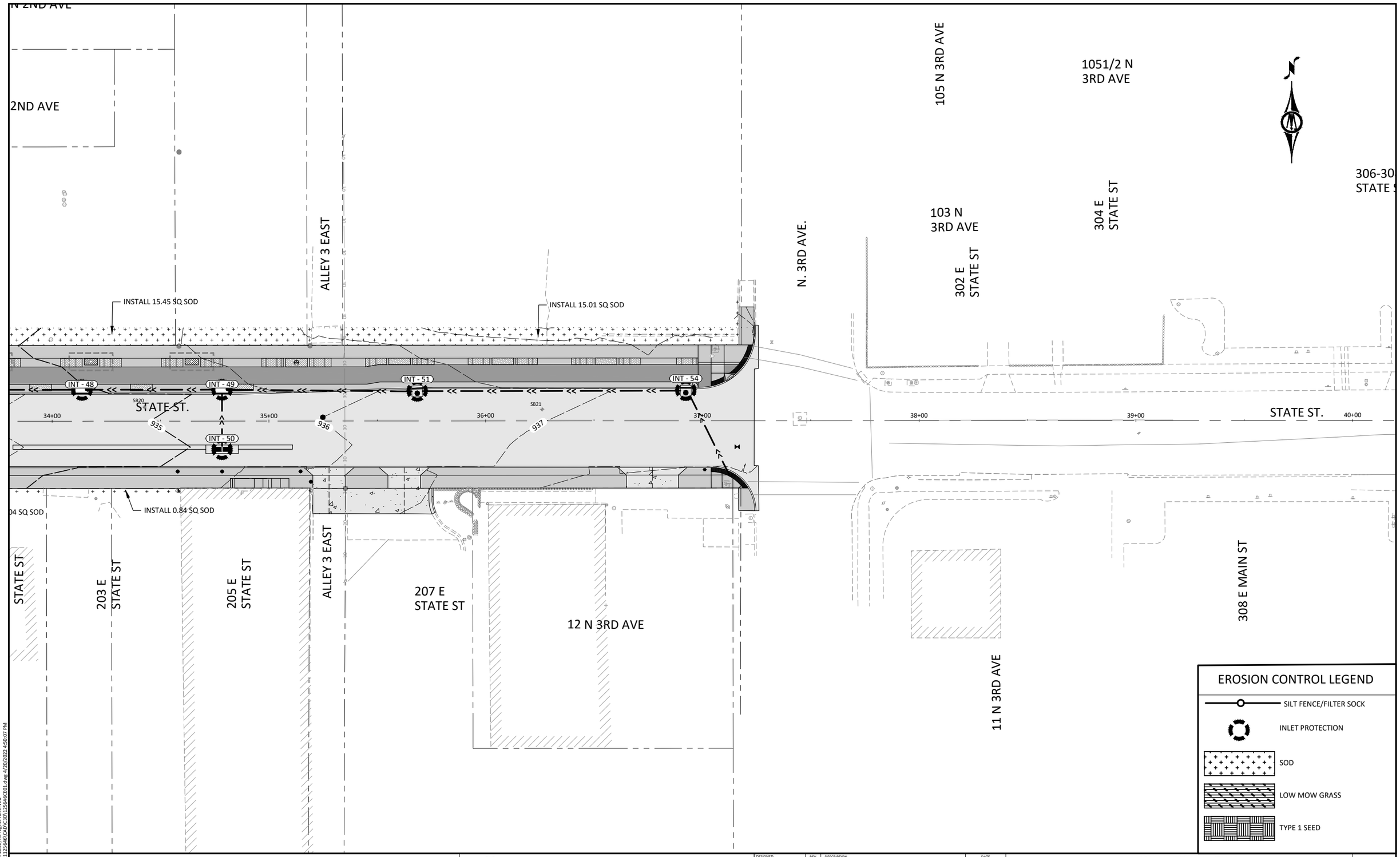
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
EROSION CONTROL SHEETS

SHEET
CE.04



EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- INLET PROTECTION
- SOD
- LOW MOW GRASS
- TYPE 1 SEED

HORZ. SCALE 0 20 40 FEET

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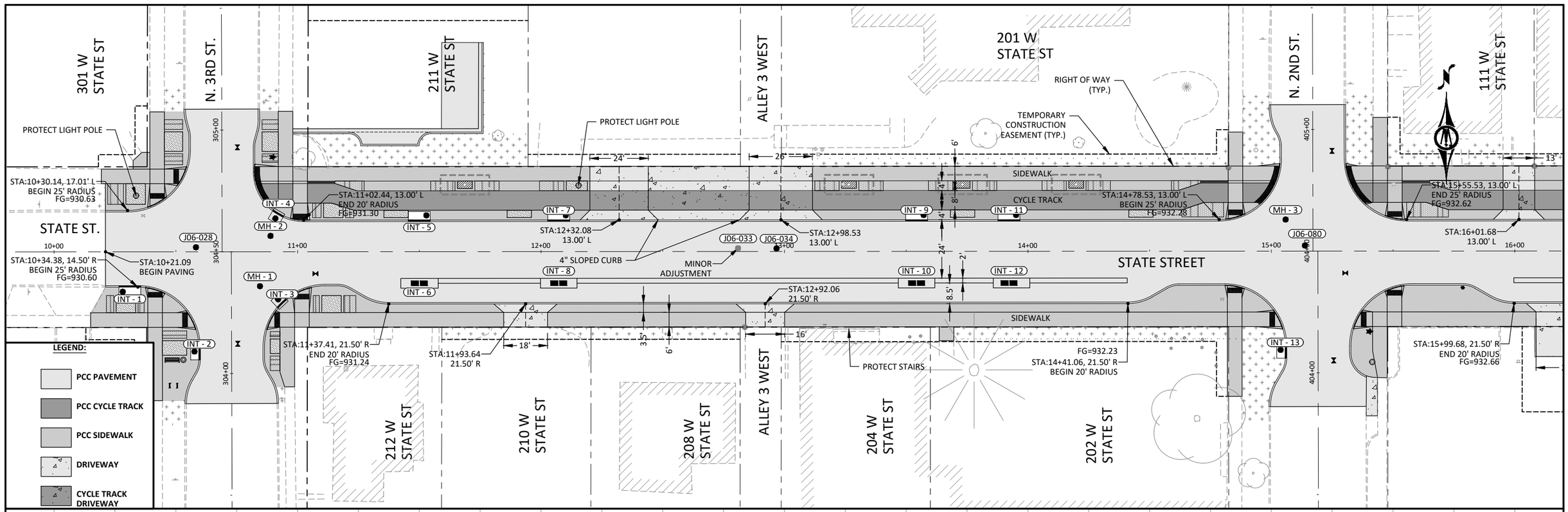
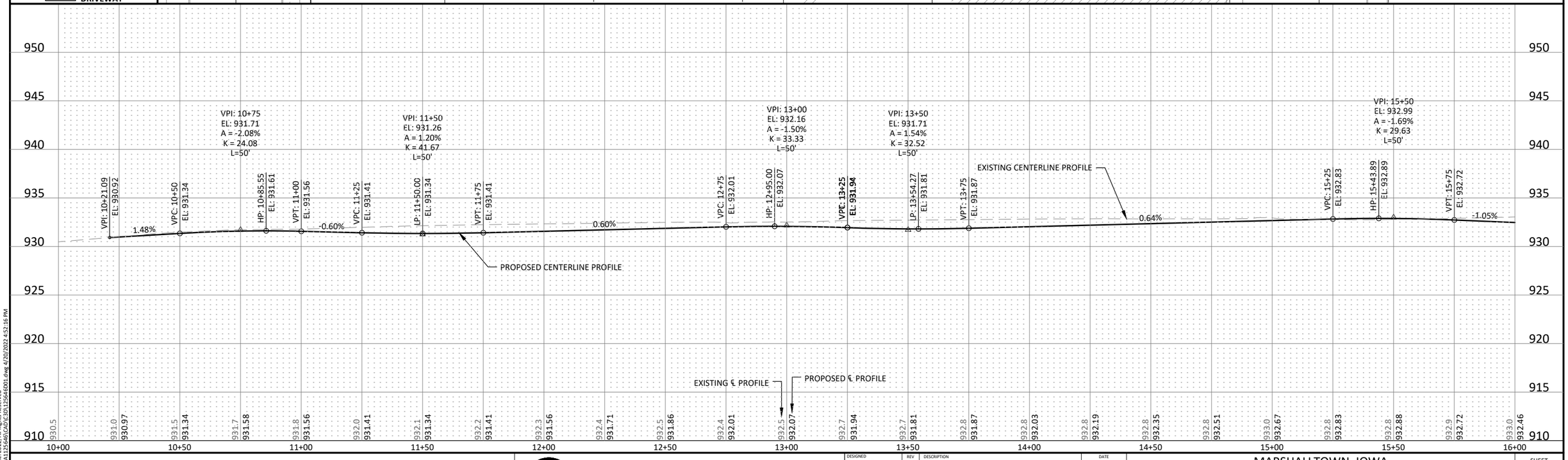
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
EROSION CONTROL SHEETS

SHEET
CE.05





HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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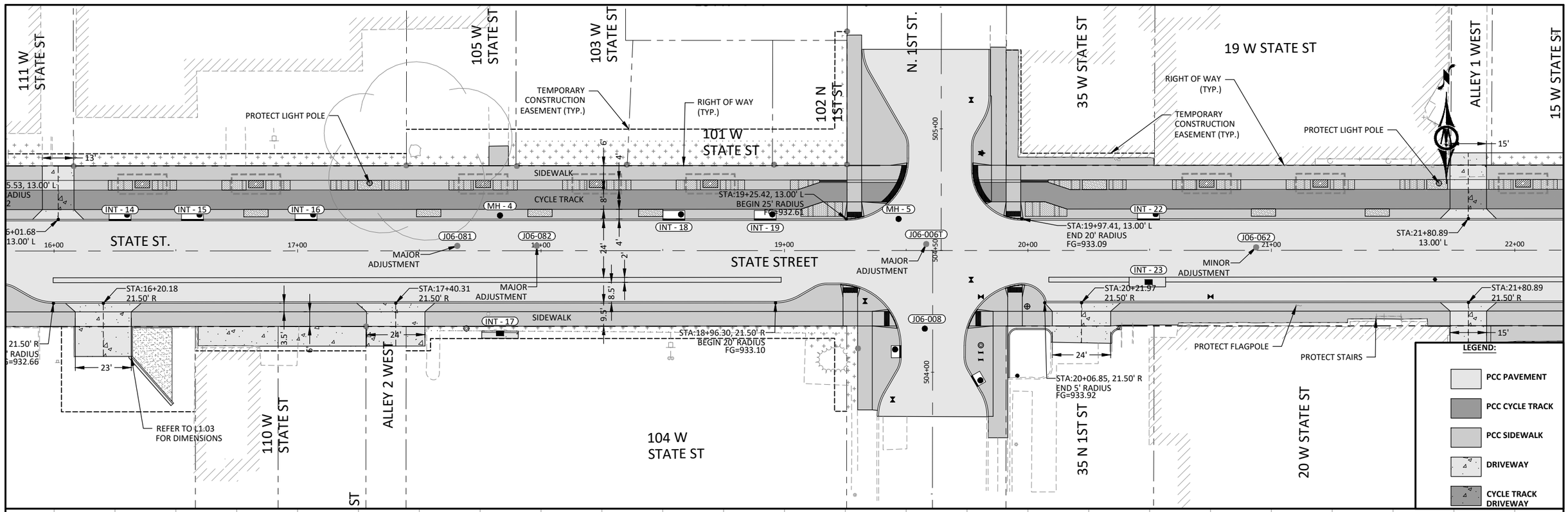
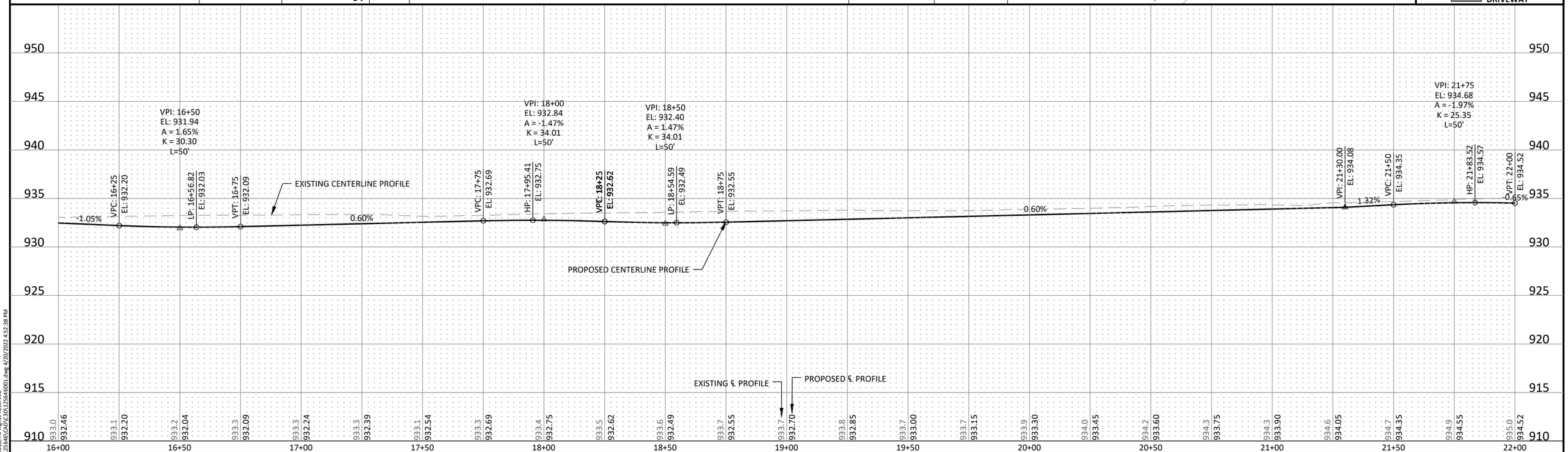
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - STATE STREET

SHEET D.01





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HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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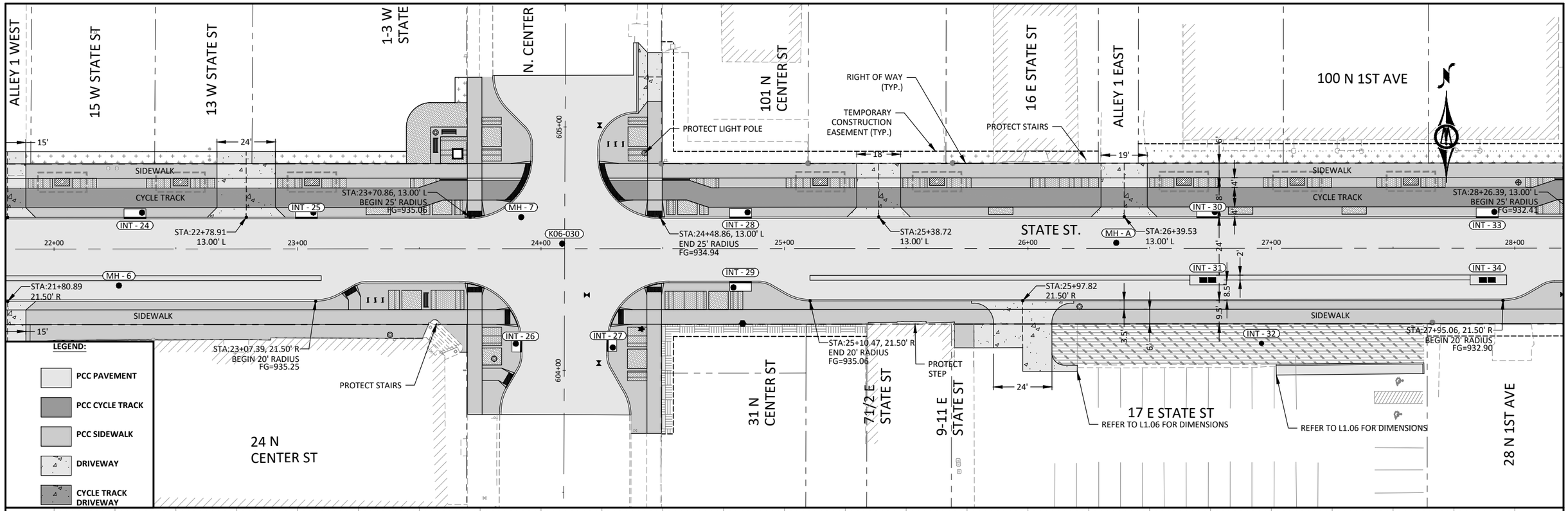
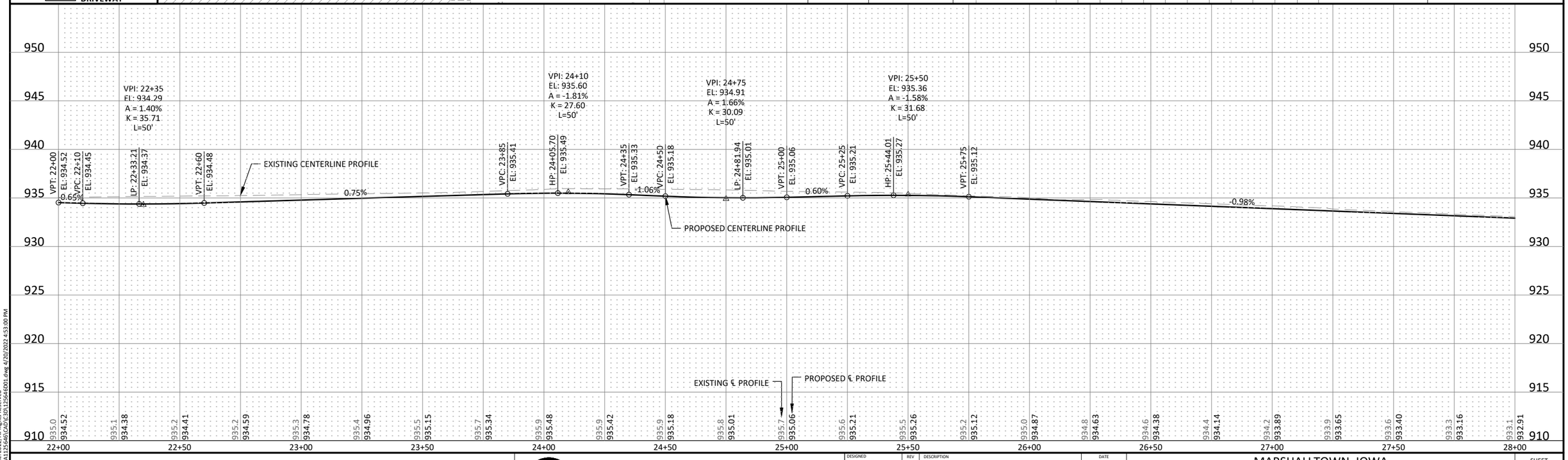
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - STATE STREET

SHEET D.02





HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - STATE STREET

SHEET D.03

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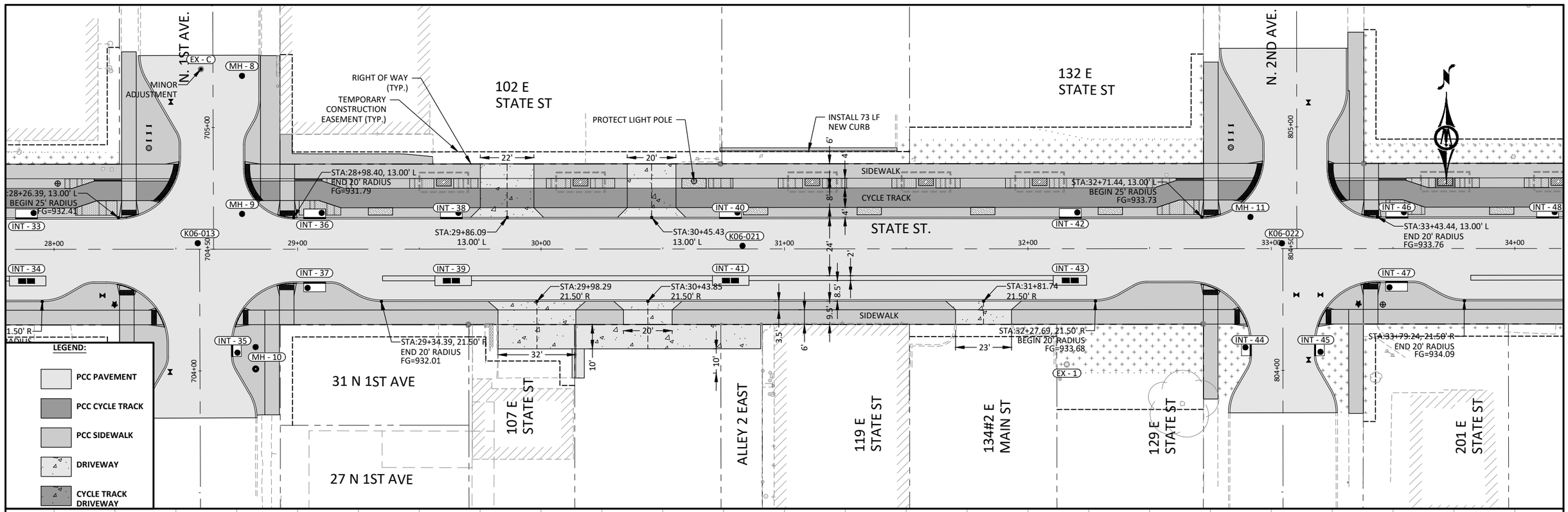

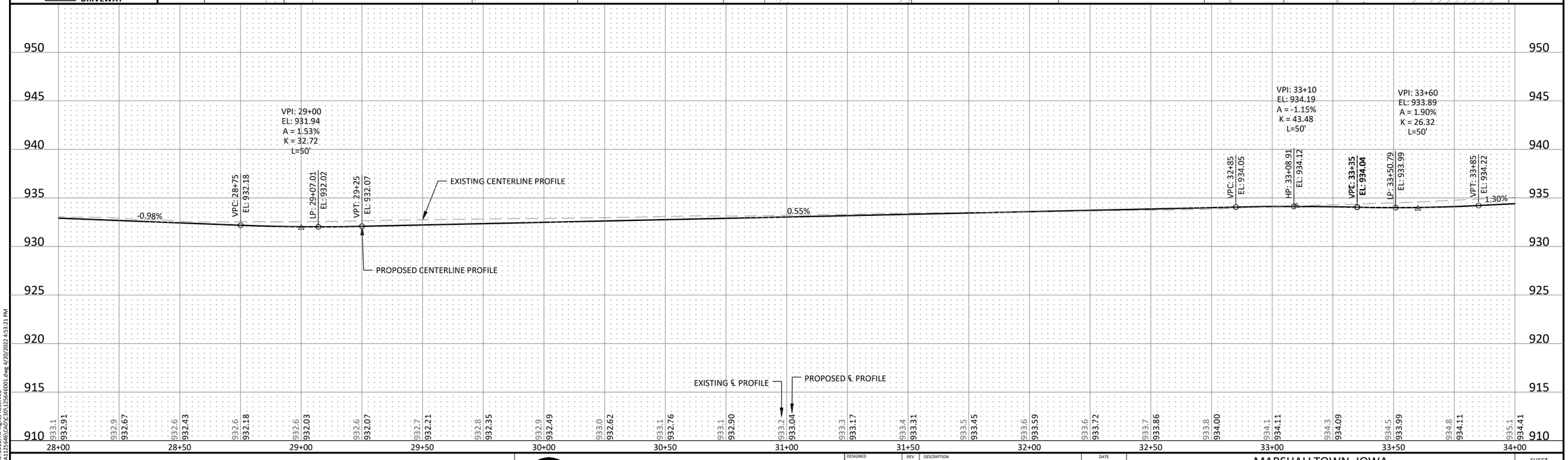

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - STATE STREET

SHEET D.04

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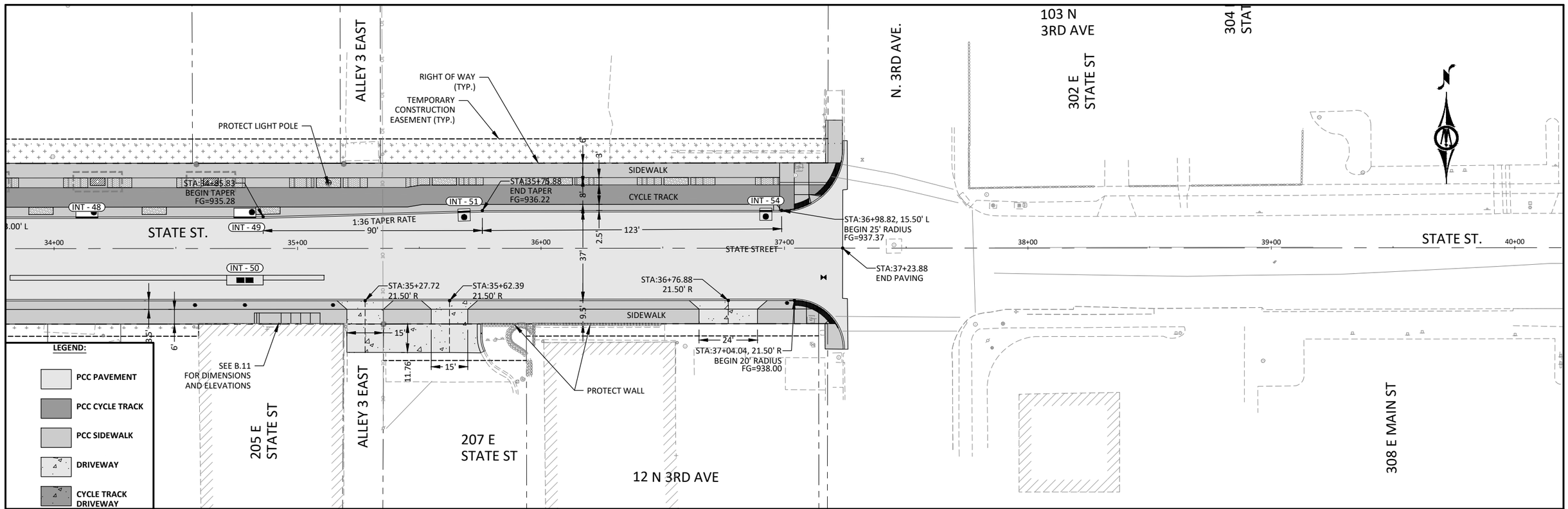

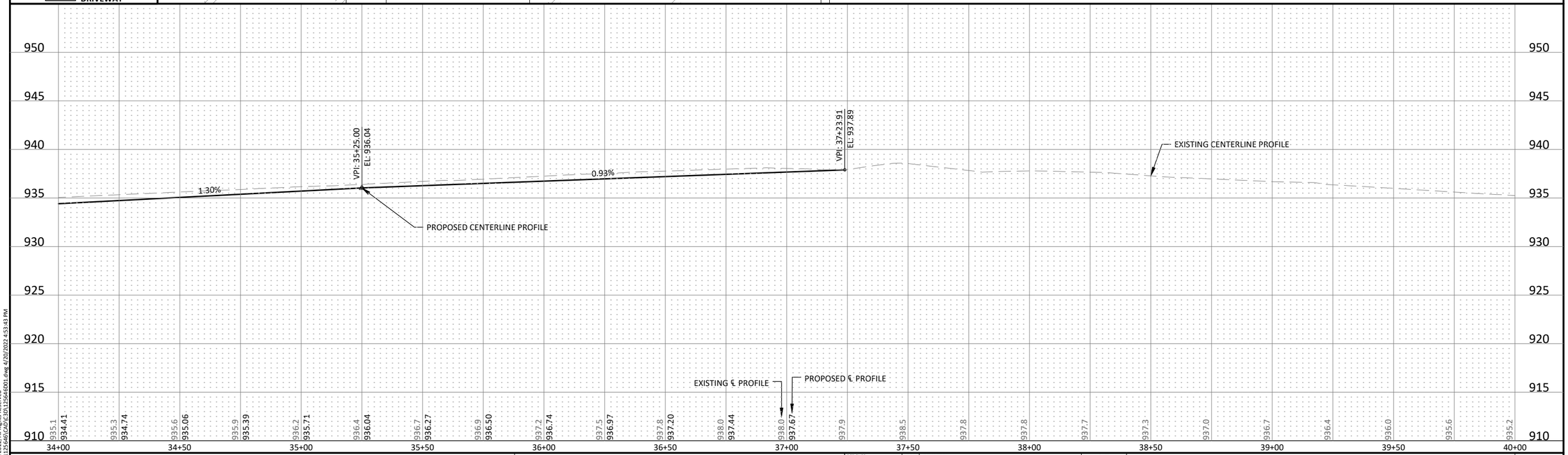

HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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PLAN & PROFILE - STATE STREET

SHEET D.05

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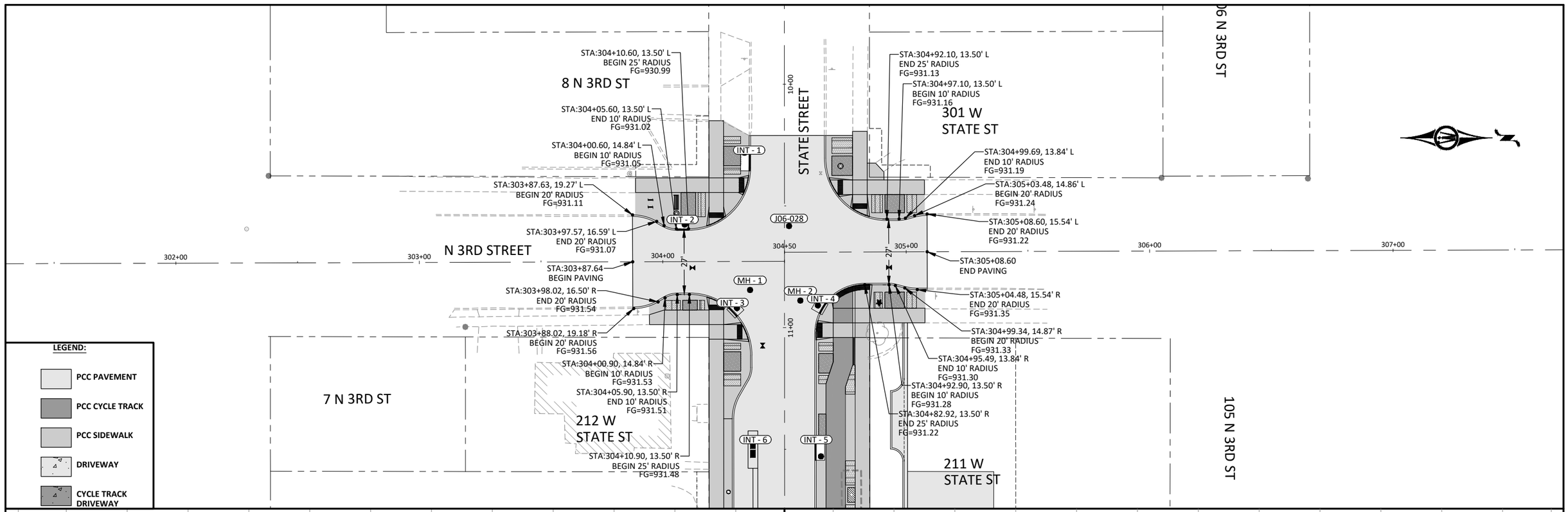
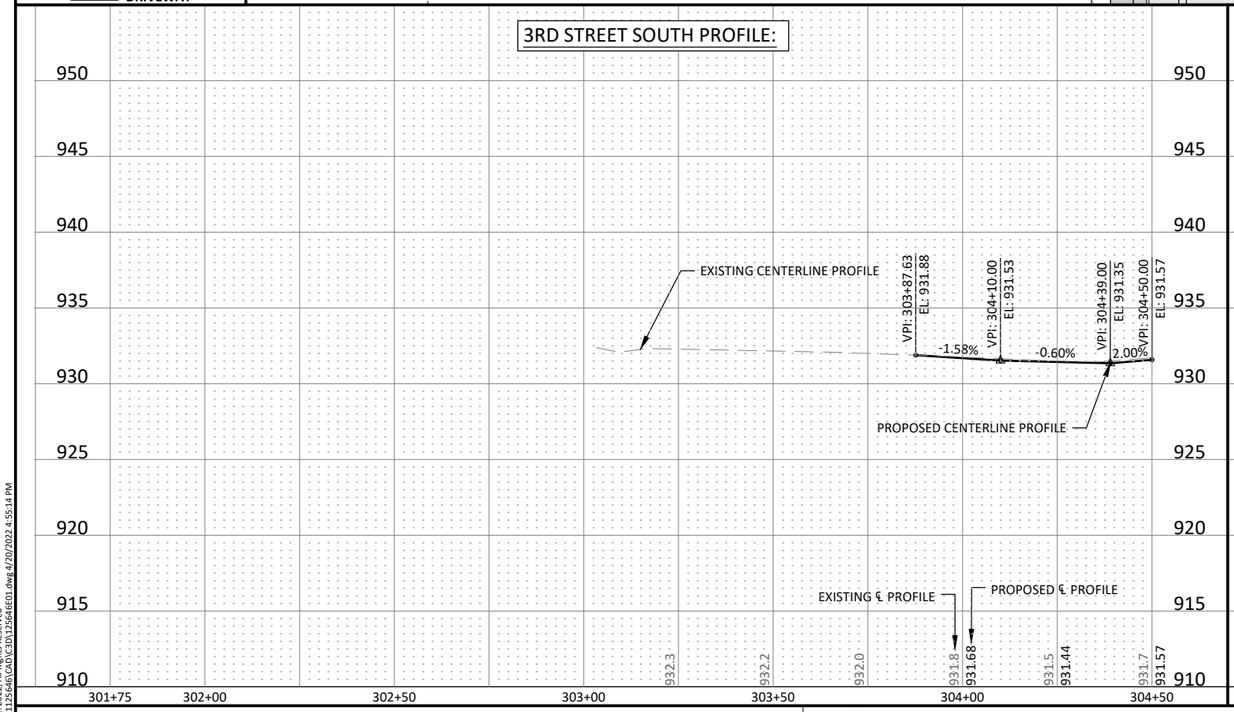


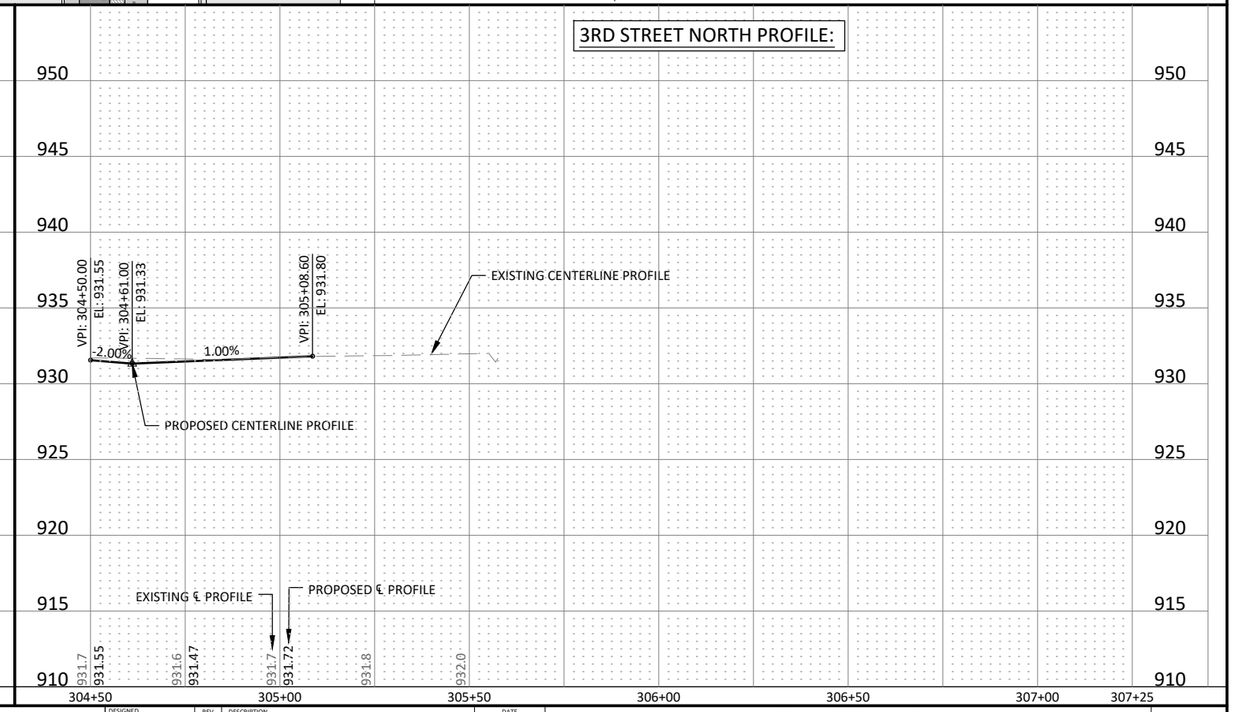
LEGEND:

- PCC PAVEMENT
- PCC CYCLE TRACK
- PCC SIDEWALK
- DRIVEWAY
- CYCLE TRACK DRIVEWAY

3RD STREET SOUTH PROFILE:



3RD STREET NORTH PROFILE:



HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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CLIENT PROJ. NO. 0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - N. 3RD STREET

SHEET E.01

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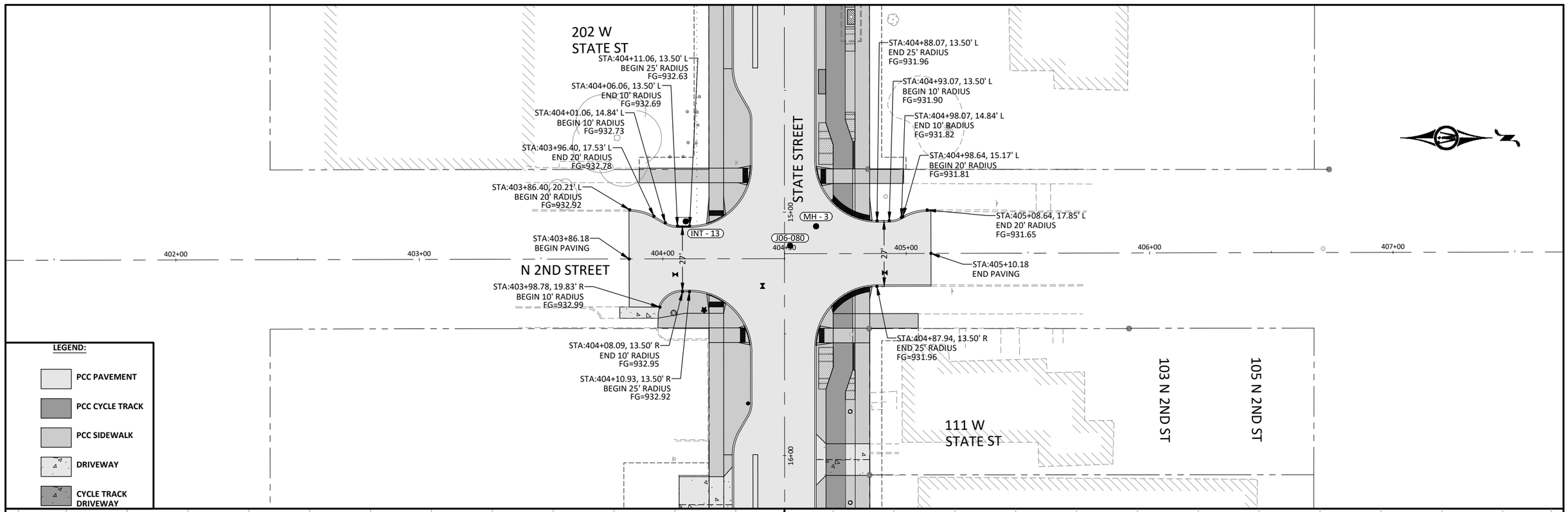

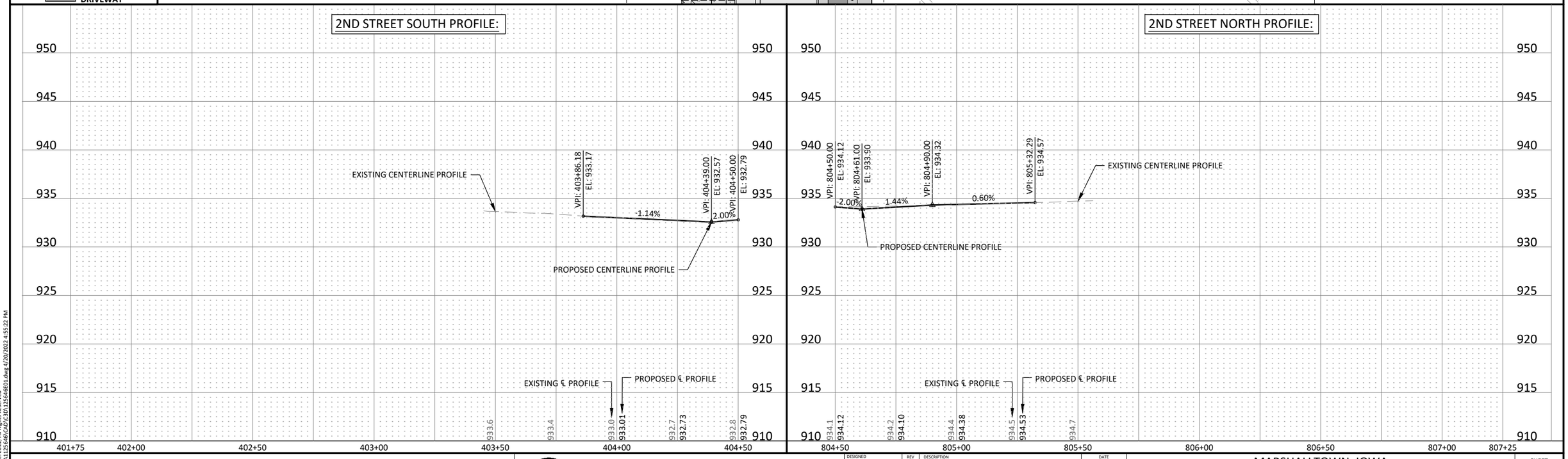

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - N. 2ND STREET

SHEET
E.02

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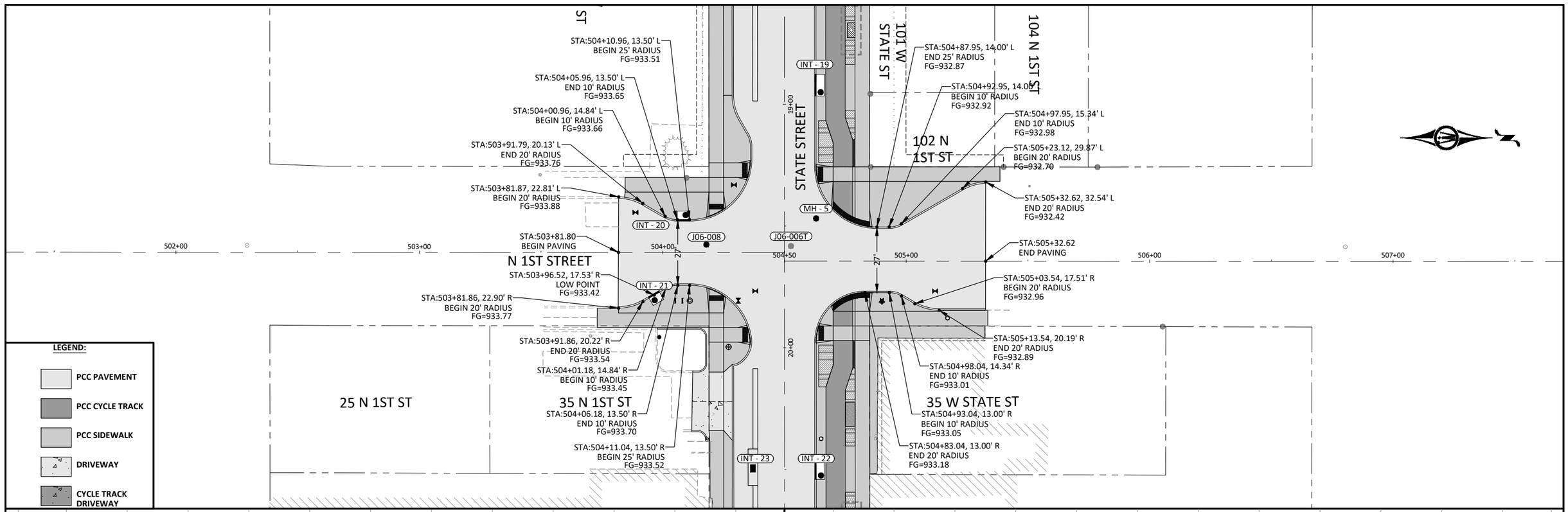

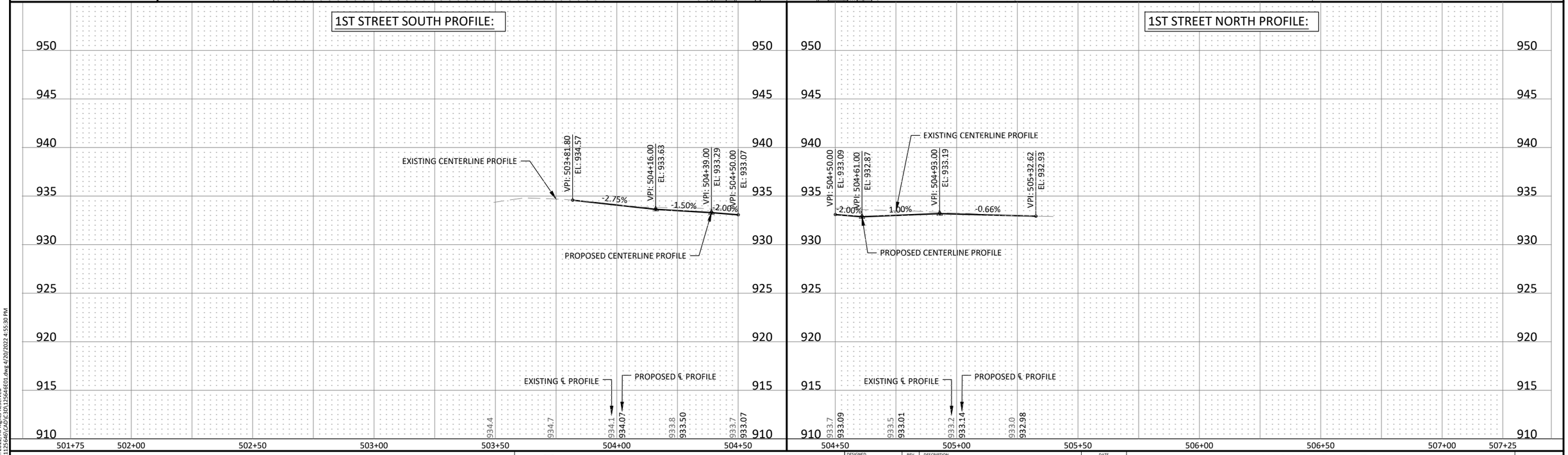

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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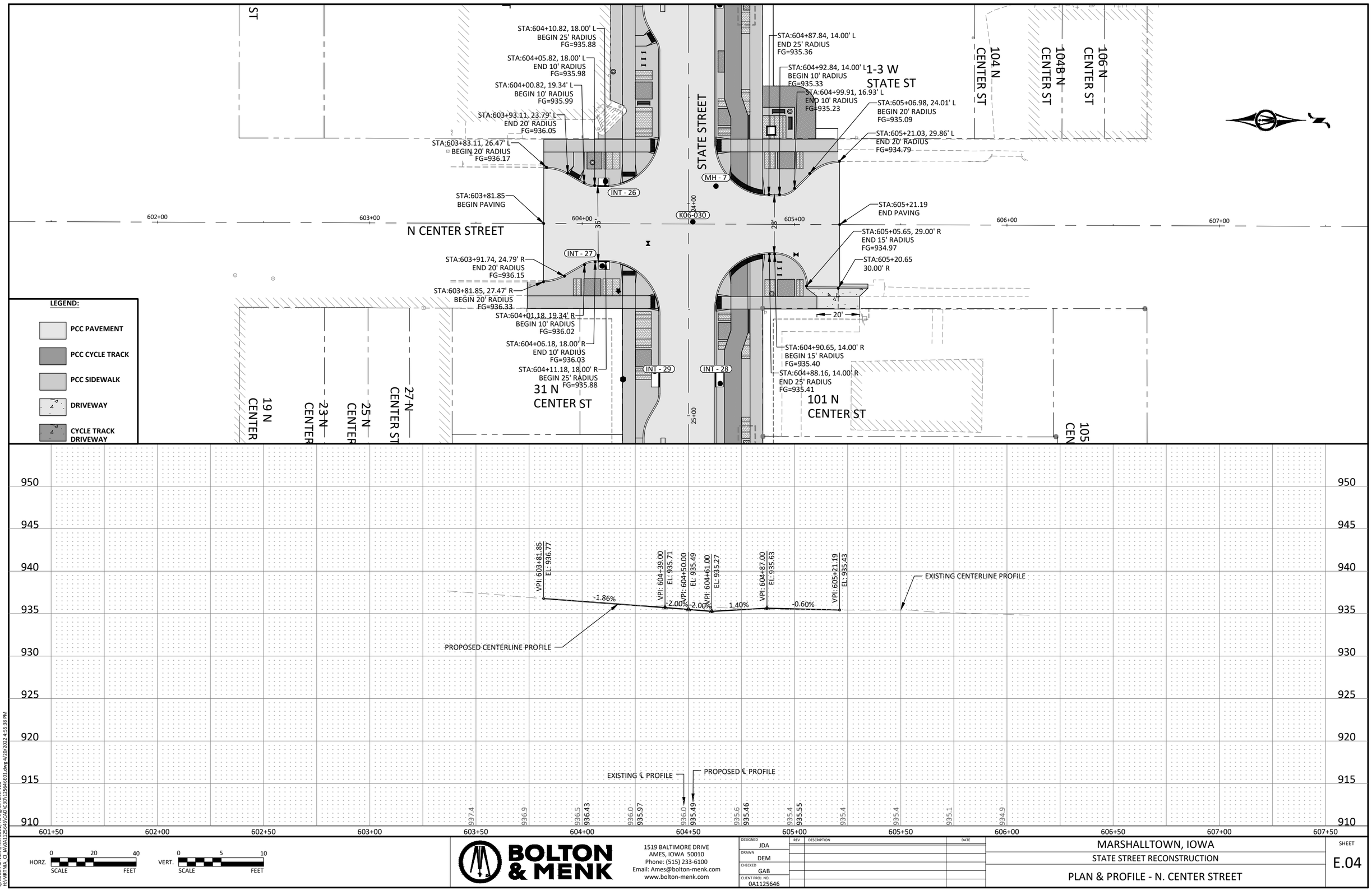
CHECKED GAB			
CLIENT PROJ. NO. 0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - N. 1ST STREET

SHEET E.03



HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	JDA
DRAWN	DEM
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - N. CENTER STREET

SHEET E.04

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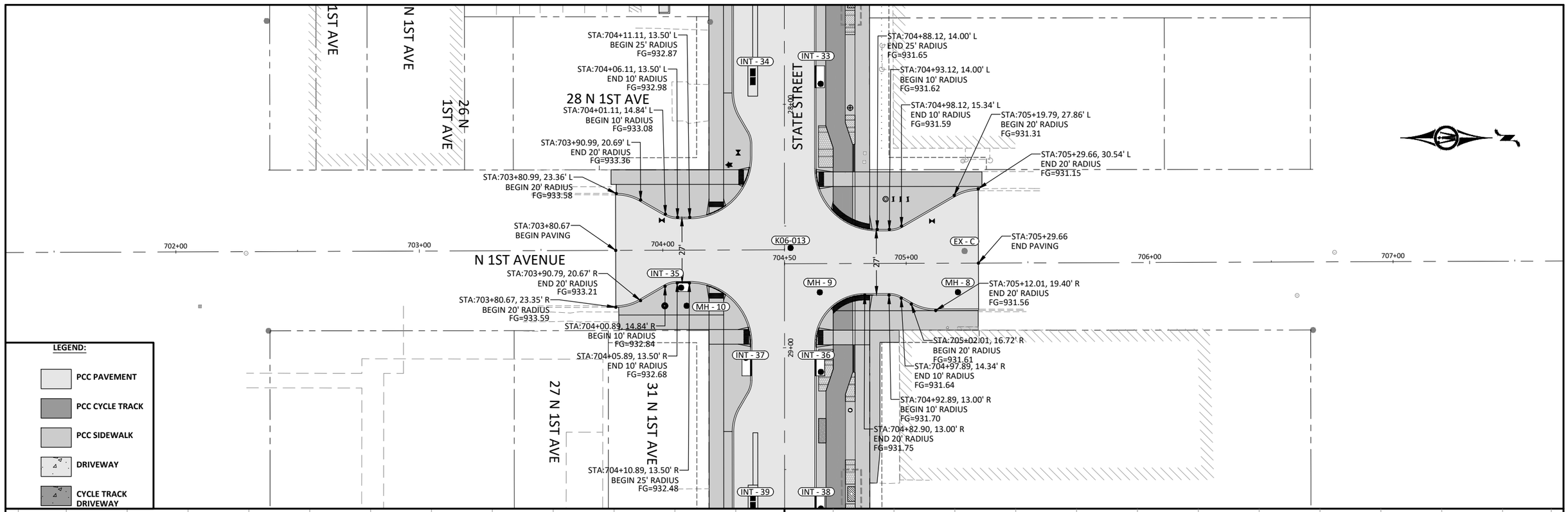

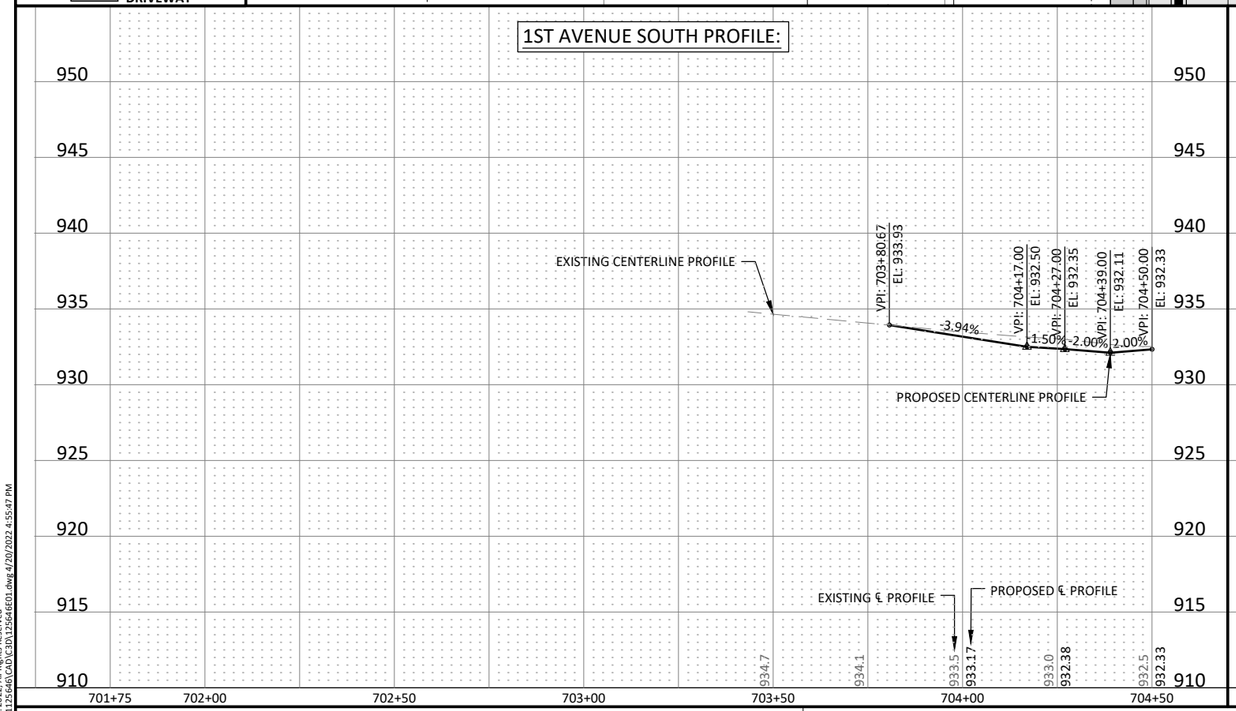

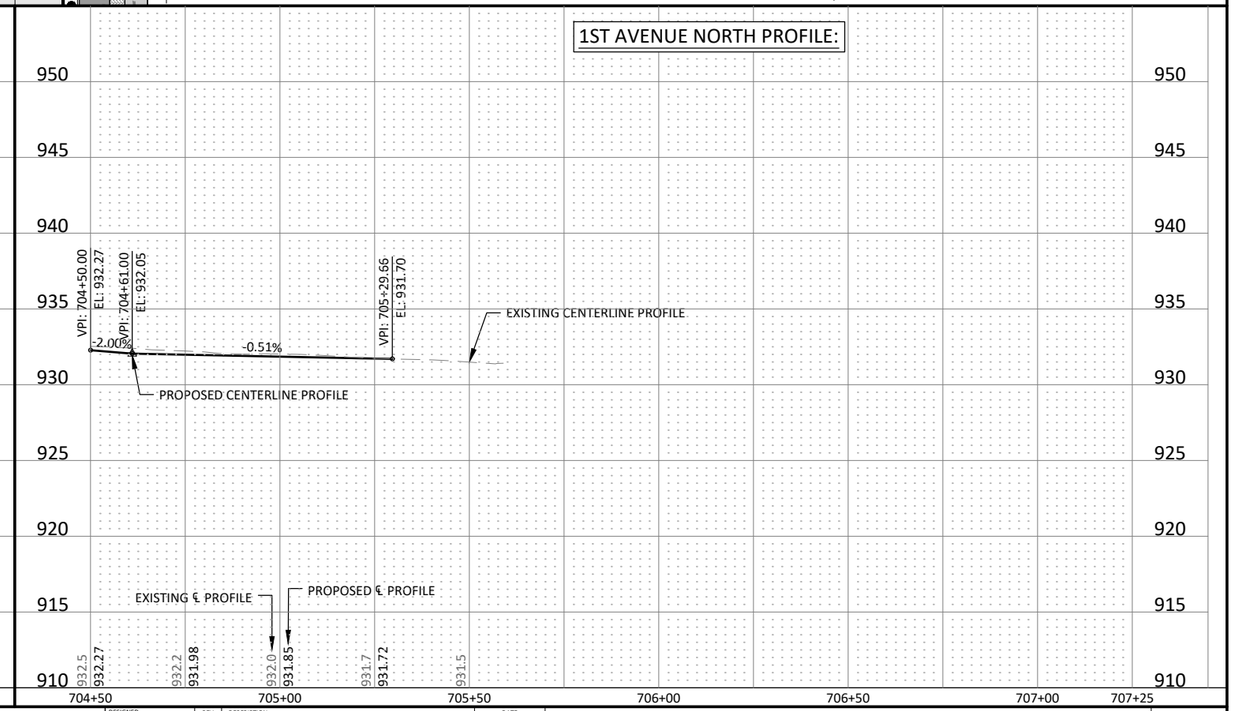

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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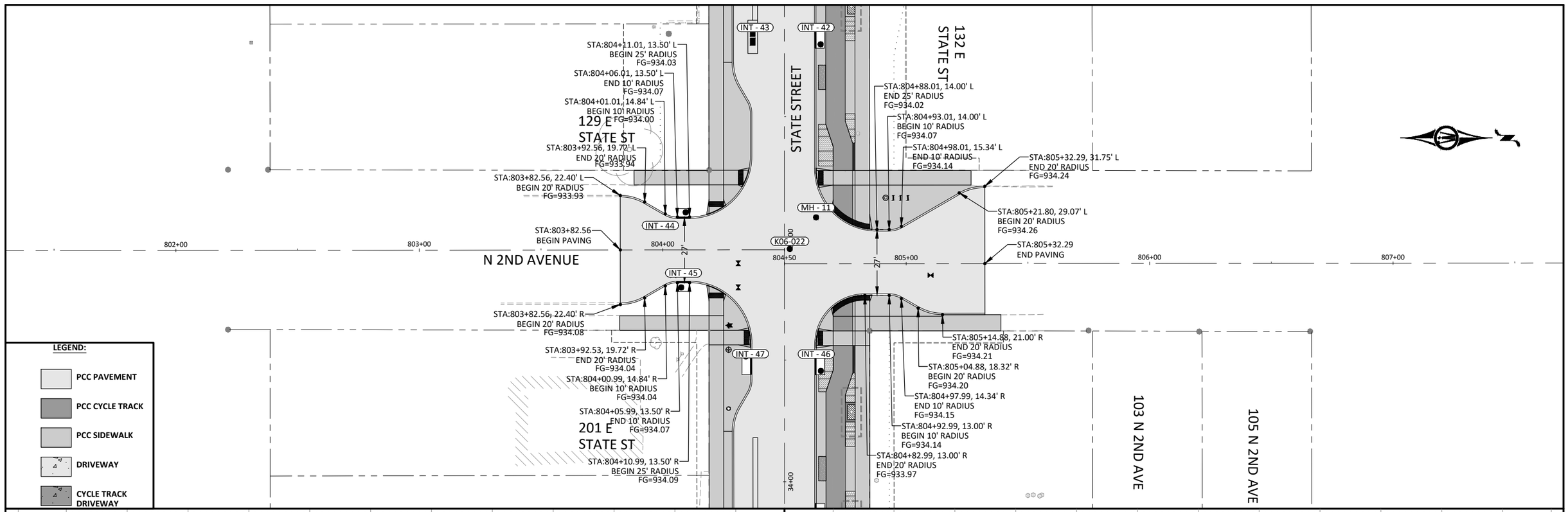
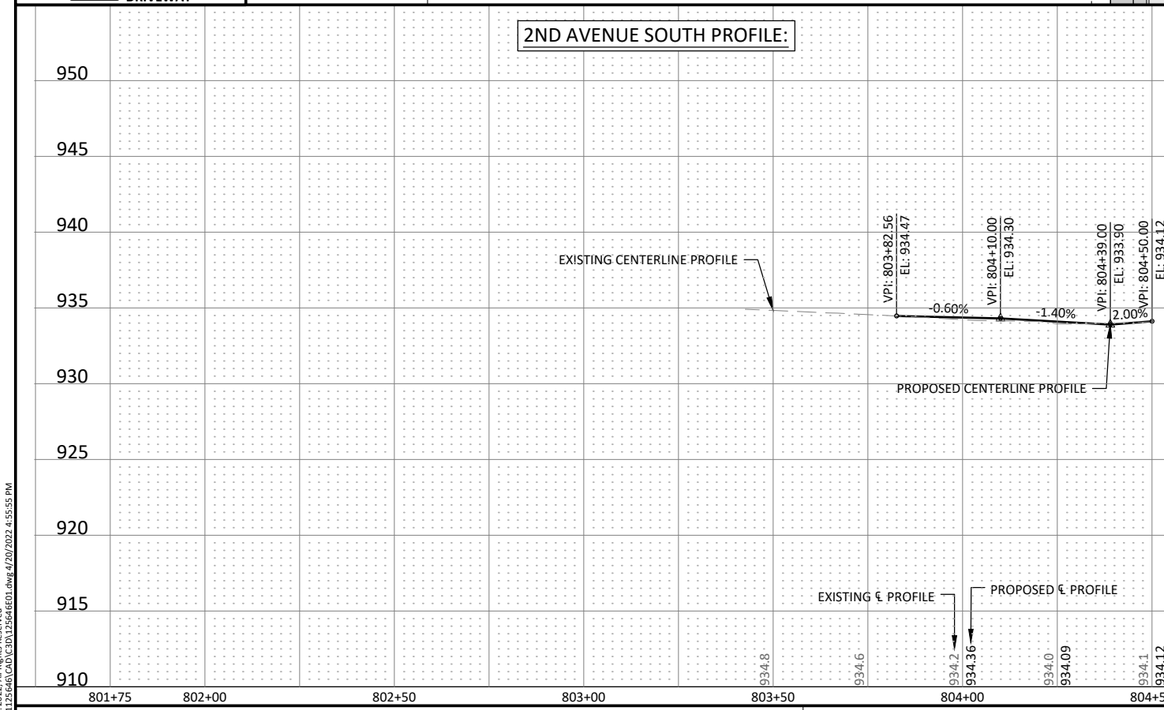
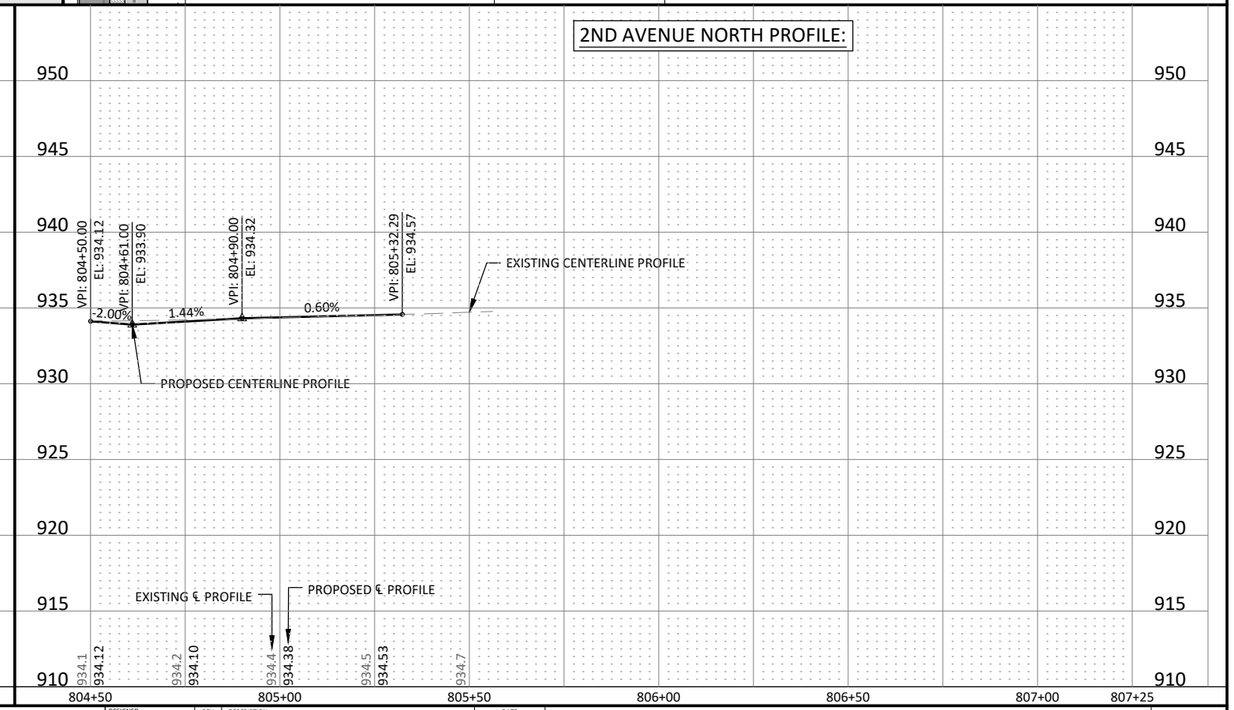
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - N. 1ST AVENUE

SHEET E.05







HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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DRAWN DEM			
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CLIENT PROJ. NO. 0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PLAN & PROFILE - N. 2ND AVENUE

SHEET E.06

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3RD ST

105 N 3RD ST

207-209 W STATE ST

103 N 2ND ST

301 W STATE ST

N. 3RD ST.

211 W STATE ST

ALLEY 3 WEST

201 W STATE ST

N. 2ND ST.

111 W STATE ST

306+00

305+00

304+00

303+00

406+00

405+00

404+00

403+00

STA:305+08.60
0.00'
END REMOVALS

HYDRANT REMOVAL

PROTECT TREE

PROTECT EXISTING LIGHT POLE

PROTECT EXISTING LIGHT POLE

ADJUSTMENT BY OTHERS

REMOVE IRRIGATION PIPING AND SPRINKLER HEADS

STA:405+10.18
0.00'
END REMOVALS

RELOCATION BY OTHERS

STA:10+21.10
0.00'
BEGIN REMOVALS

STATE ST.

10+00

11+00

12+00

13+00

14+00

15+00

16+00

PROTECT EXISTING MANHOLE

PROTECT EXISTING MANHOLE

8 N 3RD ST

212 W STATE ST

210 W STATE ST

208 W STATE ST

ALLEY 3 WEST

204 W STATE ST

202 W STATE ST

PROTECT STAIRS

FOOTING REMOVAL (OLD LIGHT POLE)

HYDRANT REMOVAL

PROTECT EXITING 16" WATERMAIN

STA:303+87.64
0.00'
BEGIN REMOVALS

STA:403+86.18
0.00'
BEGIN REMOVALS

7 N 3RD ST

LEGEND:

- GRAVEL REMOVAL
- PAVEMENT REMOVAL
- DRIVEWAY REMOVAL
- SIDEWALK REMOVAL
- ASPHALT/CONCRETE SAW CUT
- TEMPORARY CONSTRUCTION EASEMENT
- PIPE REMOVAL
- SIGN REMOVAL
- UTILITY STRUCTURE REMOVAL

HORZ. SCALE 0 20 40 FEET

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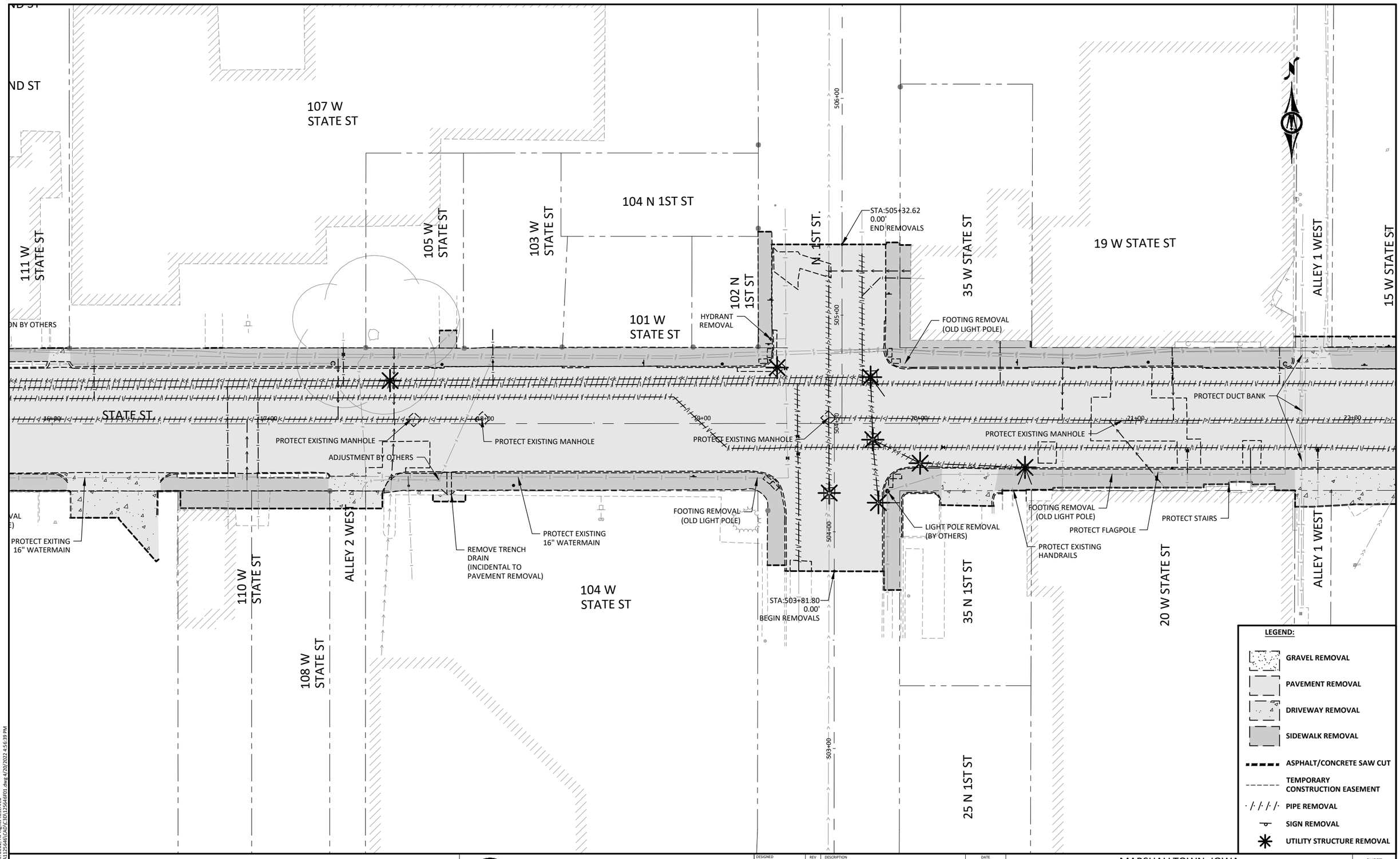
CLIENT PROJ. NO.			
0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REMOVAL SHEETS

SHEET F.01



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HORZ. SCALE 0 20 40 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REMOVAL SHEETS

SHEET
F.02

CENTER ST

104B N CENTER ST

104 N CENTER ST

105 N CENTER ST

606+00

ALLEY 1 WEST

15 W STATE ST

13 W STATE ST

1-3 W STATE ST

N. CENTER ST.

STA:605+21.19
0.00'
END REMOVALS

101 N CENTER ST

16 E STATE ST

ALLEY 1 EAST

100 N 1ST AVE

PROTECT EXIS

ROCK REMOVAL
(INCIDENTAL TO EXCAVATION)

ADJUSTMENT BY OTHERS

FOOTING REMOVAL
(OLD LIGHT POLE)

PROTECT STAIRS

ADJUSTMENT BY OTHERS

ADJUSTMENT BY OTHERS

LIGHT POLE REMOVAL (BY OTHERS)

605+00

STATE ST.

23+00 23+00 24+00 25+00 26+00 27+00 28+00

ALLEY 1 WEST

PROTECT STAIRS

24 N CENTER ST

STA:603+80.85
0.00'
BEGIN REMOVALS

604+00

HYDRANT REMOVAL

31 N CENTER ST

71/2 E STATE ST

PROTECT STEP

9-11 E STATE ST

ROCK REMOVAL
(INCIDENTAL TO EXCAVATION)

17 E STATE ST

PAVEMENT MARKING REMOVAL

HYDRANT REMOVAL

28 N 1ST AVE

27 N CENTER ST

PAVEMENT MARKING REMOVAL

25 N CENTER ST

23 N CENTER ST

603+00

22 N

19 N

LEGEND:

- GRAVEL REMOVAL
- PAVEMENT REMOVAL
- DRIVEWAY REMOVAL
- SIDEWALK REMOVAL
- ASPHALT/CONCRETE SAW CUT
- TEMPORARY CONSTRUCTION EASEMENT
- PIPE REMOVAL
- SIGN REMOVAL
- UTILITY STRUCTURE REMOVAL

HORZ. SCALE 0 20 40 FEET

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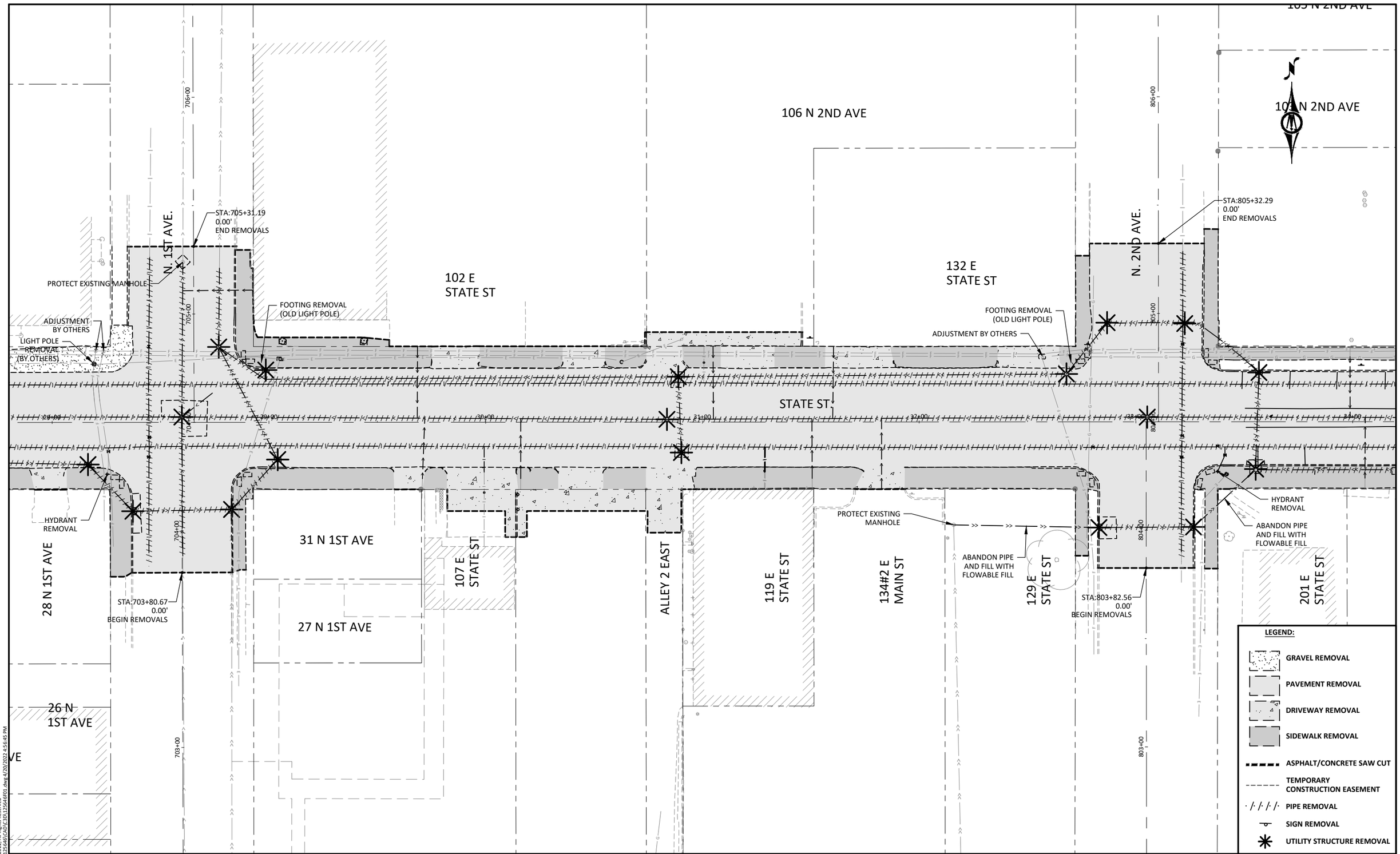
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REMOVAL SHEETS

SHEET F.03



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HORZ. SCALE 0 20 40 FEET

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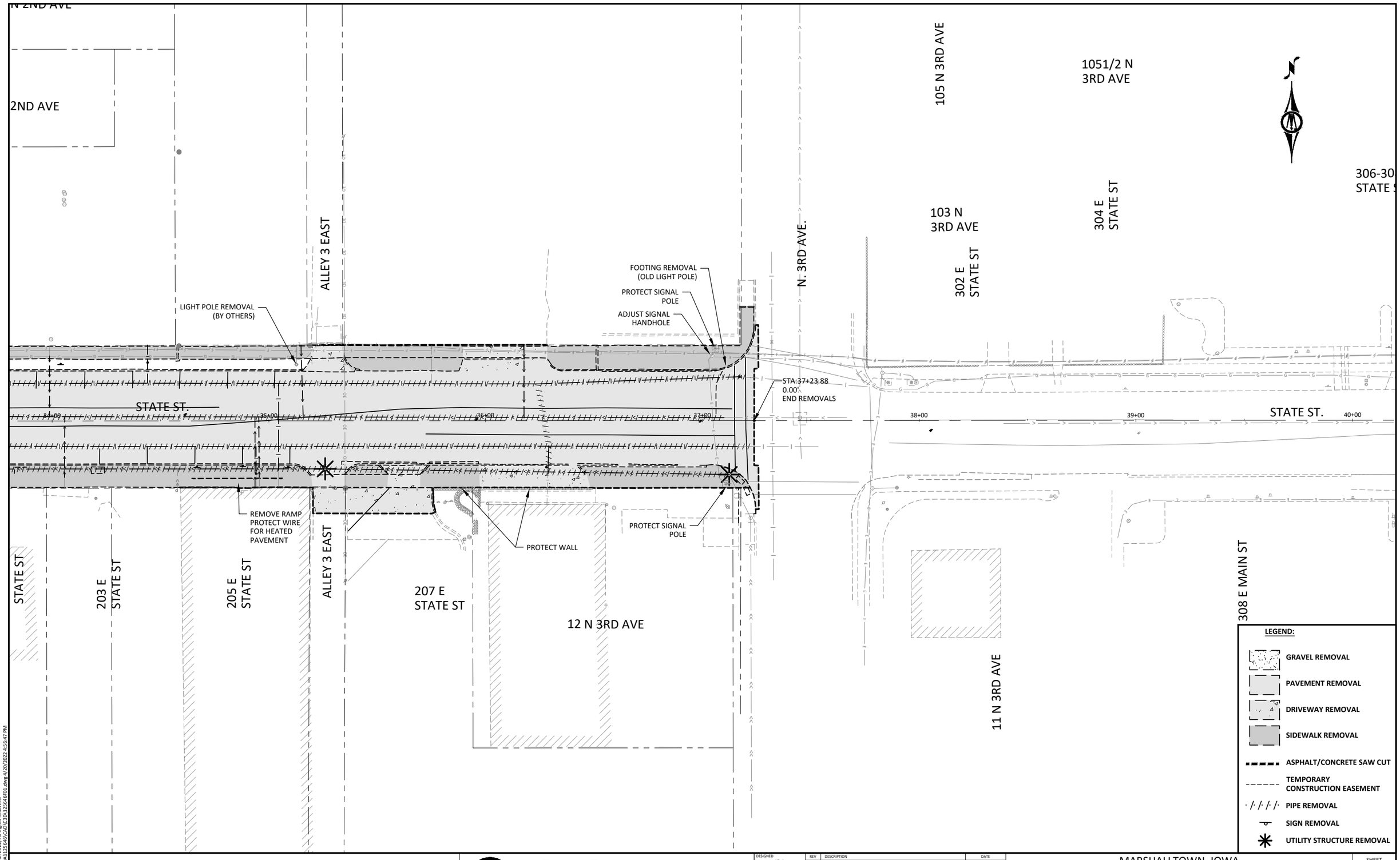
REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REMOVAL SHEETS

SHEET
F.04



HORZ. SCALE 0 20 40 FEET

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CLIENT PROJ. NO.			
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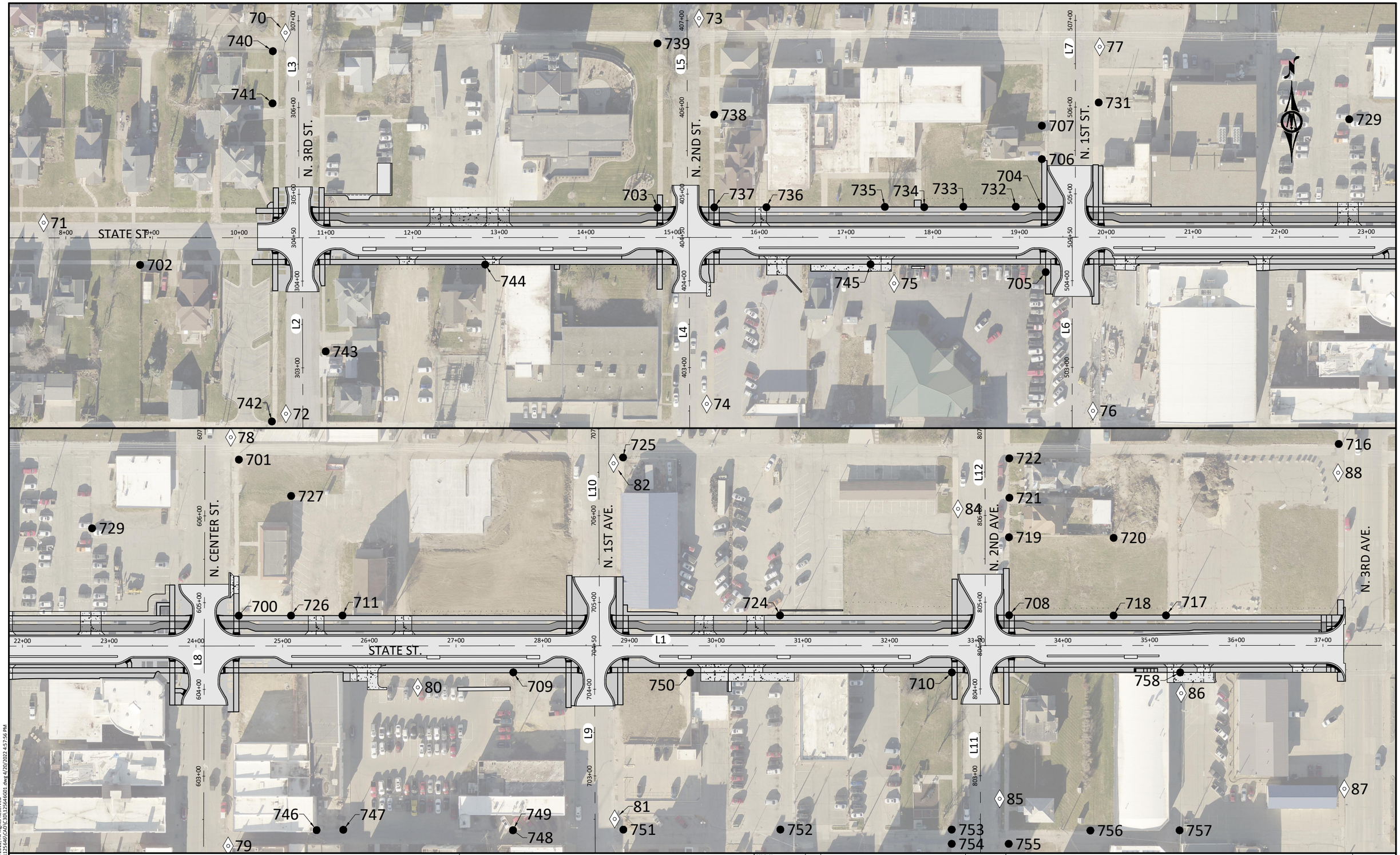
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REMOVAL SHEETS

SHEET F.05



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HORZ. 0 50 100 SCALE FEET

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JDA			
DRAWN DEM			
CHECKED GAB			
CLIENT PROJ. NO. 0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REFERENCES AND BENCHMARKS

SHEET G.01

125646 STATE STREET

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L1	5+00	53+73.08	4,873.08'				7,856,010.88	19,471,936.95	7,856,013.71	19,476,810.03	N89° 58' 00"E

N. 3RD STREET SOUTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L2	300+00	304+50	450.00'				7,855,561.21	19,472,511.11	7,856,011.21	19,472,509.73	N0° 10' 35"W

N. 3RD STREET NORTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L3	304+50	309+00	450.00'				7,856,011.21	19,472,505.97	7,856,461.20	19,472,504.59	N0° 10' 35"W

N. 2ND STREET SOUTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L4	400+00	404+50	450.00'				7,855,561.47	19,472,957.07	7,856,011.47	19,472,956.04	N0° 07' 48"W

N. 2ND STREET NORTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L5	404+50	409+00	450.00'				7,856,011.47	19,472,954.04	7,856,461.47	19,472,953.02	N0° 07' 48"W

N. 1ST STREET SOUTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L6	500+00	504+50	450.00'				7,855,561.73	19,473,397.56	7,856,011.73	19,473,397.82	N0° 01' 59"E

N. 1ST STREET NORTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L7	504+50	509+00	450.00'				7,856,011.73	19,473,401.32	7,856,461.73	19,473,401.58	N0° 01' 59"E

N. CENTER STREET

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L8	600+00	609+00	900.00'				7,855,561.99	19,473,845.03	7,856,461.98	19,473,848.27	N0° 12' 24"E

N. 1ST AVENUE SOUTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L9	700+00	704+50	450.00'				7,855,562.25	19,474,298.28	7,856,012.25	19,474,296.69	N0° 12' 08"W

N. 1ST AVENUE NORTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L10	704+50	709+00	450.00'				7,856,012.25	19,474,302.45	7,856,462.25	19,474,300.86	N0° 12' 08"W

N. 2ND AVENUE SOUTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L11	800+00	804+50	450.00'				7,855,562.51	19,474,742.08	7,856,012.51	19,474,741.65	N0° 03' 17"W

N. 2ND AVENUE NORTH

NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START NORTHING	START EASTING	END NORTHING	END EASTING	LINE / CHORD DIRECTION
L12	804+50	809+00	450.00'				7,856,012.51	19,474,747.40	7,856,462.51	19,474,746.97	N0° 03' 17"W

CONTROL POINT DATA

POINT NUMBER	RAW DESCRIPTION	ELEVATION	NORTH	EAST
70	VFCP /CUT X BOC	932.185	7,856,247.56	19,472,490.31
71	VFCP /CUT X BOC	926.240	7,856,028.55	19,472,211.30
72	VFCP /CUT X BOC	932.565	7,855,808.23	19,472,490.81
73	VFCP /CUT X BOC	929.450	7,856,264.17	19,472,967.25
74	VFCP /CUT X BOC	935.155	7,855,819.54	19,472,976.19
75	VFCP /CUT X BOC	934.500	7,855,958.55	19,473,192.26
76	VFCP /CUT X LP BASE	936.930	7,855,811.53	19,473,421.57
77	VFCP /CUT X BOC	932.060	7,856,231.28	19,473,429.37
78	VFCP /CUT X BOC	933.590	7,856,252.68	19,473,877.13
79	VFCP /CUT X BOC	939.490	7,855,781.52	19,473,874.17
80	VFCP /CUT X BOC	935.730	7,855,964.28	19,474,092.86
81	VFCP /CUT X BOC	936.885	7,855,812.55	19,474,319.95
82	VFCP /CUT X EAST JOINT COR MHST	929.595	7,856,222.55	19,474,318.67
84	VFCP /CUT X CGLP	935.335	7,856,170.10	19,474,715.94
85	VFCP /CUT X BOC	935.510	7,855,835.90	19,474,764.03
86	VFCP /CUT X	936.890	7,855,957.57	19,474,973.34
87	VFCP /CUT X BOC	939.040	7,855,847.42	19,475,161.57
88	VFCP /CUT X BOC	935.640	7,856,211.78	19,475,154.34

MONUMENT PRESERVATION

POINT NUMBER	RAW DESCRIPTION	ELEVATION	NORTHING	EASTING
700	LMFD /CUT X	935.952	7,856,046.97	1947,3886.36
701	LMFD /CUT X	933.873	7,856,226.93	1947,3886.51
702	LMFR /5/8IN RBR OPC 17162	927.856	7,855,979.86	1947,2322.62
703	LMFR /5/8IN RBR CHECK AND LOOK AT WITH TOPO	932.778	7,856,045.80	1947,2919.30
704	LMFR /1/2IN RBR	933.174	7,856,047.08	1947,3362.64
705	LMFD /CUT X CHECK MIGHT BE CNT	934.111	7,855,971.52	1947,3367.16
706	LMFD /MAG NAIL	932.596	7,856,101.76	1947,3362.67
707	LMFR /5/8IN RBR	932.367	7,856,140.28	1947,3362.75
708	LMFD /MAG NAIL	934.452	7,856,047.48	1947,4774.93
709	LMFD /MAG NAIL	933.821	7,855,981.70	1947,4203.07
710	LMFD /CUT X	933.961	7,855,981.56	1947,4708.89
711	LMFD /CUT X	935.540	7,856,047.18	1947,4006.05
716	LMFD /MAG NAIL	934.650	7,856,244.90	1947,5155.13
717	LMFR /1/2IN RBR WITH BPC CHECK LOCATION BENT AND NEW DRIVE	936.266	7,856,047.36	1947,4955.91
718	LMFR /1/2IN RBR BPC	935.935	7,856,047.20	1947,4895.41
719	LMFR /1/2IN RBR	935.359	7,856,137.42	1947,4774.80
720	LMFR /1/2IN RBR BPC 22259 HARRIS	939.621	7,856,136.74	1947,4895.48
721	LMFR /1/2IN RBR BPC 22259 HARRIS	935.551	7,856,182.89	1947,4775.24
722	LMFR /1/2IN RBR BPC 22259 HARRIS	935.413	7,856,228.42	1947,4775.17
724	LMFR /5/8IN RBR	933.022	7,856,047.34	1947,4510.66
725	LMFR /5/8IN RBR	929.751	7,856,229.38	1947,4329.65
726	LMFR /1/2IN RBR YPC 12386	935.739	7,856,047.07	1947,3946.68
727	LMFP /1/2IN PIPE YPC 12386	934.453	7,856,185.03	1947,3946.82
729	LMFR /5/8IN RBR	935.578	7,856,147.73	1947,3717.19
731	LMFR /5/8IN RBR BENT	931.633	7,856,167.04	1947,3428.21
732	LMFR /1/2IN RBR BPC 22259 HARRIS	933.163	7,856,046.96	1947,3332.64
733	LMFR /1/2IN RBR BPC 22259 HARRIS	932.885	7,856,046.98	1947,3272.19
734	LMFR /1/2IN RBR	933.265	7,856,046.42	1947,3227.03
735	LMFR /1/2IN RBR BPC ILLEGIBLE	933.539	7,856,046.70	1947,3181.60
736	LMFR /1/2IN RBR	932.800	7,856,046.39	1947,3044.97
737	LMFR /1/2IN RBR	932.790	7,856,046.24	1947,2984.79
738	LMFP /1/2IN PIPE	931.318	7,856,153.00	1947,2984.77
739	LMFR /1/2IN RBR	930.068	7,856,235.16	1947,2919.38
740	LMFR /1/2IN RBR	932.797	7,856,226.22	1947,2475.69
741	LMFR /1/2IN RBR YPC 3017	932.444	7,856,166.08	1947,2475.42
742	LMFD /1/4IN IRON PIN	932.505	7,855,799.32	1947,2474.61
743	LMFP /1/2IN PIPE	931.887	7,855,880.12	1947,2536.67
744	LMFR /1/2IN RBR	932.411	7,855,980.26	1947,2720.66
745	LMFR /1/2IN RBR	933.158	7,855,980.54	1947,3165.10
746	LMFP /1/2IN PIPE CHECK	939.464	7,855,799.73	1947,3976.13
747	LMFD /MAG NAIL	939.201	7,855,800.11	1947,4006.98
748	LMFR /1/2IN RBR	938.512	7,855,799.64	1947,4202.66
749	LMFP /1/2IN PIPE	938.412	7,855,799.56	1947,4202.68
750	LMFD /MAG NAIL	933.056	7,855,981.35	1947,4407.08
751	LMFR /1/2IN RBR CHECK	937.739	7,855,800.34	1947,4329.99
752	LMFD /MAG NAIL	936.702	7,855,800.43	1947,4511.11
753	LMFD /CUT X WITH DRILLED HOLE	936.047	7,855,800.39	1947,4708.77
754	LMFD /CUT X WITH DRILLED HOLE	936.274	7,855,783.95	1947,4708.76
755	LMFD /MAG NAIL	936.232	7,855,783.95	1947,4774.44
756	LMFP /3/4IN PIPE	936.704	7,855,799.31	1947,4868.69
757	LMFP /1IN PIPE	937.453	7,855,799.52	1947,4971.56
758	LMFR /1/2IN RBR WITH CAP ILLEGIBLE	936.710	7,855,981.59	1947,4972.26

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BOLTON & MENK
1519 BALTIMORE DRIVE
AMES, IOWA 50010
Phone: (515) 233-6100
Email: Ames@bolton-menk.com
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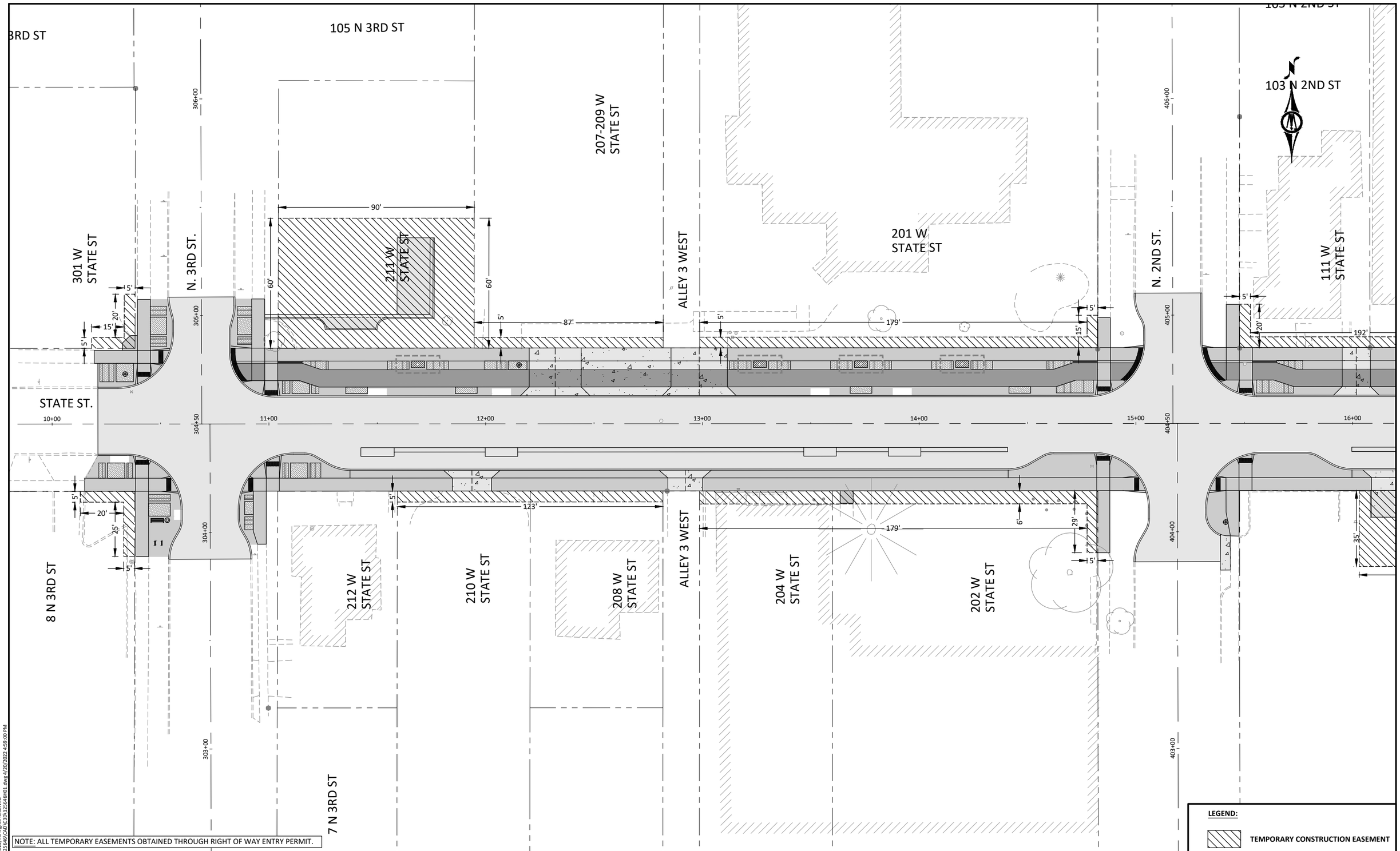
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
REFERENCES AND BENCHMARKS

SHEET
G.02



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
RIGHT-OF-WAY SHEETS

SHEET
H.01

ND ST

107 W
STATE ST

111 W
STATE ST

105 W
STATE ST

103 W
STATE ST

104 N 1ST ST

102 N
1ST ST

N. 1ST ST.

35 W STATE ST

19 W STATE ST

ALLEY 1 WEST

15 W STATE ST

101 W
STATE ST

192'
176'
55'
47'
15'
5'
6'

STATE ST.

16+00
17+00
18+00
19+00
20+00
21+00
22+00

506+00
505+00
504+50
504+00
503+00

110 W
STATE ST

108 W
STATE ST

ALLEY 2 WEST

104 W
STATE ST

35 N 1ST ST

20 W STATE ST

25 N 1ST ST

ALLEY 1 WEST

70'
166'
10'
35'

NOTE: ALL TEMPORARY EASEMENTS OBTAINED THROUGH RIGHT OF WAY ENTRY PERMIT.

LEGEND:

TEMPORARY CONSTRUCTION EASEMENT

HORZ. SCALE 0 20 40 FEET

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RIGHT-OF-WAY SHEETS

SHEET
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CENTER ST

104B N
CENTER ST

104 N
CENTER ST

105 N
CENTER ST

606+00

605+00

604+00

603+00

ALLEY 1 WEST

15 W STATE ST

13 W STATE ST

1-3 W
STATE ST

N. CENTER ST.

101 N
CENTER ST

16 E STATE ST

ALLEY 1 EAST

100 N 1ST AVE

5'

50'

174'

8'

177'

STATE ST.

22+00 23+00 24+00 25+00 26+00 27+00 28+00

24 N
CENTER ST

79'

45'

31 N
CENTER ST

71/2 E
STATE ST

9-11 E
STATE ST

17 E STATE ST

58'

28 N 1ST AVE

27 N
CENTER ST

25 N
CENTER ST

23 N
CENTER ST

19 N

26 N
1ST AVE

24 N 1ST AVE

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LEGEND:

TEMPORARY CONSTRUCTION EASEMENT

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
RIGHT-OF-WAY SHEETS

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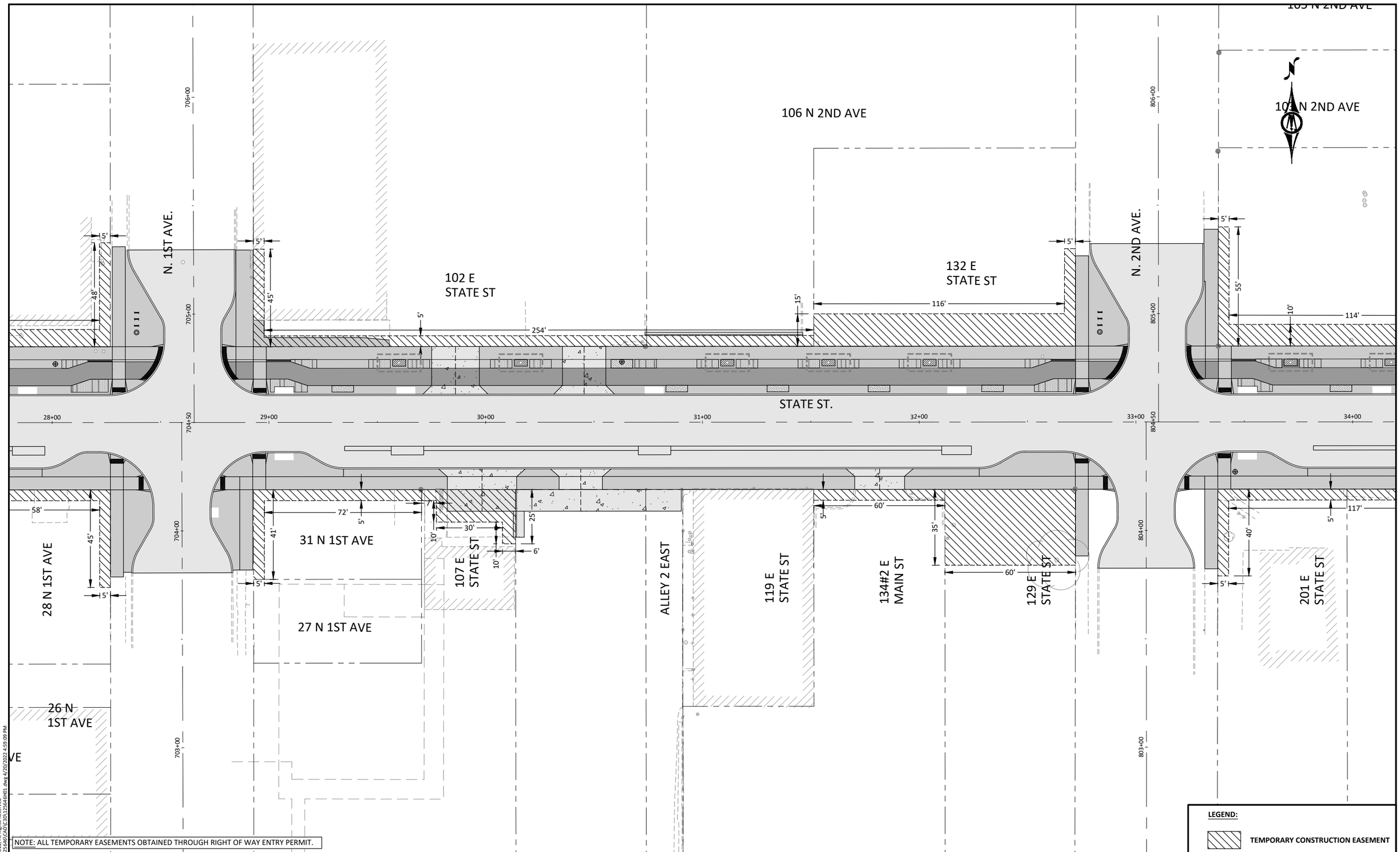

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
RIGHT-OF-WAY SHEETS

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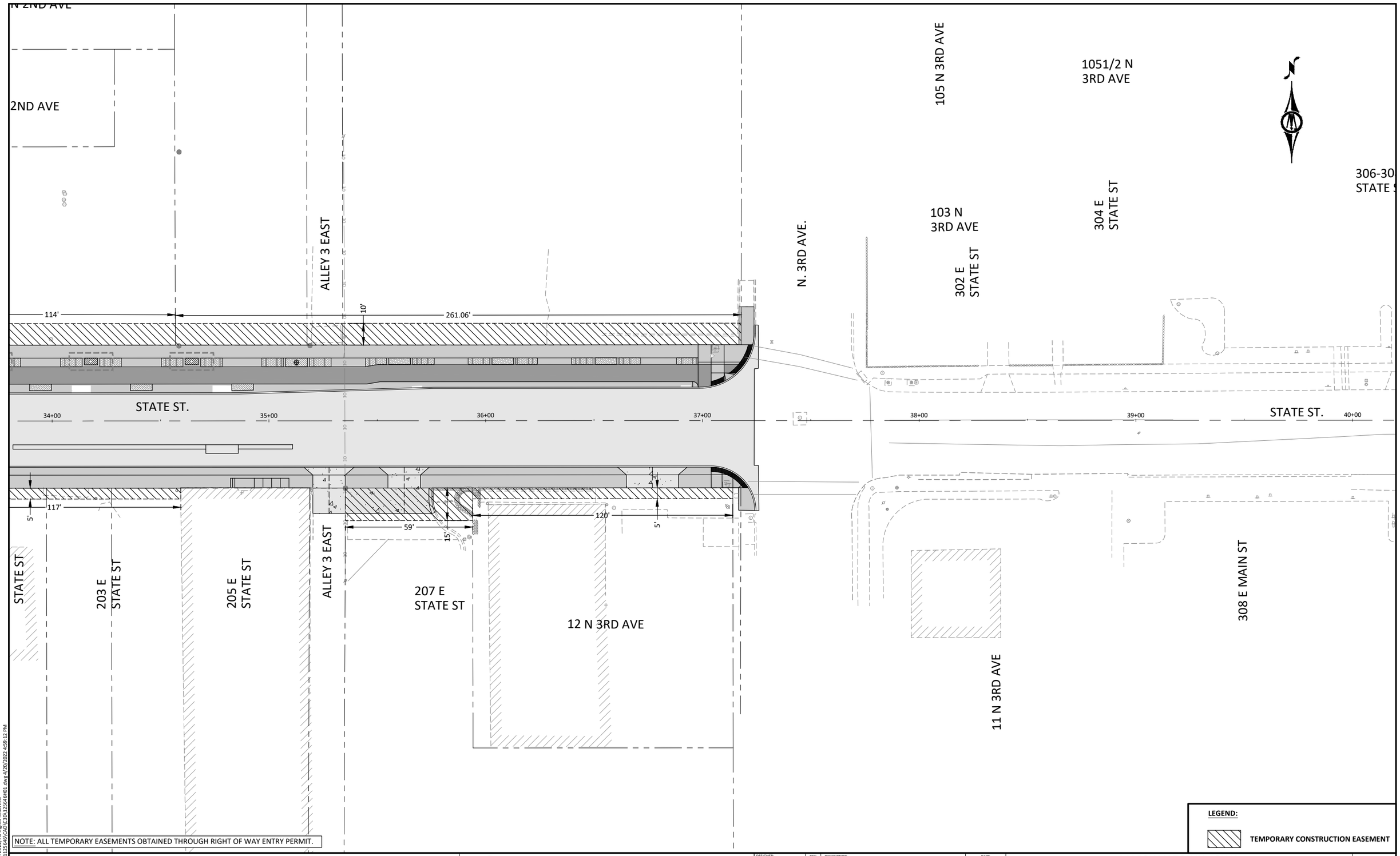

NOTE: ALL TEMPORARY EASEMENTS OBTAINED THROUGH RIGHT OF WAY ENTRY PERMIT.

LEGEND:

TEMPORARY CONSTRUCTION EASEMENT

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
RIGHT-OF-WAY SHEETS

SHEET H.05

GENERAL NOTES:

INSPECTION: THE CONTRACTOR SHALL CONTACT THE PRINCIPAL CONSTRUCTION INSPECTOR FOR THE CITY OF MARSHALLTOWN ENGINEERING DEPARTMENT 48 HOURS BEFORE BEGINNING CONSTRUCTION.

UTILITIES: THE CONTRACTOR SHALL COORDINATE WORK WITH UTILITY COMPANIES WITH RESPECT TO PROTECTING, RELOCATING AND CONSTRUCTING UTILITY FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING THE GUIDELINES OF EACH UTILITY IN PROTECTING THEIR FACILITIES AND SHALL EXERCISE ALL DUE CAUTION AND USE CONSTRUCTION METHODS AND EQUIPMENT TO COMPLETE WORK WITHOUT DAMAGING UTILITIES.

ALL COSTS FOR STAGING CONSTRUCTION FOR UTILITY INSTALLATION, PROVIDING TEMPORARY SUPPORTS FOR UTILITIES WITH ASSISTANCE FROM THE AFFECTED UTILITY COMPANY, AND COORDINATING WITH UTILITIES, INCLUDING DELAYS, SHALL BE INCIDENTAL TO THE CONTRACT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES, OTHER THAN THOSE SHOWN ON THE PLANS, MAY BE PRESENT.

CONSTRUCTION LIMITS: THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL NOT PARK, SERVICE VEHICLES AND EQUIPMENT, OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREA(S) WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER OR AS DESIGNATED IN THE PLANS. THE CONTRACTOR SHALL ACCESS THE SITE IN A MANNER THAT DOES NOT DAMAGE EXISTING PAVED SURFACES, SIDEWALKS, AND TRAILS THAT ARE NOT DESIGNATED TO BE REPLACED. ANY DAMAGE TO THESE SURFACES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AS APPROVED BY THE ENGINEER.

ALL WORK SHALL BE CONFINED TO THE PROJECT RIGHT OF WAY LIMITS AND TEMPORARY CONSTRUCTION EASEMENTS. THIS INCLUDES, BUT NOT LIMITED TO, EXCAVATION, PIPE INSTALLATION, PAVING OPERATIONS AND REMOVALS. ANY DAMAGE CAUSED TO ADJACENT PROPERTY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR REPAIR AND REPLACEMENT.

ACCESS TO PROPERTIES: THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH AREA RESIDENTS/PROPERTY OWNERS PRIOR TO CHANGING ACCESS TO ADJACENT PROPERTIES.

WORK SEQUENCE: THE CONTRACTOR SHALL SCHEDULE THEIR WORK AND THE WORK OF THEIR SUBCONTRACTORS IN SUCH A MANNER THAT WILL ENSURE A MINIMAL AMOUNT OF INCONVENIENCE TO THE ABUTTING PROPERTY OWNERS. FINAL GRADING SHALL FOLLOW COMPLETION OF THE PAVING AS SOON AS POSSIBLE. IF THE ENGINEER DETERMINES THE PROGRESS OF THE WORK IS UNSATISFACTORY, PARTIAL PAYMENTS WILL BE WITHHELD IN FULL OR PART UNTIL SATISFACTORY PROGRESS IS MADE.

CLEAN UP OF THE SITE IS REQUIRED WHEN WORK IS EITHER SUSPENDED OR COMPLETED. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL SUBMIT A STAGING SCHEDULE FOR THE ENGINEER'S APPROVAL. THE STAGING SCHEDULE SHALL BE UPDATED PERIODICALLY TO REFLECT ANY CHANGES.

TRAFFIC SIGNS: THE CONTRACTOR SHALL NOT REMOVE ANY CITY OF MARSHALLTOWN TRAFFIC CONTROL SIGNS OUTSIDE OF THE PROJECT LIMITS. THE CONTRACTOR SHALL NOTIFY MARSHALLTOWN PUBLIC WORKS, A MINIMUM OF TWO BUSINESS DAYS IN ADVANCE FOR SIGN REMOVAL, RELOCATION, AND RESET. WORK SHALL BE COMPLETED BY CITY PERSONNEL ONLY.

PAVEMENT REMOVAL: EXISTING PAVEMENT TO BE REMOVED SHALL BE SAW CUT AT REMOVAL LIMITS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. UNNECESSARY SURFACE BREAKS OR PREMATURE SPALLING THAT OCCURS DURING THE REMOVAL PROCESS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE METHOD OF REPAIR WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. ALL HOT MIX ASPHALT AND CONCRETE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR DISPOSAL UNLESS OTHERWISE SPECIFIED IN THE PLANS.

ABANDONED UTILITY LINES: ALL REMOVAL AND DISPOSAL OF ABANDONED UTILITY LINES INCLUDING GAS MAINS, WATER MAINS, TELEPHONE CONDUITS, SERVICE LINES, ETC., REQUIRED TO COMPLETE THE WORK SHALL BE INCIDENTAL TO THE CONTRACT.

BACKFILLING HOLES: ALL HOLES RESULTING FROM OPERATIONS OF THE CONTRACTOR, INCLUDING REMOVAL OF GUARDRAIL POSTS, FENCE POSTS, AND UTILITY POLES, SHALL BE FILLED AND CONSOLIDATED TO FINISHED GRADE, AS APPROVED BY THE ENGINEER, TO PREVENT FUTURE SETTLEMENT AND SHALL BE FILLED IMMEDIATELY. ANY PORTION OF THE RIGHT-OF-WAY OR PROJECT LIMITS DISTURBED BY ANY SUCH OPERATIONS SHALL BE RESTORED TO AN ACCEPTABLE CONDITION. THIS OPERATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

STORM/SANITARY SEWERS: THE CONTRACTOR SHALL MAINTAIN FLOW AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FLOW DIVERTING AND/OR BYPASS PUMPING REQUIRED TO FACILITATE CONSTRUCTION.

THE CONTRACTOR SHALL PROTECT ALL STORM SEWER INLETS AND CULVERTS FROM SILTATION AND DEBRIS DURING CONSTRUCTION. THE CONTRACTOR SHALL PLACE STEEL PLATES OVER INTAKES AND MANHOLES PRIOR TO PLACEMENT OF PAVEMENT TO PREVENT SOIL FROM ENTERING INTO THE SEWER. THE COSTS FOR PLATING FOR PLACEMENT OF PAVEMENT SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.

FINAL INSPECTION: THE CONTRACTOR SHALL HAVE A REPRESENTATIVE AT THE FINAL INSPECTION AND WILL BE RESPONSIBLE TO OPEN ALL MANHOLES AND INTAKES FOR INSPECTION BY CITY PERSONNEL.
WORKING DAYS WILL BE SUSPENDED AFTER SUBSTANTIAL COMPLETION OF WORK. A PUNCH LIST WILL BE ASSEMBLED AND THE CONTRACTOR WILL BE GIVEN A SCHEDULE IN WHICH TO COMPLETE THE PUNCH LIST ITEMS. IF THE PUNCH LIST ITEMS ARE NOT COMPLETED WITHIN THE SPECIFIED TIME, WORKING DAYS WILL RESUME.

ADA REQUIREMENTS: ALL WORK SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA). ANY WORK THAT DOES NOT MEET THESE REQUIREMENTS WILL BE CONSIDERED DEFECTIVE AND BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE CITY OR CONTRACT SPECIFIED CONSTRUCTION SURVEY SHALL PROVIDE SURVEY STAKING FOR THE GENERAL LAYOUT. PRIOR TO PLACEMENT OF THE SURFACE MATERIAL, THE CONTRACTOR WILL BE RESPONSIBLE TO VERIFY THAT THE SLOPES OF ALL SURFACES ARE WITHIN THE ALLOWABLE RANGES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF SLOPES CANNOT BE CONSTRUCTED WITHIN THE ALLOWABLE RANGE. FOLLOWING PLACEMENT OF THE SURFACE MATERIAL, THE CONTRACTOR SHALL MEASURE THE ACTUAL SURFACE SLOPE AND INITIAL AT THE APPROPRIATE LOCATION ON SIDEWALK COMPLIANCE SHEETS TO VERIFY THAT THE SLOPE IS WITHIN ALLOWABLE RANGES.THE CITY RESERVES THE RIGHT TO MEASURE THE SLOPES OF ANY SURFACE AFTER CONSTRUCTION. THERE IS NO TOLERANCE FOR SURFACES TO EXCEED THE MAXIMUM ALLOWABLE SLOPE. SURFACES THAT EXCEED THE MAXIMUM ALLOWABLE SLOPE WILL BE CONSIDERED DEFECTIVE AND SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

SITE CLEANUP: THE CONTRACTOR SHALL CLEAN ALL SURFACES PRIOR TO OPENING THE PROJECT TO THE PUBLIC. PICKUP BROOM OR STREET SWEEPER THAT CREATES A MINIMAL AMOUNT OF DUST SHALL BE USED FOR CLEANING. ALL COSTS FOR CLEANING SHALL BE INCIDENTAL TO THE CONTRACT.

GENERAL NOTES:

STREET/LANE CLOSURE: THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF THREE BUSINESS DAYS IN ADVANCE FOR LANE CLOSURE AND SHALL RECEIVE APPROVAL BEFORE CLOSING ANY LANE TO TRAFFIC.
THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF EIGHT BUSINESS DAYS IN ADVANCE FOR STREET CLOSURE AND SHALL RECEIVE APPROVAL BEFORE CLOSING ANY STREET TO TRAFFIC.

ADJUSTMENT OF WATER VALVES: THE ADJUSTMENT OF WATER VALVES AND WATER SERVICE STOP BOXES TO FINAL GRADE (BOTH PUBLIC AND PRIVATE) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO PAVEMENT CONSTRUCTION. USE OF A THREADED COUPLING TO ADJUST THE CAP ELEVATION IS REQUIRED.

ROW AND EASEMENT LIMITS: STORAGE, PARKING, AND SERVICE AREA(S) WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION.

RESTORATION: THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO WITHIN THE GRADING LIMITS AS SHOWN ON THE PLANS UNLESS AUTHORIZED BY THE PROJECT ENGINEER TO DO OTHERWISE. ALL TREES, SHRUBS, GRASS OR TURF BEYOND THE GRADING LIMITS THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO CHARGE TO THE CONTRACTING AUTHORITY, TO THE CONDITION THAT EXISTED PRIOR TO CONSTRUCTION.

ALL GRASS SURFACES DISTURBED BY CONSTRUCTION SHALL BE SEEDED OR SODDED AS DIRECTED BY THE PLANS. THIS INCLUDES TURF AREAS DAMAGED BY EITHER CONSTRUCTION ACCESS AND CONSTRUCTION ACTIVITIES. PAYMENT SHALL BE FOR THOSE DISTURBED AREAS WITHIN THE GRADING LIMITS.

WASTE SITES: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL, BROKEN PAVEMENT, ETC.) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE CITY PROPERTY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE ENGINEER.

DISPOSAL OF PAVEMENT: UNLESS OTHERWISE DIRECTED OR AUTHORIZED, ALL PAVEMENT MATERIALS WHICH ARE NOT SPECIFICALLY ADDRESSED OR DESCRIBED IN THE PLANS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR IN ACCORDANCE WITH CURRENT RULES AND REGULATIONS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES MAY:

1. REMOVE THE MATERIAL FROM THE PROJECT AND STOCKPILE FOR THE CONTRACTOR'S FUTURE USE.
2. DISPOSE OF IN A LICENSED LANDFILL.

SAW-CUT TREE ROOTS: ALL TREE ROOTS EXCEEDING 1-1/2" IN DIAMETER WHICH ARE MANGLED BY EQUIPMENT DURING GRADING OR EXCAVATION SHALL BE CUT CLEANLY WITH A SAW. NO ROOTS WHICH EXCEED THE SPECIFIED DIAMETER SHALL BE LEFT STRIPPED OR MANGLED PRIOR TO BACKFILLING. CUTTING OF ROOTS IS CONSIDERED INCIDENTAL TO EXCAVATION.

NO WORK ZONE, TREE PROTECTION AREA: CONTRACTOR SHALL NOT ENTER THE "NO WORK ZONE" WITH CONSTRUCTION VEHICLES. THE CONTRACTOR SHALL USE EXTREME CARE TO AVOID TREE ROOT SYSTEMS, WHICH ARE TYPICALLY TO THE DRIP LINE OF THE TREE.

REINFORCING STEEL: ALL REINFORCING STEEL DOWELS AND TIE BARS IN THE PAVING SHALL BE EPOXY-COATED UNLESS OTHERWISE NOTED.

STAGING NOTES:

1. THESE STAGING NOTES ARE NOT INTENDED TO CONFINE THE CONTRACTOR'S ACTIVITIES TO THE AREAS OF SUGGESTED STAGES ALONE. IT IS UNDERSTOOD THAT VARIOUS STEPS INCLUDED HEREIN MAY OCCUR SIMULTANEOUSLY. THE CONTRACTOR MAY CONDUCT SEVERAL OPERATIONS CONCURRENTLY, PROVIDED THAT TRAFFIC AND ACCESS IS MAINTAINED AND THESE OPERATIONS DO NOT CONFLICT WITH THE STAGING INDICATED HEREIN, OTHER PORTIONS OF THIS PROJECT AND OTHER CONSTRUCTION ACTIVITIES.
2. AS LONG AS WORK REMAINS ON THE PROJECT, THE CONTRACTOR SHALL REMAIN ON THE PROJECT. IF ISSUES EXIST WITHIN A STAGE OF THE PROJECT WHICH ARE BEYOND THE CONTRACTOR'S CONTROL, THE CITY HAS THE OPTION TO REVISE THE CONSTRUCTION STAGING AND DIRECT THE CONTRACTOR TO WORK ON OTHER "UNAFFECTED" STAGES OR AREAS OF THE PROJECT AS SHOWN WITHIN THE CONTRACT DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER. THE OWNER MAY, AT THE OWNERS DISCRETION, PROVIDE ADDITIONAL DAYS TO THE CONTRACTOR BASED UPON RELOCATION EFFORTS AND SCHEDULING JUSTIFICATION.
3. ONCE WORK WITHIN A STAGE HAS COMMENCED, THE CONTRACTOR SHALL CONTINUE WORK WITHIN THAT STAGE UNTIL ALL WORK WITHIN THAT STAGE HAS BEEN COMPLETED. IF WORK WITHIN THAT STAGE IS NOT COMPLETED AND THE CONTRACTOR REMOVES THE "NORMAL" SIZE CREW (AND/OR EQUIPMENT) FROM THE PROJECT WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER, THEN THE CONTRACTOR WILL BE CHARGED FOR EACH DAY THE SITUATION REMAINS.
4. ANY ADJUSTMENT TO THE STAGING/TRAFFIC CONTROL SHALL BE COORDINATED WITH THE CITY OF MARSHALLTOWN AND ENGINEER OF RECORD A MINIMUM OF TWO WEEKS IN ADVANCE.

SIDEWALKS:

1. THE CONTRACTOR SHALL PROVIDE A PEDESTRIAN AND BIKE DETOUR / CONTROL PLAN FOR ALL STAGES.
2. REFER TO IOWA DOT STANDARD ROAD PLAN TC-601 FOR SIDEWALK CLOSURE INFORMATION AND STANDARDS. PEDESTRIAN PATH CLOSURE BARRICADES SHALL BE PLACED AT THE BEGINNING AND END OF SIDEWALK CONSTRUCTION AREAS WITHIN EACH STAGE. BARRICADES SHALL BE PLACED REGARDLESS OF WHETHER AN EXISTING PAVED PATH IS PRESENT OR NOT.
3. EXISTING SIDEWALK TO REMAIN IN PLACE AS LONG AS POSSIBLE TO PROVIDE ACCESS.
4. SIDEWALK TRAFFIC CONTROL SHALL REMAIN IN PLACE UNTIL SIDEWALKS ARE REPLACED, CLEANED AND ACCESSIBLE.
5. THE COST FOR SIDEWALK ACCOMMODATIONS IS INCIDENTAL TO TEMPORARY TRAFFIC CONTROL.

TRAFFIC CONTROL NOTES:

1. THE J SHEETS DESCRIBE TRAFFIC CONTROL NECESSARY FOR THE CONSTRUCTION OF STATE STREET. LOCAL TRAFFIC TO ADJACENT PROPERTIES SHALL BE MAINTAINED. ALL TRAFFIC CONTROL SIGNS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
2. SPECIFIC TRAFFIC CONTROL LAYOUTS ARE SHOWN ON THESE PLANS. THESE ARE GENERAL TRAFFIC CONTROL LAYOUTS FOR INFORMATION ONLY.
3. THE CONTRACTOR SHALL COORDINATE TRAFFIC CONTROL WITH OTHER PROJECTS IN THE AREA AS REQUIRED. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CLOSURES SHOWN ON THE J SHEETS. FOR ADDITIONAL INFORMATION, REFER TO THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. THE LUMP SUM BID ITEM FOR "TEMPORARY TRAFFIC CONTROL" SHALL INCLUDE ALL COSTS FOR TRAFFIC CONTROL MEASURES DURING CONSTRUCTION FOR THIS PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
5. TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS AS ADOPTED BY THE IOWA DEPARTMENT OF TRANSPORTATION PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC) CHAPTER 130.
6. ALL TRAFFIC CONTROL SIGNS SHALL BE PLACED A MINIMUM OF TWO (2) FEET CLEAR OF THE BACK OF CURB OR OUTSIDE EDGE OF SHOULDER WHERE POSSIBLE.
7. ALL DETOUR SIGNS AND ROAD CLOSURE BARRICADES SHALL BE INSTALLED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO CLOSING THE ROAD.
8. ALL SIGNS SHALL BE POST MOUNTED UNLESS NOTED OR OTHERWISE APPROVED BY THE CITY.
9. PROPOSED SIGN SPACING MAY BE MODIFIED, AS APPROVED BY THE ENGINEER, TO MEET EXISTING FIELD RESTRICTIONS, OR TO PREVENT OBSTRUCTION OF THE MOTORIST'S VIEW OF PERMANENT SIGNING.
10. PROPOSED CHANGES IN THE TRAFFIC CONTROL PLAN SHALL BE REVIEWED WITH THE CITY AND ENGINEER BEFORE CHANGES ARE MADE.
11. THIS LAYOUT DOES NOT INCLUDE ALL BARRICADES AS MAY BE REQUIRED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
12. ALL "STOP" AND OTHER REGULATORY SIGNS SHALL NOT BE DISTURBED. PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF THE TEMPORARY SIGNING NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR AS APPROVED BY THE CITY. IF THE CONTRACTOR AND THE CITY DETERMINE A SIGN MUST BE REMOVED FOR ANY STAGE OF CONSTRUCTION IT SHALL BE REMOVED AND RELOCATED BY PERSONNEL FROM THE CITY OF MARSHALLTOWN. THE CONTRACTOR SHALL NOTIFY PUBLIC WORKS A MINIMUM OF TWO BUSINESS DAYS IN ADVANCE FOR SIGN REMOVAL, RELOCATION, AND RESET. WORK SHALL BE COMPLETED BY CITY PERSONNEL ONLY.
13. ANY TEMPORARY REGULATORY SIGNS ARE TO BE PROVIDED, LOCATED, AND MAINTAINED BY THE CONTRACTOR.
14. ALL CONTRACTOR FURNISHED TRAFFIC CONTROL AND FIXED, POST MOUNTED, TRAFFIC CONTROL SIGNS USED ON THIS PROJECT SHALL BE SHEETED WITH HIGH-VISIBILITY PRISMATIC REFLECTIVE SHEETING (TYPE III OR HIGHER).
15. TYPE "C" STEADY BURN WARNING LIGHTS ARE NOT REQUIRED FOR VERTICAL PANELS, BARRICADES, AND DRUMS WHEN THESE TRAFFIC CONTROL DEVICES ARE SHEETED WITH HIGH-VISIBILITY PRISMATIC REFLECTIVE SHEETING (TYPE III OR HIGHER).
16. ALL TRAFFIC LANE CLOSURES SHALL BE RE-OPENED FOR PUBLIC USE WITHIN 24 HOURS OF THE COMPLETION OF ACTIVE CONSTRUCTION WORK. THE CONTRACTOR SHALL PROPERLY CLEAN ALL SURFACES AND ELIMINATE ALL UNSAFE CONDITIONS PRIOR TO REMOVING TRAFFIC CONTROL DEVICES.
17. THE CONTRACTOR SHALL FURNISH THE CITY WITH NAMES AND TELEPHONE NUMBERS OF INDIVIDUALS RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC CONTROL DEVICES AND SIGNING. THE INDIVIDUAL(S) SHALL BE AVAILABLE FOR CORRECTIVE ACTION 24 HOURS A DAY, 7 DAYS A WEEK.
18. THE CONTRACTOR SHALL NOTIFY THE CITY OF STREET CLOSURE EIGHT (8) DAYS OR LANE CLOSURE THREE (3) DAYS PRIOR TO THE CLOSURE. THE CONTRACTOR SHALL COORDINATE CLOSURE WITH THE CITY TO ENSURE THE ABOVE DEADLINES ARE ACHIEVED.
19. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, MOVE, AND REMOVE ALL TRAFFIC CONTROL DEVICES ON THE PROJECT. ALL SIGNS SHALL BE REFLECTORIZED AND CONFORM AS TO DESIGN, COLOR, SIZE, AND LEGEND TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
20. PAVEMENT MARKINGS THAT CONFLICT WITH THE MEANING OF TEMPORARY PAVEMENT MARKINGS OR BARRICADES FOR THE STAGE UNDER CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR. TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED AS INDICATED ON THE STAGING PLANS.
21. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS, WITH BOTH WRITTEN NOTICE AND PERSONAL CONTACT, WHEN ACCESS TO A PROPERTY WILL EITHER BE RESTRICTED OR NOT BE AVAILABLE DUE TO CONSTRUCTION ACTIVITIES.
22. NO FIELD MEASUREMENT SHALL BE MADE FOR THE TRAFFIC CONTROL BID ITEM. THE CONTRACTOR SHALL BE PAID THE LUMP SUM BID AMOUNT FOR TRAFFIC CONTROL.
23. SOME CONSTRUCTION MAY REQUIRE TEMPORARY LANE CLOSURES NOT SHOWN ON THE PLANS. REFER TO PART 6 OF THE MUTCD FOR STANDARD LANE CLOSURE SIGNAGE.
24. SIGNAGE MAINTENANCE SHALL BE CONSIDERED INCIDENTAL TO TRAFFIC CONTROL AND REQUIRED AS NECESSARY OR DIRECTED BY THE ENGINEER.
25. THE LOCATION FOR STORAGE OF EQUIPMENT BY THE CONTRACTOR DURING NONWORKING HOURS SHALL BE AS APPROVED BY THE ENGINEER, AND THE CONTRACTOR SHALL PROVIDE A WRITTEN AGREEMENT WITH THE PROPERTY OWNER.

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STAGING AND TRAFFIC CONTROL SHEETS

SHEET
J.01

LEGEND:
PHASE 1A
PHASE 1B
PHASE 2
PHASE 3
PHASE 4

105 N 3RD ST
301 W STATE ST
211 W STATE ST
207-209 W STATE ST
201 W STATE ST
105 N 2ND ST
103 N 2ND ST
111 W STATE ST
107 W STATE ST
105 W STATE ST
103 W STATE ST
104 N 1ST ST
101 W STATE ST
102 N 1ST ST
35 W STATE ST
19 W STATE ST
15 W STATE ST
13 W STATE ST
106 N CENTER ST
104B N CENTER ST
104 N CENTER ST
1-3 W STATE ST
105 N CENTER ST
101 N CENTER ST
16 E STATE ST
STATE STREET
STATE STREET
STATE STREET
N 3RD STREET
212 W STATE ST
210 W STATE ST
208 W STATE ST
204 W STATE ST
202 W STATE ST
7 N 3RD ST
N 2ND STREET
110 W STATE ST
108 W STATE ST
104 W STATE ST
N 1ST STREET
25 N 1ST ST
35 N 1ST ST
20 W STATE ST
24 N CENTER ST
22 N CENTER ST
N CENTER STREET
31 N CENTER ST
27 N CENTER ST
25 N CENTER ST
23 N CENTER ST
19 N CENTER ST
71/2 E STATE ST
9-11 E STATE ST

100 N 1ST AVE
16 E STATE ST
102 E STATE ST
106 N 2ND AVE
132 E STATE ST
105 N 2ND AVE
103 N 2ND AVE
105 N 3RD AVE
1051/2 N 3RD AVE
106 N 4TH AVE
302 E STATE ST
304 E STATE ST
306-308 E STATE ST
312 E STATE ST
103 N 3RD AVE
STATE STREET
STATE STREET
STATE STREET
31 N 1ST AVE
28 N 1ST AVE
27 N 1ST AVE
26 N 1ST AVE
24 N 1ST AVE
22 N 1ST AVE
N 1ST AVENUE
107 E STATE ST
119 E STATE ST
134#2 E MAIN ST
129 E STATE ST
N 2ND AVENUE
201 E STATE ST
203 E STATE ST
205 E STATE ST
207 E STATE ST
12 N 3RD AVE
N 3RD AVENUE
11 N 3RD AVE
308 E MAIN ST
312 E MAIN ST
9-11 E STATE ST
17 E STATE ST

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STAGING AND TRAFFIC CONTROL SHEETS

SHEET
J.02

- PHASE 1A
  - INSTALL TEMPORARY TRAFFIC CONTROL.
  - SAWCUT AND REMOVE EXISTING PAVEMENT.
  - GRADE, INSTALL SUBBASE, INSTALL PAVEMENT.
  - INSTALL DRIVEWAYS AND SIDEWALK.
  - ALL WORK MUST BE COMPLETED EXCEPT SEEDING PRIOR TO COMMENCING NEXT PHASE.
  - ALL OTHER PRIVATE UTILITY RELOCATIONS MUST BE COMPLETED IN ADVANCE OF THE PROJECT.
  - PROVIDE ENOUGH TYPE III BARRICADES TO CLOSE THE ROAD FROM CURB TO CURB INSTALL PCMS 7 DAYS IN ADVANCE OF CLOSURE (ONE EB AND ONE WB ON STATE ST)

PCMS MESSAGE:

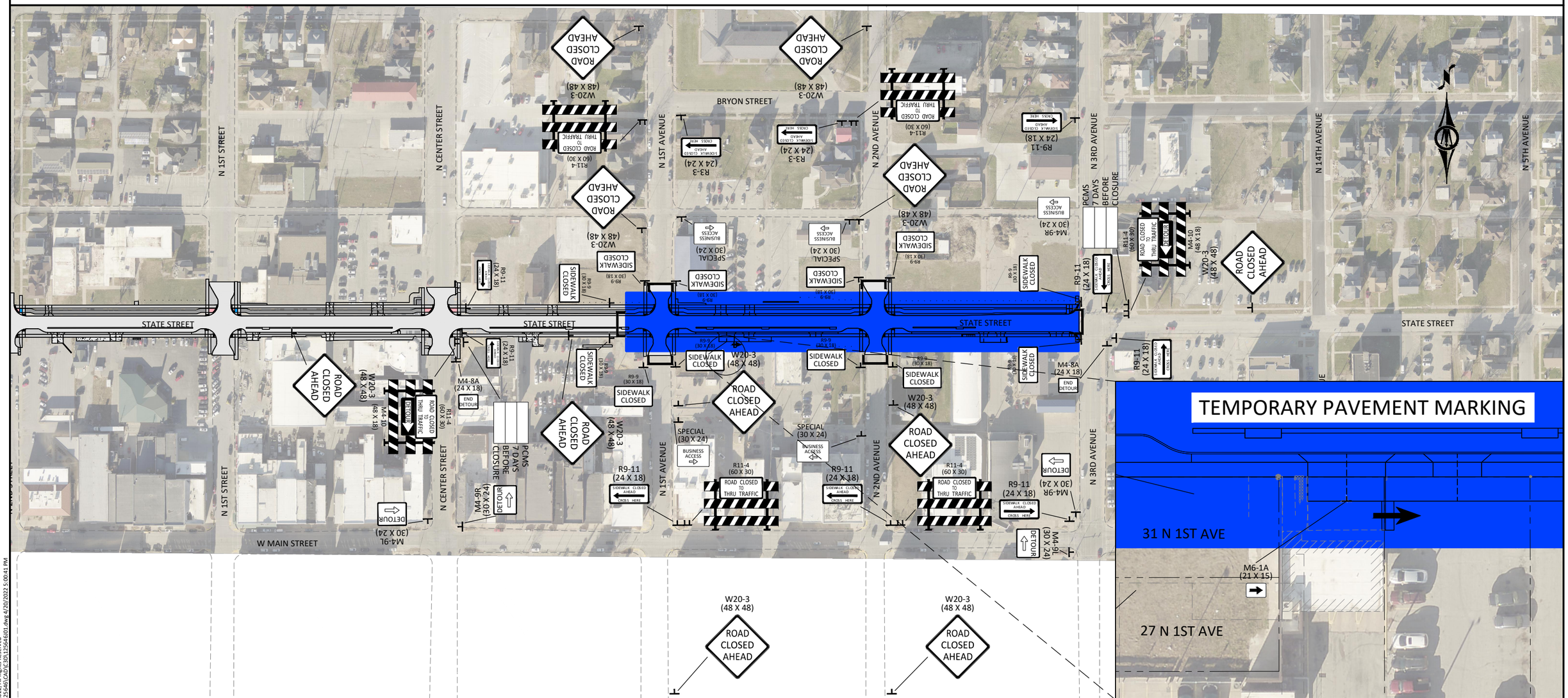
STATE ST CLOSED	3RD AVE TO 1ST AVE	BEGINNING DATE

PHASE 1A WATER MAIN NOTES

1. LEAVE EXISTING 4" AND 12" ACTIVE
2. INSTALL NEW PHASE 1A WATER MAIN INCLUDING SIDE STREETS
   - 2.1. STOP AT NEW VALVES ON SIDE STREETS AND VALVE AT STATION 28+19.84
   - 2.2. INSTALL TEMPORARY BLOWOFF HYDRANTS ON EACH LEG OF SIDE STREETS FOR TESTING PURPOSES
3. CONNECT NEW 12" MAIN TO EXISTING 12" MAIN AT 3RD AVE
   - 3.1. INSTALL TEMPORARY BLOWOFF HYDRANT ON EXISTING 12" MAIN AT 3RD AVE RUNNING WEST
4. PRESSURE AND BACTERIA TEST NEW 12" MAIN
5. RELOCATE ALL SERVICES TO NEW 12" MAIN
6. MAKE CONNECTION TO EXISTING WATER MAIN AT 1ST AVE & 2ND AVE
   - 6.1. CLOSE VALVES AT THE FOLLOWING LOCATIONS
     - 6.1.1. 4" MAIN ON WEST SIDE OF STATE AND 3RD AVE
     - 6.1.2. SOUTH SIDE OF 2ND AVE AND WEBSTER
     - 6.1.3. 4" MAIN EAST OF CENTER AND STATE
     - 6.1.4. WEST SIDE OF GRANT AND 1ST AVE
     - 6.1.5. SOUTH SIDE OF 1ST AVE AND WEBSTER
     - 6.1.6. 12" MAIN ON EAST SIDE OF CENTER AND STATE
     - 6.1.7. NORTH SIDE OF 1ST AVE AND MAIN
     - 6.1.8. NORTH SIDE OF 2ND AVE AND MAIN
   - 6.2. REMOVE EXISTING BLOWOFF HYDRANTS ON 1ST AVE & 2ND AVE.
   - 6.3. MAKE CONNECTIONS ON 1ST AVE AND 2ND AVE
   - 6.4. CUT 4" LINE WEST OF 1ST AVE
     - 6.4.1. INSTALL BLOWOFF HYDRANT ON 4" LINE
   - 6.5. CUT & CAP 4" LINE ON WEST SIDE OF STATE ST. & 3RD AVE.
   - 6.6. CUT 12" LINE WEST OF 1ST AVE
     - 6.6.1. INSTALL BLOWOFF HYDRANT ON 12" LINE
   - 6.7. REMOVE EXISTING WATER MAIN IN PHASE 1A LIMITS

LEGEND

- TRAFFIC SIGN
- TYPE III BARRICADE
- PORTABLE DYNAMIC MESSAGE SIGN
- WORK AREA
- ROAD CLOSURE



TEMPORARY PAVEMENT MARKING

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STAGING AND TRAFFIC CONTROL SHEETS

SHEET J.03

- PHASE 1B
  - INSTALL TEMPORARY TRAFFIC CONTROL.
  - SAWCUT AND REMOVE EXISTING PAVEMENT.
  - GRADE, INSTALL SUBBASE, INSTALL PAVEMENT.
  - INSTALL DRIVEWAYS AND SIDEWALK.
  - ALL WORK MUST BE COMPLETED EXCEPT SEEDING PRIOR TO COMMENCING NEXT PHASE.
  - ALL OTHER PRIVATE UTILITY RELOCATIONS MUST BE COMPLETED IN ADVANCE OF THE PROJECT.
  - PROVIDE ENOUGH TYPE III BARRICADES TO CLOSE THE ROAD FROM CURB TO CURB INSTALL PCMS 7 DAYS IN ADVANCE OF CLOSURE (ONE EB AND ONE WB ON STATE ST)

PCMS MESSAGE:

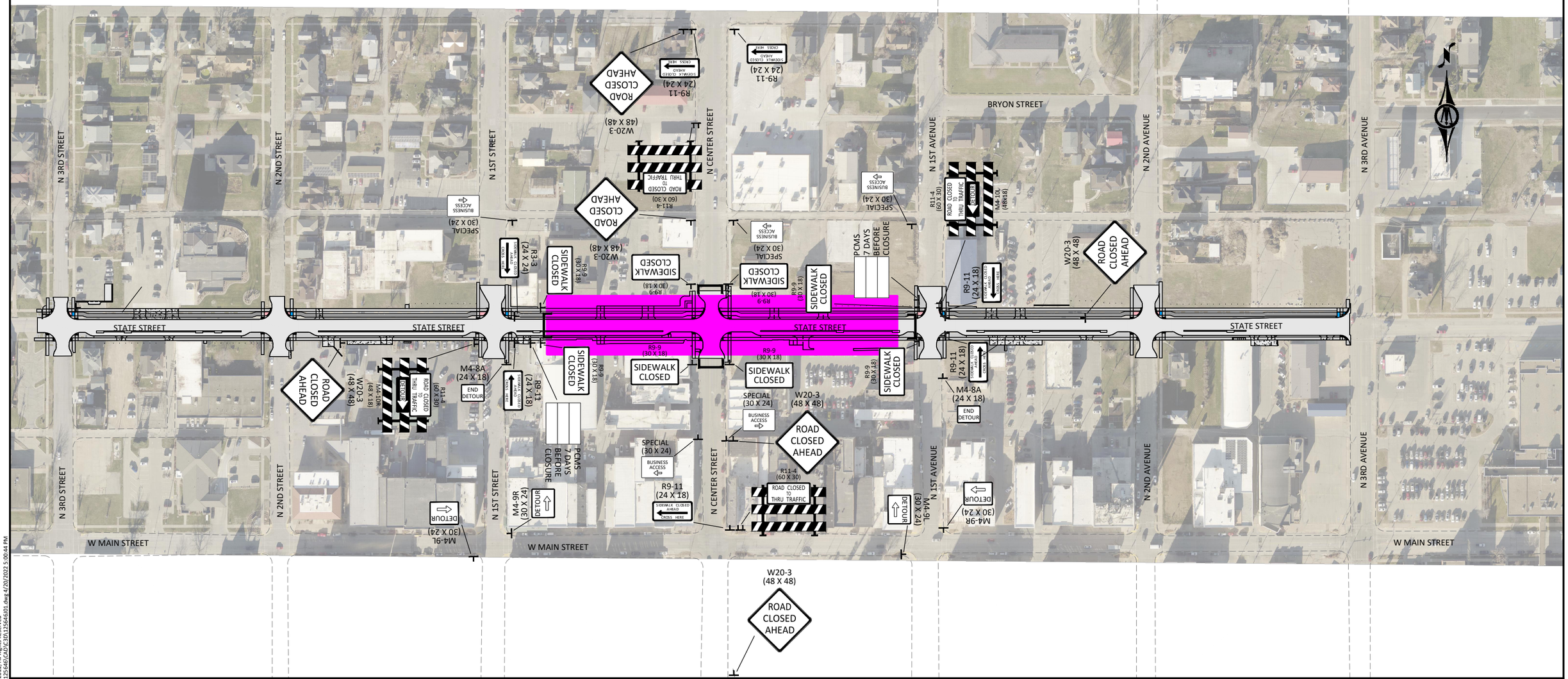
STATE ST CLOSED	1ST AVE TO 1ST ST	BEGINNING DATE

PHASE 1B WATER MAIN NOTES

1. LEAVE EXISTING 4" AND 12" ACTIVE
2. INSTALL NEW PHASE 1B WATER MAIN INCLUDING SIDE STREETS
   - 2.1. STOP AT VALVES ON CENTER STREET AND STATION 20+75.00
   - 2.2. INSTALL TEMPORARY BLOWOFF HYDRANTS ON NORTH AND SOUTH LEGS OF CENTER STREET
3. PRESSURE AND BACTERIA TEST NEW 12" MAIN
4. RELOCATE ALL SERVICES TO NEW 12" MAIN
5. MAKE CONNECTION TO EXISTING WATER MAIN AT CENTER STREET.
   - 5.1. CLOSE VALVES AT THE FOLLOWING LOCATIONS
     - 5.1.1. EAST SIDE OF CENTER ST & GRANT ST
     - 5.1.2. WEST SIDE OF CENTER ST & GRANT ST
     - 5.1.3. SOUTH SIDE OF CENTER ST & WEBSTER
     - 5.1.4. 12" VALVE EAST OF 1ST STREET & STATE STREET
     - 5.1.5. 4" VALVE EAST OF 2ND ST.
     - 5.1.6. SOUTH SIDE OF 1ST ST & WEBSTER
     - 5.1.7. 6" VALVE IN INTERSECTION OF 1ST ST AND STATE ST.
     - 5.1.8. NORTH SIDE OF CENTER ST AND MAIN ST
   - 5.2. REMOVE EXISTING BLOWOFF HYDRANTS
   - 5.3. MAKE CONNECTIONS ON CENTER ST
   - 5.4. CUT 4" LINE AT PHASE LINE
     - 5.1.1. INSTALL BLOWOFF HYDRANT IN BLVD
   - 5.2. CUT 12" LINE AT PHASE LINE
     - 5.2.1. INSTALL BLOWOFF HYDRANT IN BLVD
6. REMOVE EXISTING WATERMAIN WITHIN PHASE LIMITS

LEGEND

- TRAFFIC SIGN
- TYPE III BARRICADE
- PORTABLE DYNAMIC MESSAGE SIGN
- WORK AREA
- ROAD CLOSURE



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STAGING AND TRAFFIC CONTROL SHEETS

SHEET J.04

- PHASE 2
  - INSTALL TEMPORARY TRAFFIC CONTROL.
  - SAWCUT AND REMOVE EXISTING PAVEMENT.
  - GRADE, INSTALL SUBBASE, INSTALL PAVEMENT.
  - INSTALL DRIVEWAYS AND SIDEWALK.
  - ALL WORK MUST BE COMPLETED EXCEPT SEEDING PRIOR TO COMMENCING NEXT PHASE.
  - ALL OTHER PRIVATE UTILITY RELOCATIONS MUST BE COMPLETED IN ADVANCE OF THE PROJECT.
  - PROVIDE ENOUGH TYPE III BARRICADES TO CLOSE THE ROAD FROM CURB TO CURB INSTALL PCMS 7 DAYS IN ADVANCE OF CLOSURE (ONE EB AND ONE WB ON STATE ST)

PCMS MESSAGE:

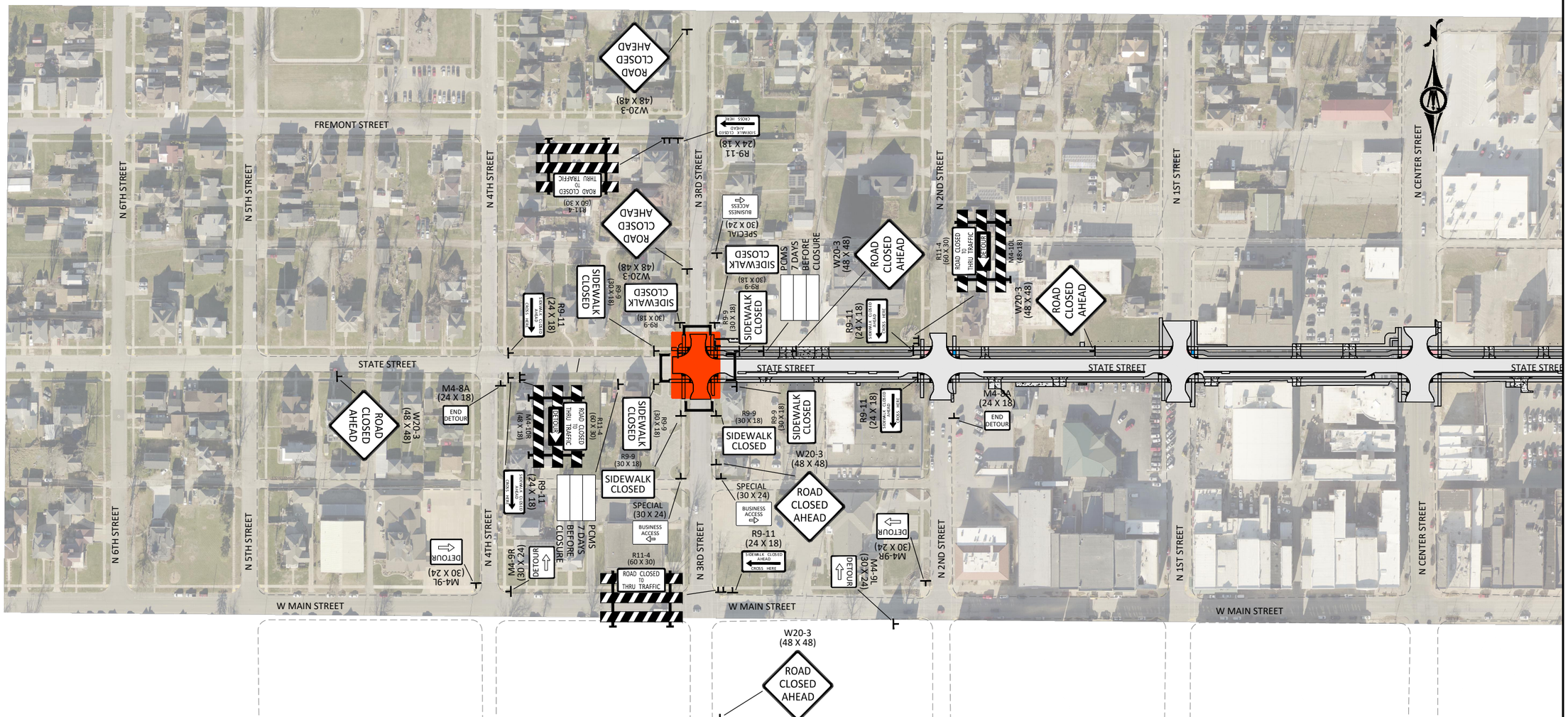
STATE ST CLOSED	AT 3RD ST	BEGINNING DATE

PHASE 2 - WATER MAIN NOTES

1. INSTALL INSERTION VALVE ON SOUTH LEG OF 3RD ST
2. TURN OFF EXISTING VALVES ON EAST AND WEST SIDE OF 3RD ST ON 6" AND 4" LINES
3. TURN OFF EXISTING VALVE ON NORTH 6" LINE.
4. REMOVE EXISTING WATER MAIN IN INTERSECTION
5. INSTALL NEW WATER MAIN
   - 5.1. INSTALL TEMPORARY BLOWOFF HYDRANT ON 12" LINE
6. PRESSURE AND BACTERIA TEST NEW 12" MAIN
7. OPEN VALVES ON 3RD ST AND WEST SIDE OF INTERSECTION.

LEGEND

- TRAFFIC SIGN
- TYPE III BARRICADE
- PORTABLE DYNAMIC MESSAGE SIGN
- WORK AREA
- ROAD CLOSURE



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STATE STREET RECONSTRUCTION
STAGING AND TRAFFIC CONTROL SHEETS

SHEET J.05

- PHASE 3
  - INSTALL TEMPORARY TRAFFIC CONTROL.
  - SAWCUT AND REMOVE EXISTING PAVEMENT.
  - GRADE, INSTALL SUBBASE, INSTALL PAVEMENT.
  - INSTALL DRIVEWAYS AND SIDEWALK.
  - ALL WORK MUST BE COMPLETED EXCEPT SEEDING PRIOR TO COMMENCING NEXT PHASE.
  - ALL OTHER PRIVATE UTILITY RELOCATIONS MUST BE COMPLETED IN ADVANCE OF THE PROJECT.
  - PROVIDE ENOUGH TYPE III BARRICADES TO CLOSE THE ROAD FROM CURB TO CURB INSTALL PCMS 7 DAYS IN ADVANCE OF CLOSURE (ONE EB AND ONE WB ON STATE ST)

PCMS MESSAGE:

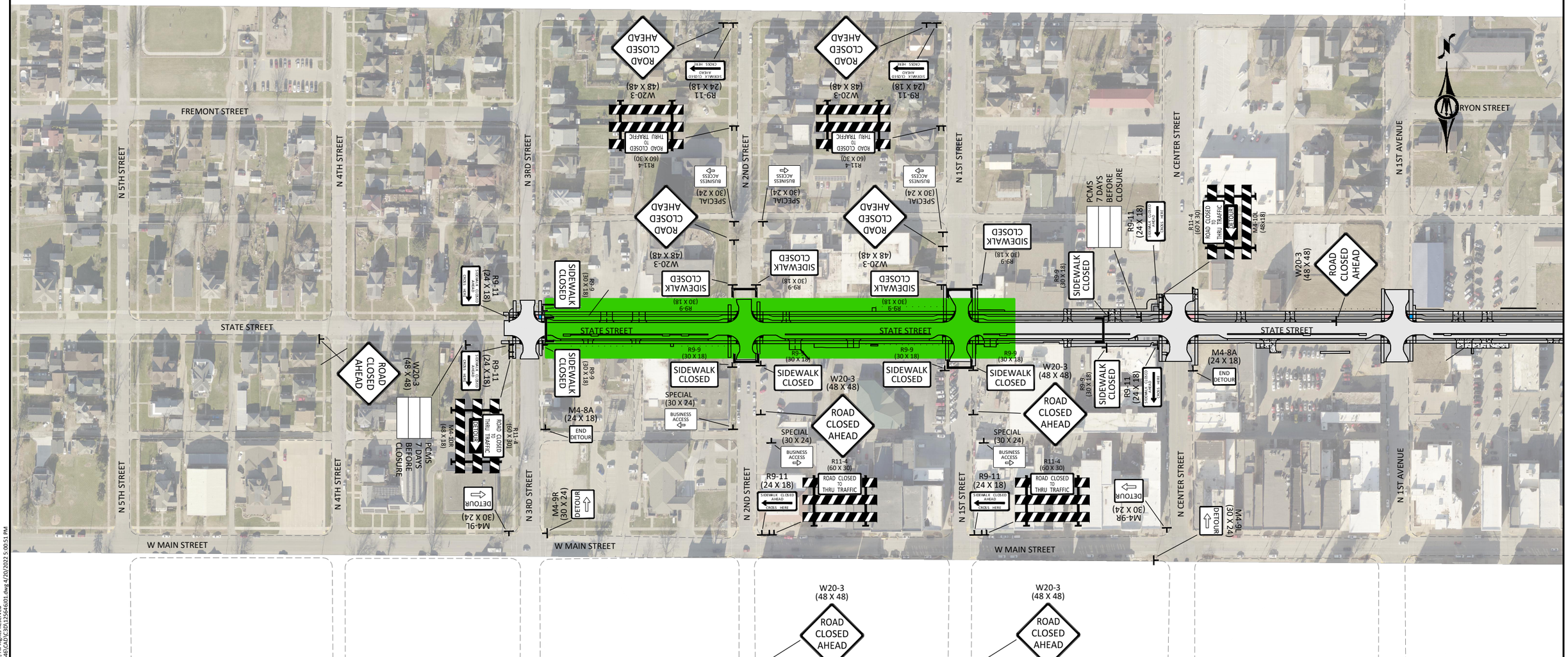
STATE ST CLOSED	1ST ST TO 3RD ST	BEGINNING DATE

PHASE 3 - WATER MAIN NOTES

1. LEAVE EXISTING 4" AND 12" ACTIVE
2. INSTALL NEW PHASE 3 WATER MAIN INCLUDING SIDE STREETS
   - 2.1. CONNECT TO NEW 12" VALVE FROM PHASE 2
     - 2.1.1. REMOVE TEMPORARY BLOWOFF FROM PHASE 2
   - 2.2. CONNECT TO NEW 12" VALVE FROM PHASE 1B
   - 2.3. INSTALL TEMPORARY BLOWOFF HYDRANTS ON NORTH AND SOUTH LEGS OF 2ND ST & 1ST ST.
3. PRESSURE AND BACTERIA TEST NEW 12" MAIN
4. RELOCATE ALL SERVICES TO NEW 12" MAIN
5. CONNECTION TO EXISTING WATER MAIN AT 2ND ST
   - 5.1. CLOSE VALVES AT THE FOLLOWING LOCATIONS
     - 5.1.1. NEW 12" VALVE @ 15+30.34
     - 5.1.2. NEW 12" VAVLE EAST OF 3RD ST.
     - 5.1.3. SOUTH SIDE OF 2ND ST & GRANT
     - 5.1.4. NORTH SIDE OF 2ND ST & MAIN ST
   - 5.2. REMOVE TEMPORARY BLOWOFF HYDRANTS
   - 5.3. MAKE CONNECTION 2ND ST
   - 5.4. OPEN ALL VALVES
6. CONNECTION TO EXISTING WATER MAIN AT 1ST ST
   - 6.1. CLOSE VALVES AT THE FOLLOWING LOCATIONS
     - 6.1.1. NEW 12" VALVE @ 15+30.34
     - 6.1.2. NORTH SIDE OF 1ST ST & MAIN ST
     - 6.1.3. SOUTH SIDE OF 1ST ST & WEBSTER ST
     - 6.1.4. NEW 12" VALVE AT PHASE 1B LINE
     - 6.1.5. REMOVE EXISTING BLOWOFF HYDRANT
   - 6.2. MAKE CONNECTION ON 1ST ST
   - 6.3. OPEN ALL VALVES
7. REMOVAL ALL EXISTING WATER MAIN IN PHASE 3 INCLUDING TEMPORARY BLOWOFF HYDRANTS

LEGEND

- TRAFFIC SIGN
- TYPE III BARRICADE
- PORTABLE DYNAMIC MESSAGE SIGN
- WORK AREA
- ROAD CLOSURE



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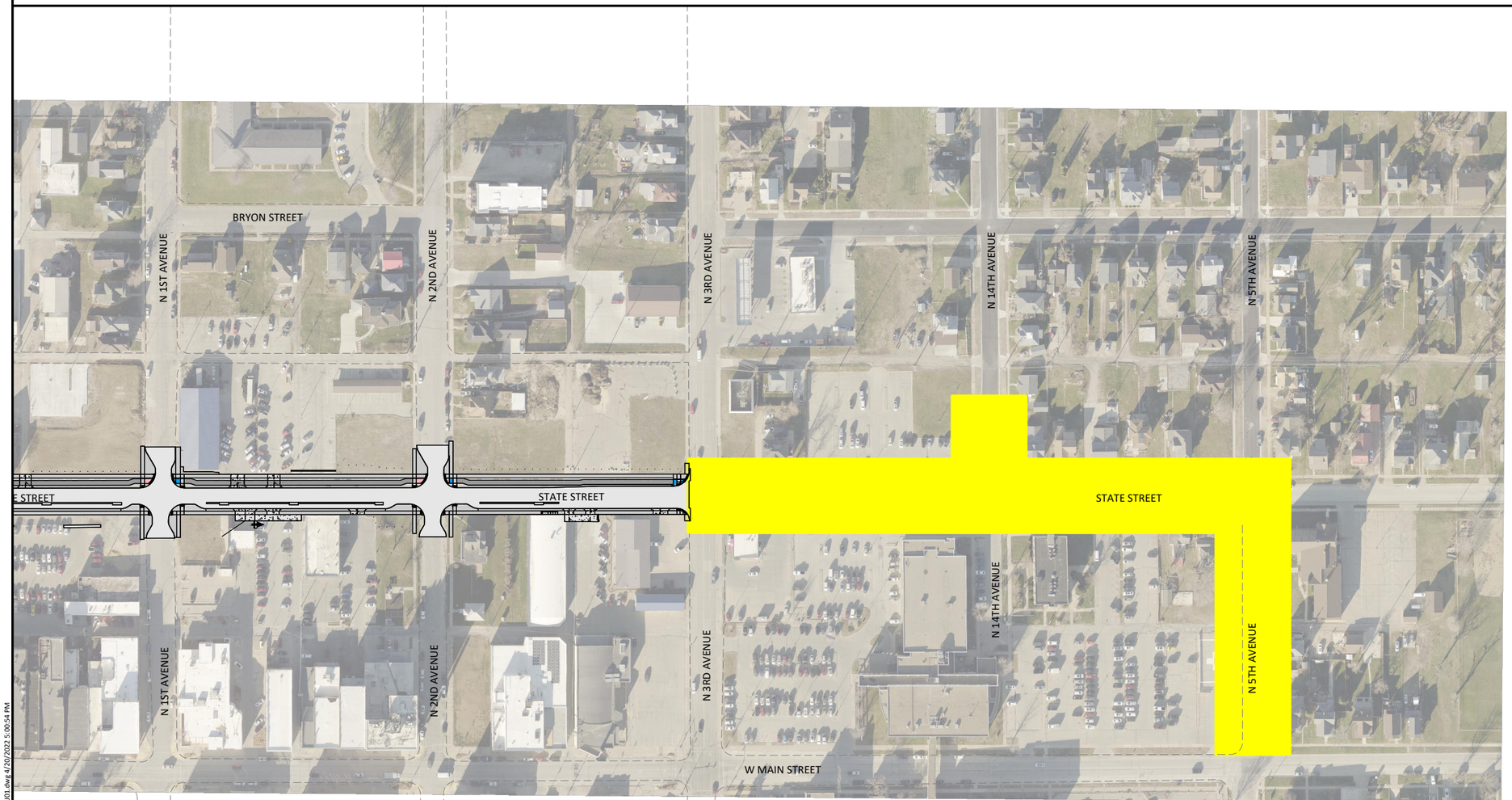
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STAGING AND TRAFFIC CONTROL SHEETS

SHEET J.06

- PHASE 4
  - INSTALL TEMPORARY TRAFFIC CONTROL.
  - REMOVE EXISTING PAVEMENT MARKINGS
  - INSTALL PERMANENT PAVEMENT MARKINGS
  - MARKINGS TO BE PLACED UNDER TRAFFIC, COORDINATE WITH THE PROJECT ENGINEER
  - CONSIDER WARNING FOR PAVEMENT MARKING OPERATIONS/WET PAINT PER DISCUSSION WITH THE PROJECT ENGINEER



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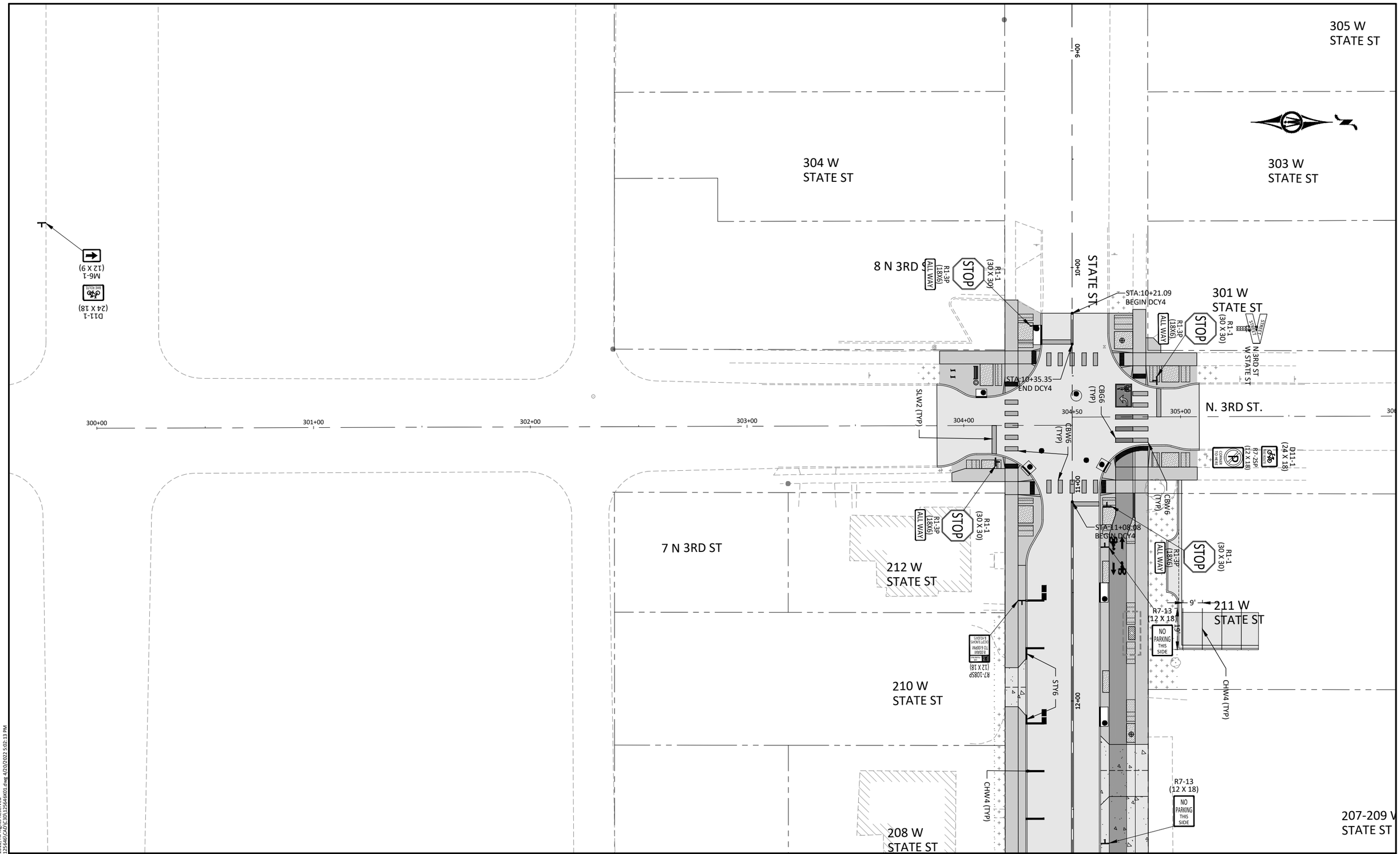
STAGING AND TRAFFIC CONTROL SHEETS

SHEET J.07



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING SHEETS

SHEET
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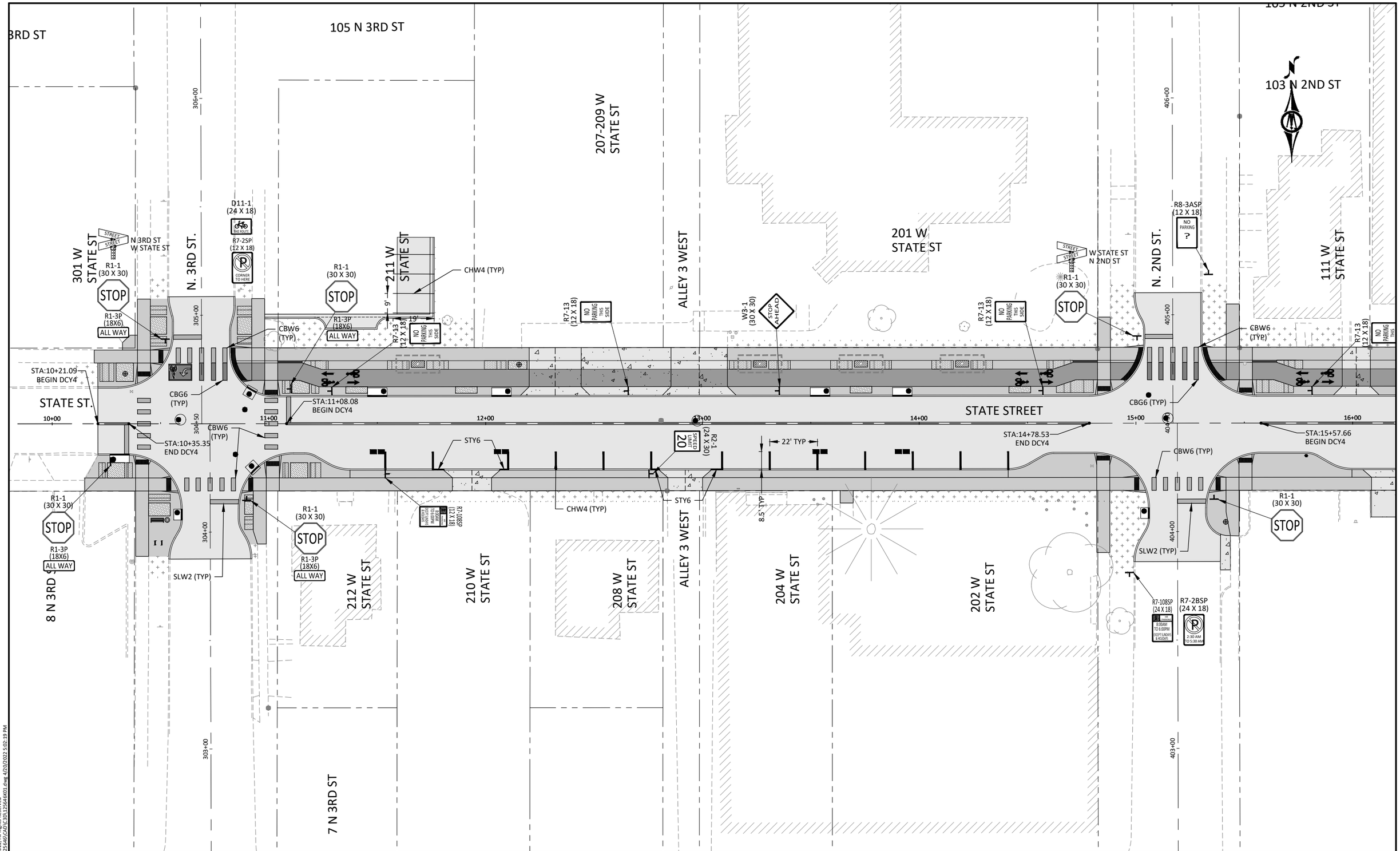

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING SHEETS

SHEET
K.01

ND ST

107 W
STATE ST

111 W
STATE ST

105 W
STATE ST

103 W
STATE ST

104 N 1ST ST

101 W
STATE ST

102 N
1ST ST

N. 1ST ST.

19 W STATE ST

35 W STATE ST

ALLEY 1 WEST

15 W STATE ST

STREET
STREET

W STATE ST
N 1ST ST

R1-1
(30 X 30)
STOP

R7-108SP
(12 X 18)
8:00AM
TO 6:00PM
EXCEPT SUNDAYS
& HOLIDAYS

R7-13
(12 X 18)
NO
PARKING
THIS
SIDE

SLW2
(TYP)

CBW6 (TYP)

CBG6 (TYP)

506+00

505+00

504+50

504+00

503+00

STATE ST.

16+00

17+00

18+00

19+00

20+00

21+00

22+00

STA:15+57.66
BEGIN DCY4

STA:19+22.33
END DCY4

STA:19+98.89
BEGIN DCY4

STY6 (TYP)

22' TYP

8.5' TYP

CHW4 (TYP)

110 W
STATE ST

ALLEY 2 WEST

108 W
STATE ST

104 W
STATE ST

R7-15P
(12 X 18)
NO
PARKING
HERE
TO CORNER

R8-34SP
(12 X 18)
NO
DOUBLE
PARKING

R7-108P
(24 X 18)
8:00AM
TO 6:00PM
EXCEPT SUNDAYS
& HOLIDAYS

R7-25P
(24 X 18)

(24 X 18)
PUBLIC
PARKING

35 N 1ST ST

20 W STATE ST

25 N 1ST ST

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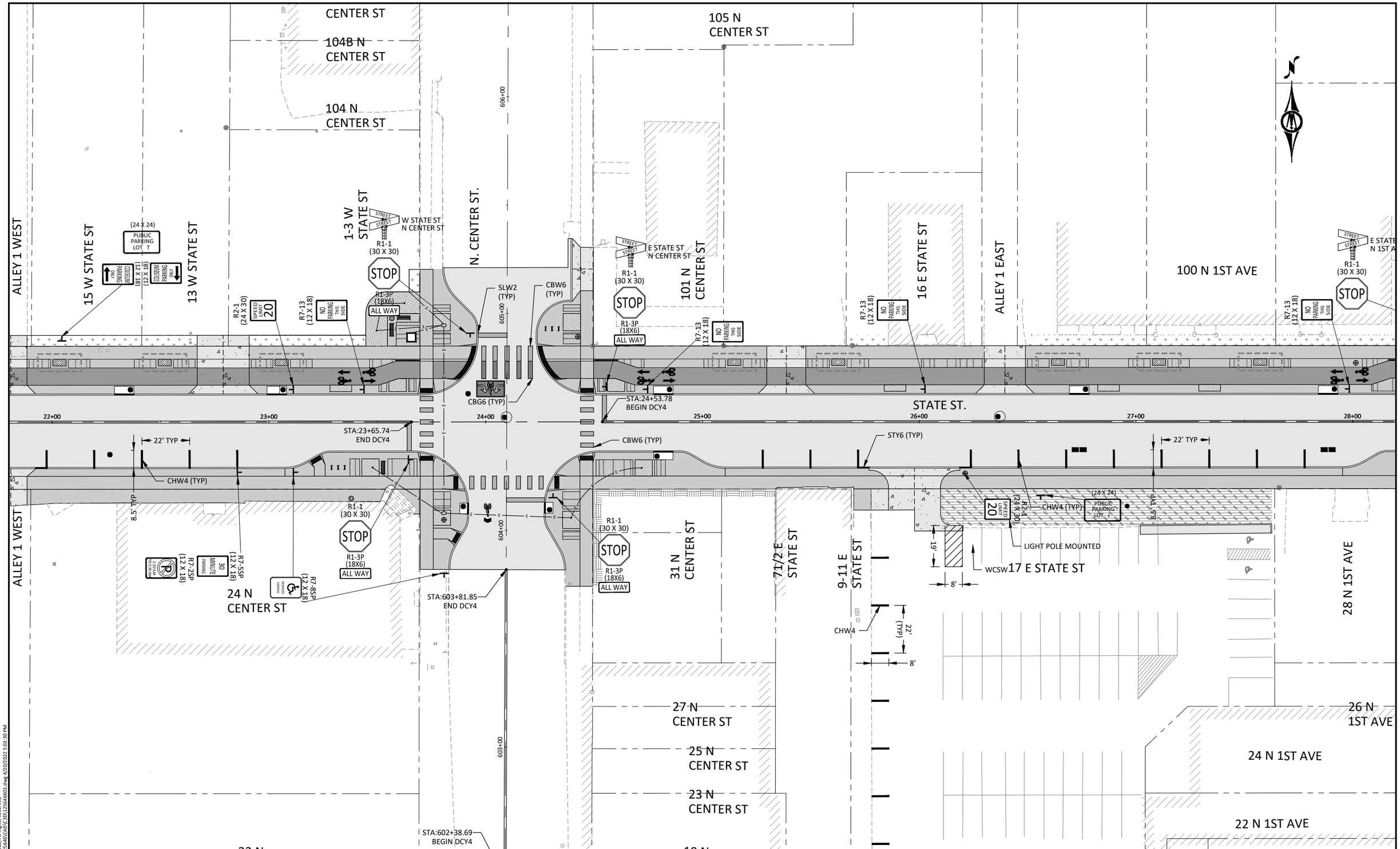
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING SHEETS

SHEET
K.02



HORZ. 0 20 40 SCALE FEET

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SHEET K.03

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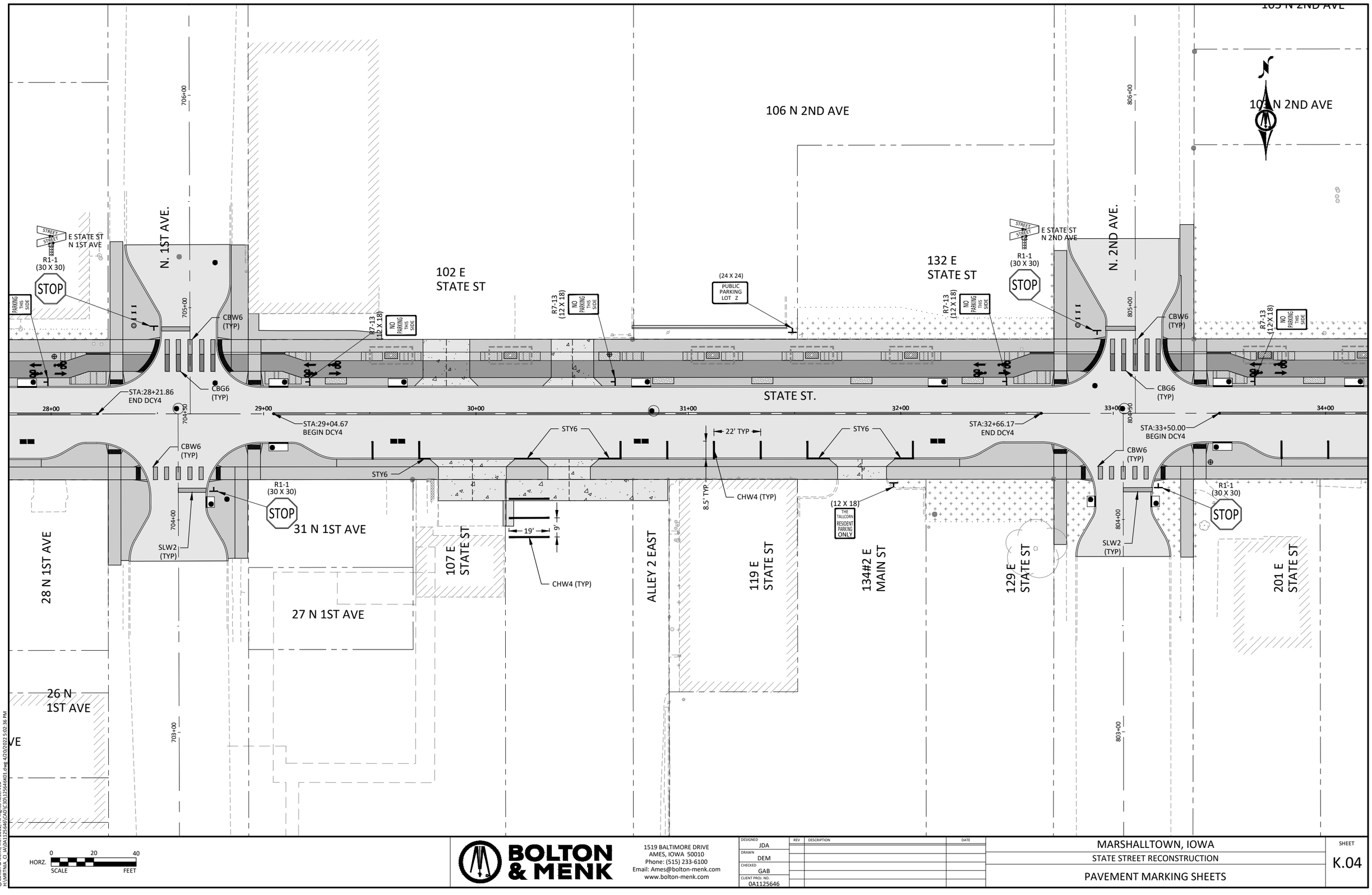

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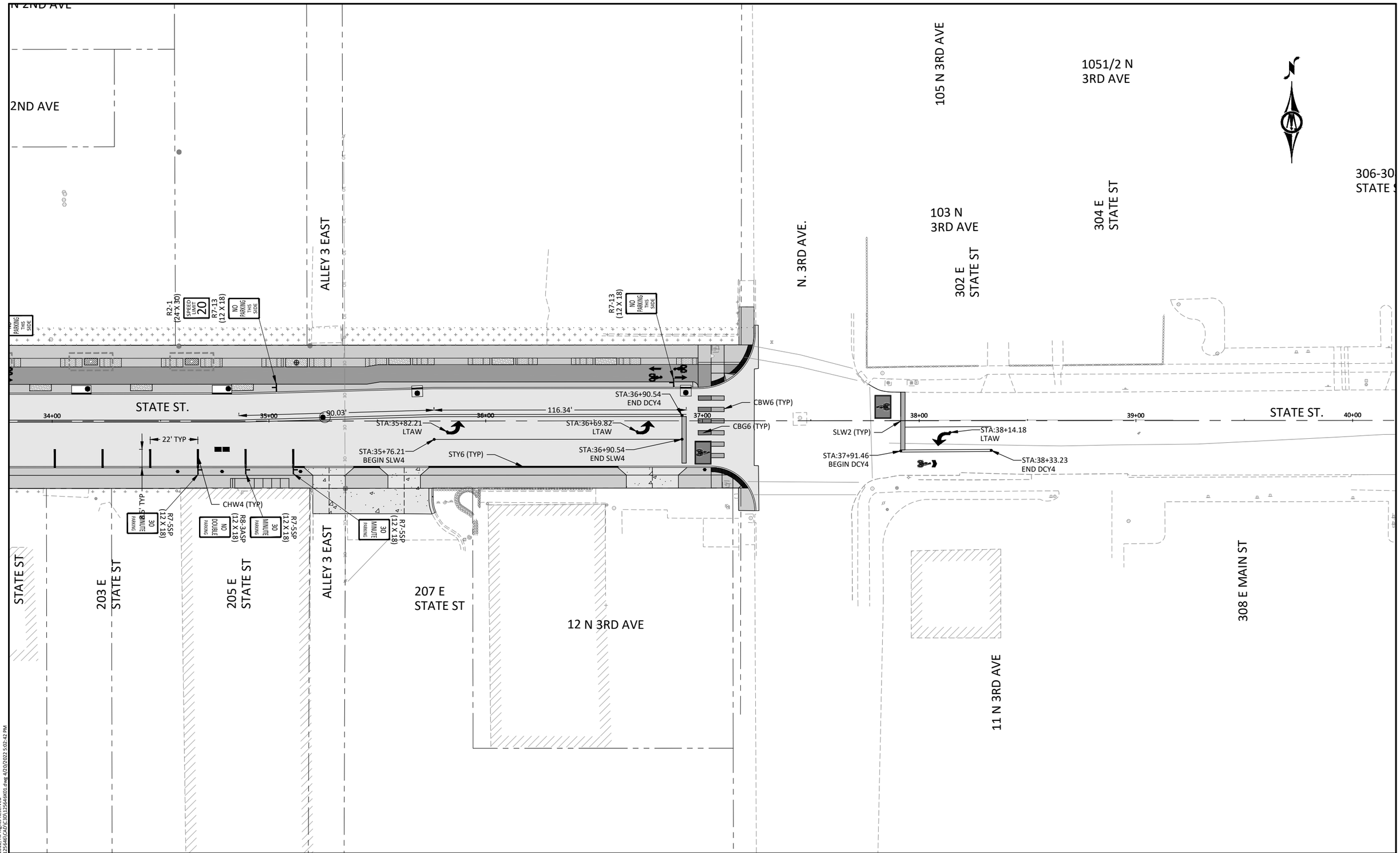
REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING SHEETS

SHEET
K.04



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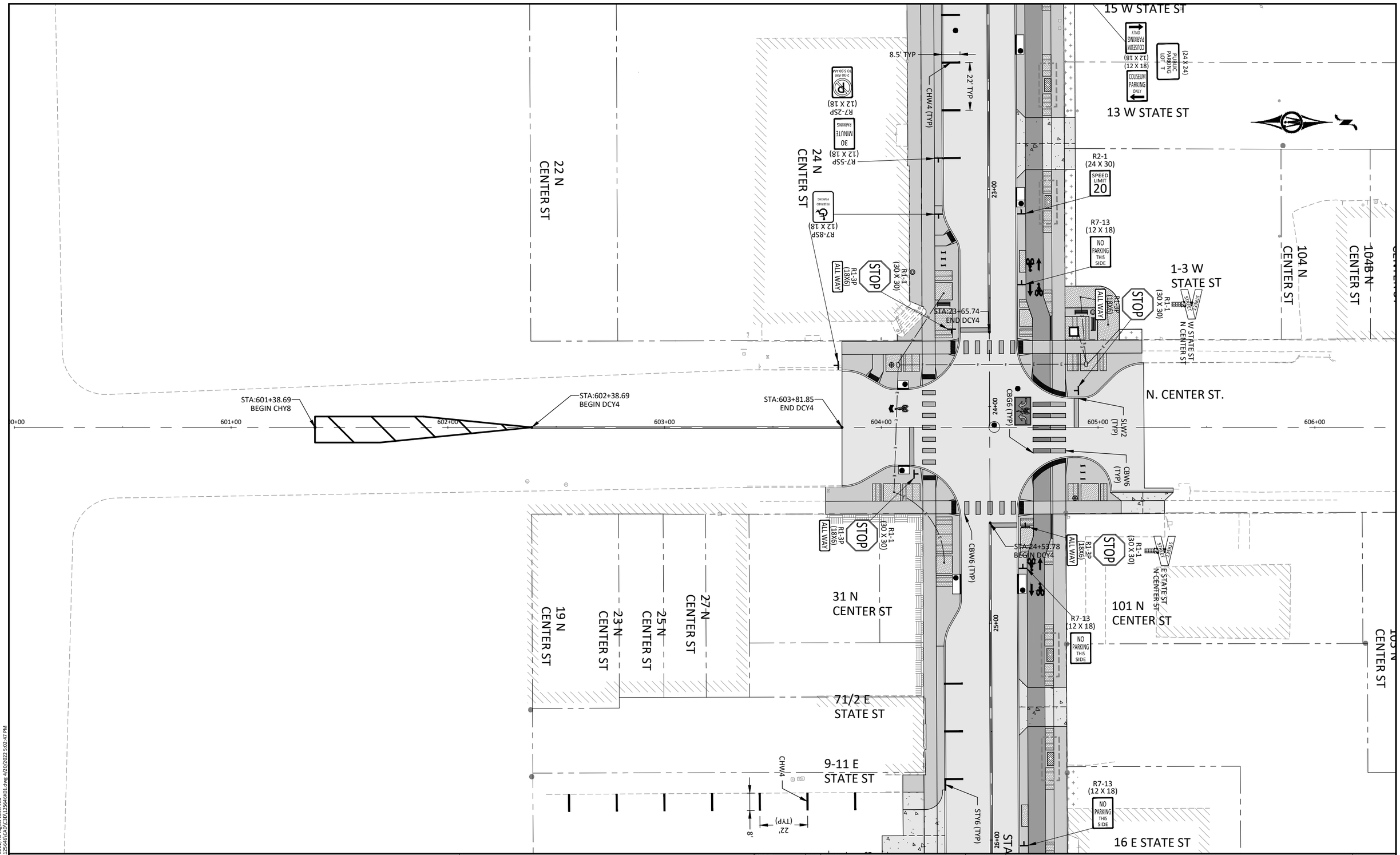
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING SHEETS

SHEET
K.05



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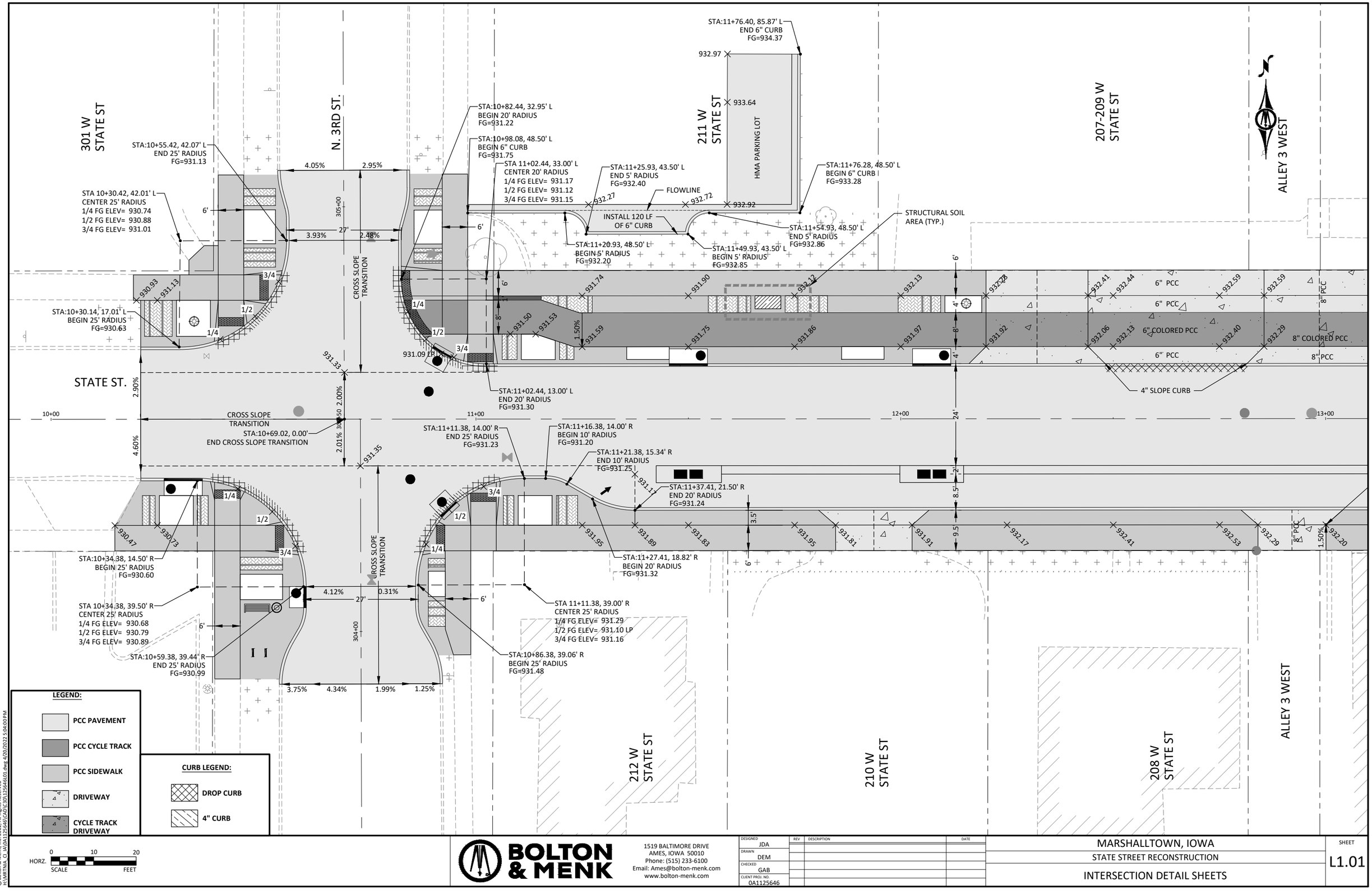
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
PAVEMENT MARKING SHEETS

SHEET K.07



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MARSHALLTOWN, IOWA
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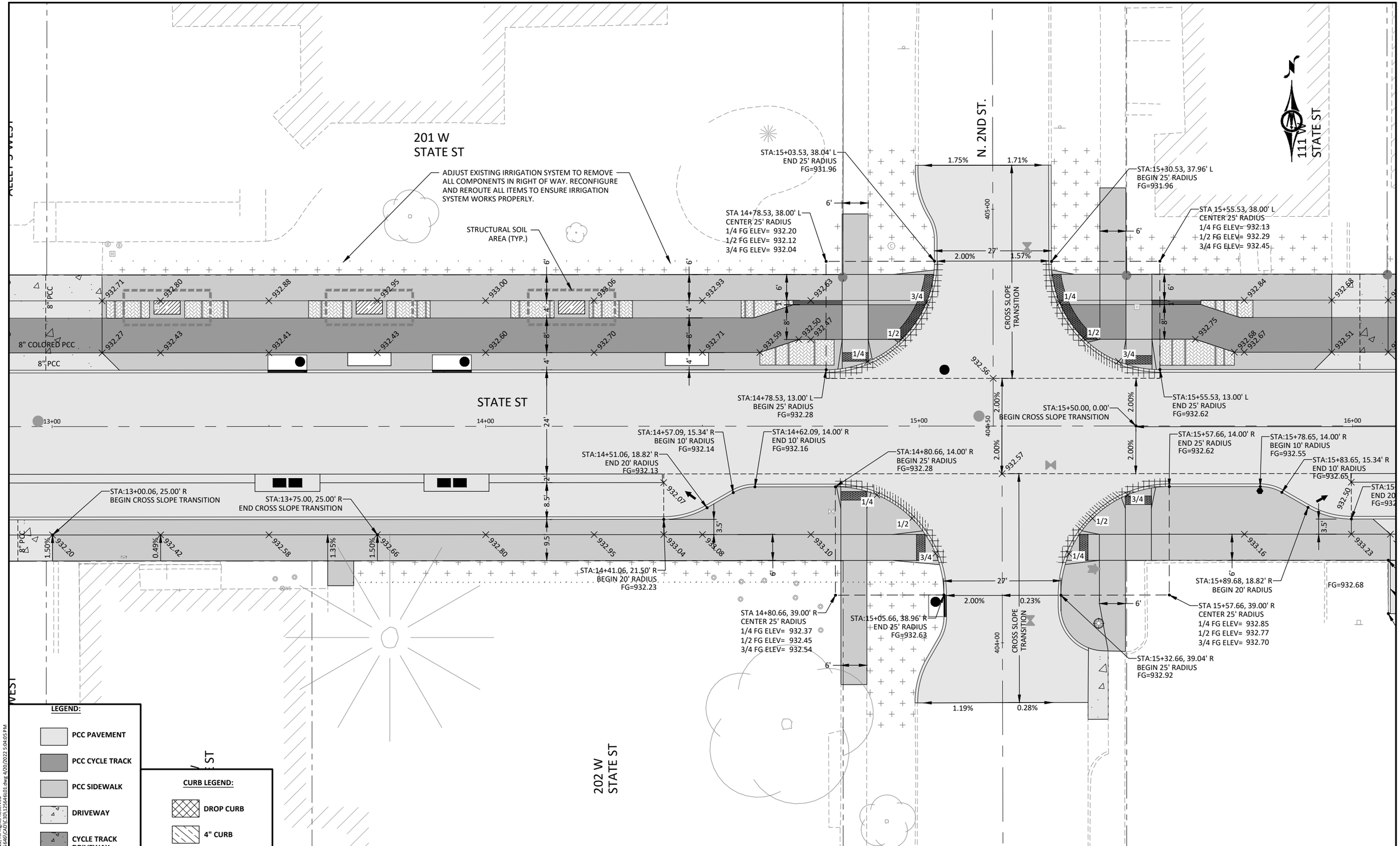
INTERSECTION DETAIL SHEETS

SHEET
L1.01



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
INTERSECTION DETAIL SHEETS

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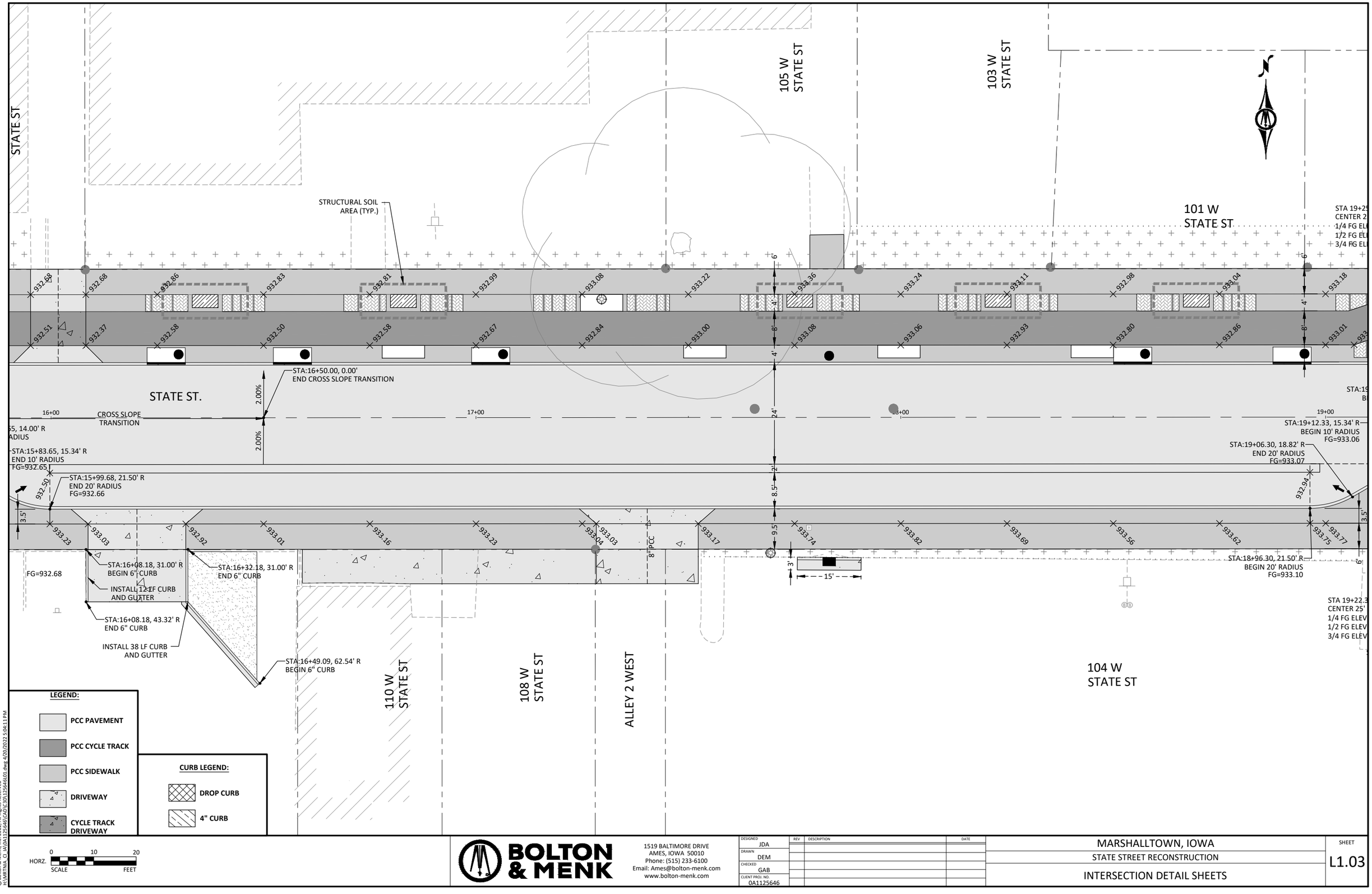
L1.02



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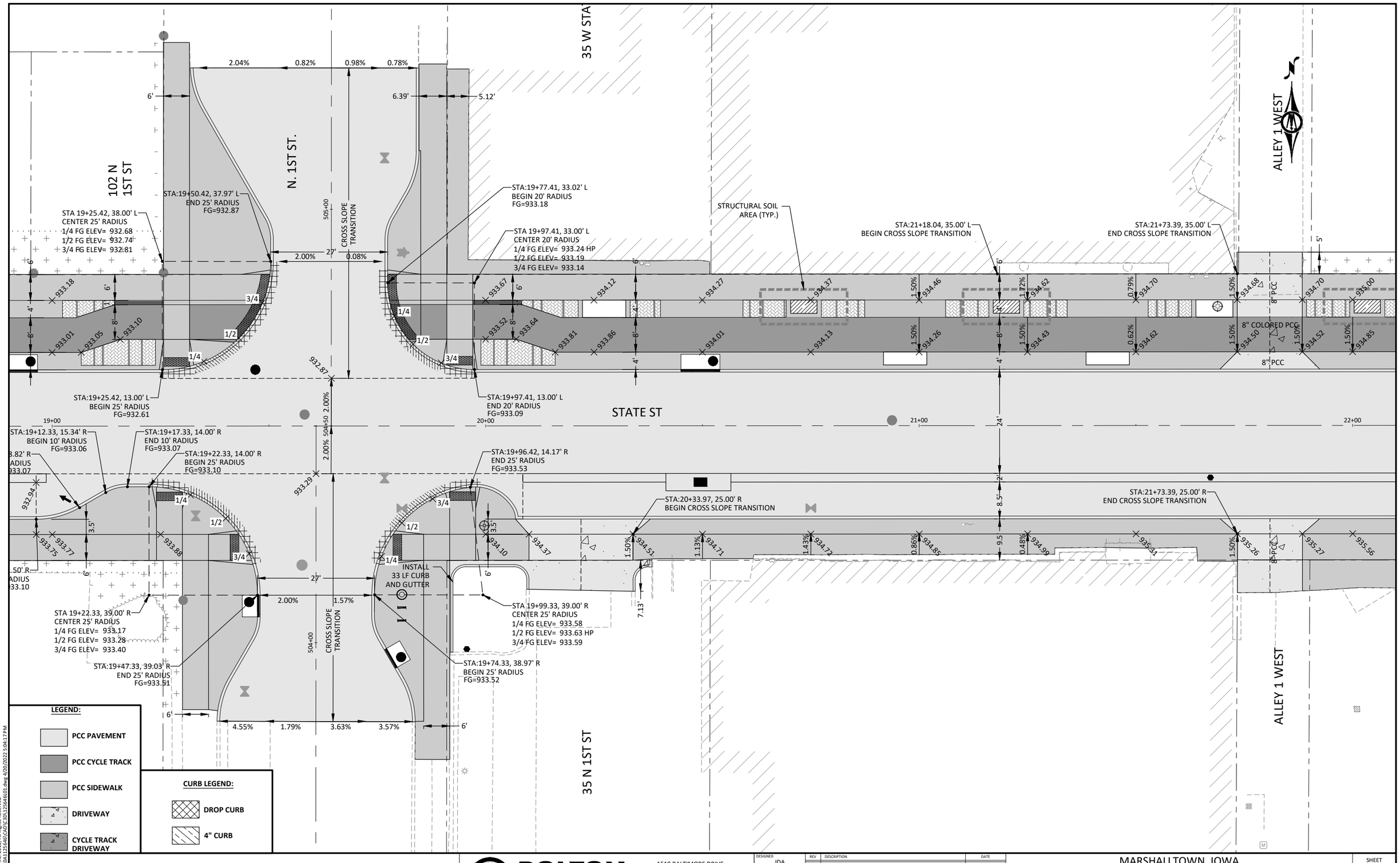
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
INTERSECTION DETAIL SHEETS

SHEET
L1.03



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
INTERSECTION DETAIL SHEETS

SHEET
L1.04

1-3 W STATE ST

N. CENTER ST.

101 N CENTER ST

STA:23+95.86, 37.90' L
END 25' RADIUS
FG=935.36

STA 23+70.86, 38.00' L
CENTER 25' RADIUS
1/4 FG ELEV= 935.14
1/2 FG ELEV= 935.21
3/4 FG ELEV= 935.28

STRUCTURAL SOIL
AREA (TYP.)

STA:24+23.86, 38.10' L
BEGIN 25' RADIUS
FG=935.41

STA 24+48.86, 38.00' L
CENTER 25' RADIUS
1/4 FG ELEV= 935.25
1/2 FG ELEV= 935.15
3/4 FG ELEV= 935.05

STATE ST

STA:23+70.86, 13.00' L
BEGIN 25' RADIUS
FG=935.06

STA:24+48.86, 13.00' L
END 25' RADIUS
FG=934.94
CROSS SLOPE
TRANSITION

STA:23+23.42, 15.34' R
BEGIN 10' RADIUS
FG=935.23

STA:23+28.42, 14.00' R
END 10' RADIUS
FG=935.26

STA:23+17.39, 18.82' R
END 20' RADIUS
FG=935.24

STA:23+66.54, 14.00' R
BEGIN 25' RADIUS
FG=935.54

STA:24+00.00, 0.00' L
BEGIN CROSS SLOPE TRANSITION

STA:24+89.44, 14.00' R
BEGIN 10' RADIUS
FG=934.89

STA:24+52.54, 14.00' R
END 25' RADIUS
FG=935.19

STA:23+07.39, 21.50' R
BEGIN 20' RADIUS
FG=935.25

STA 23+66.54, 39.00' R
CENTER 25' RADIUS
1/4 FG ELEV= 935.59
1/2 FG ELEV= 935.69
3/4 FG ELEV= 935.79

STA 24+52.54, 39.00' R
CENTER 25' RADIUS
1/4 FG ELEV= 935.69
1/2 FG ELEV= 935.50
3/4 FG ELEV= 935.32

STA:23+91.54, 39.10' R
END 25' RADIUS
FG=935.88

STA:24+27.54, 38.90' R
BEGIN 25' RADIUS
FG=935.88

THICKENED EDGE

24 N
CENTER ST

31 N
CENTER ST

LEGEND:

- PCC PAVEMENT
- PCC CYCLE TRACK
- PCC SIDEWALK
- DRIVEWAY
- CYCLE TRACK DRIVEWAY

CURB LEGEND:

- DROP CURB
- 4" CURB

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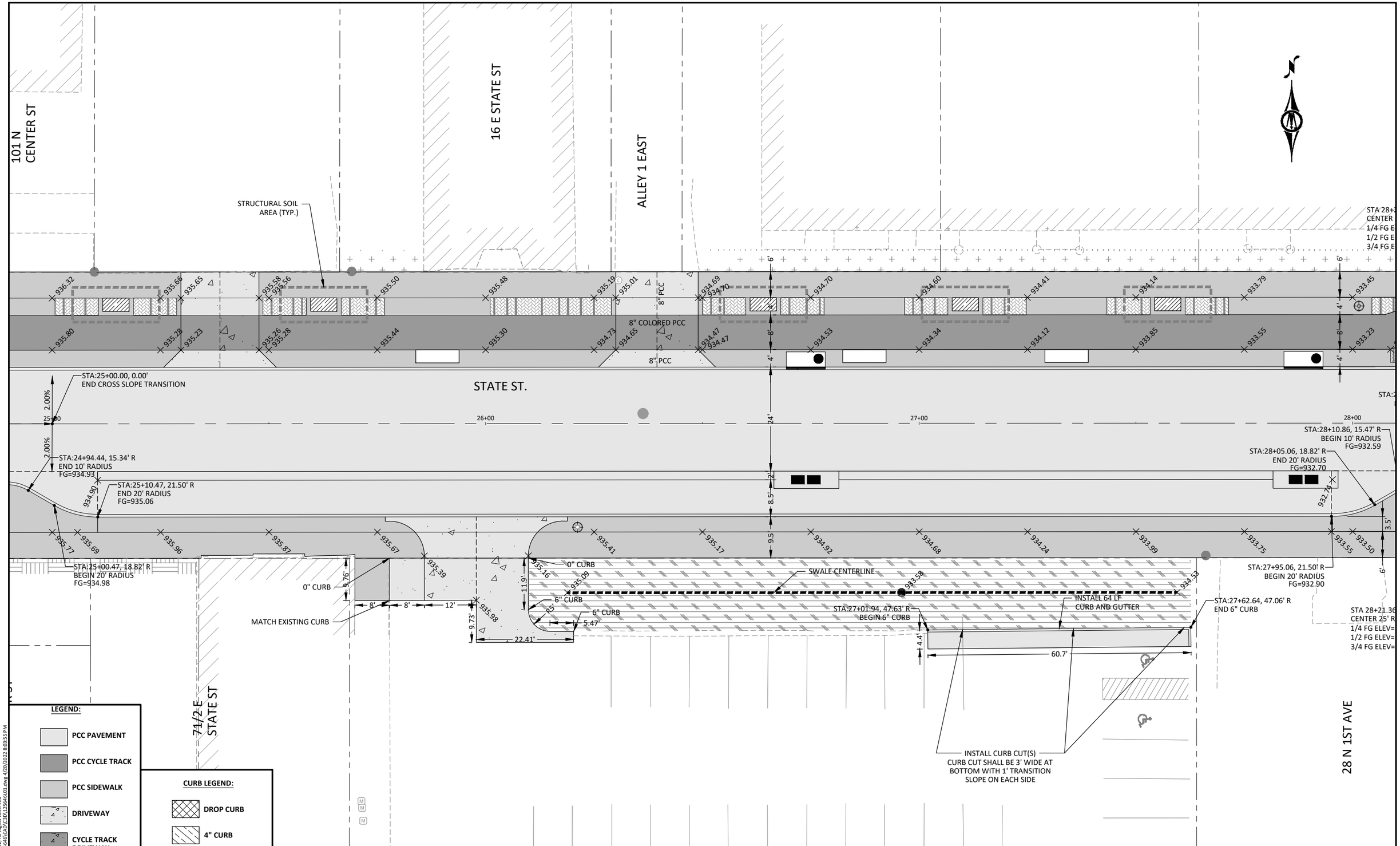
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
INTERSECTION DETAIL SHEETS

SHEET
L1.05



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
INTERSECTION DETAIL SHEETS

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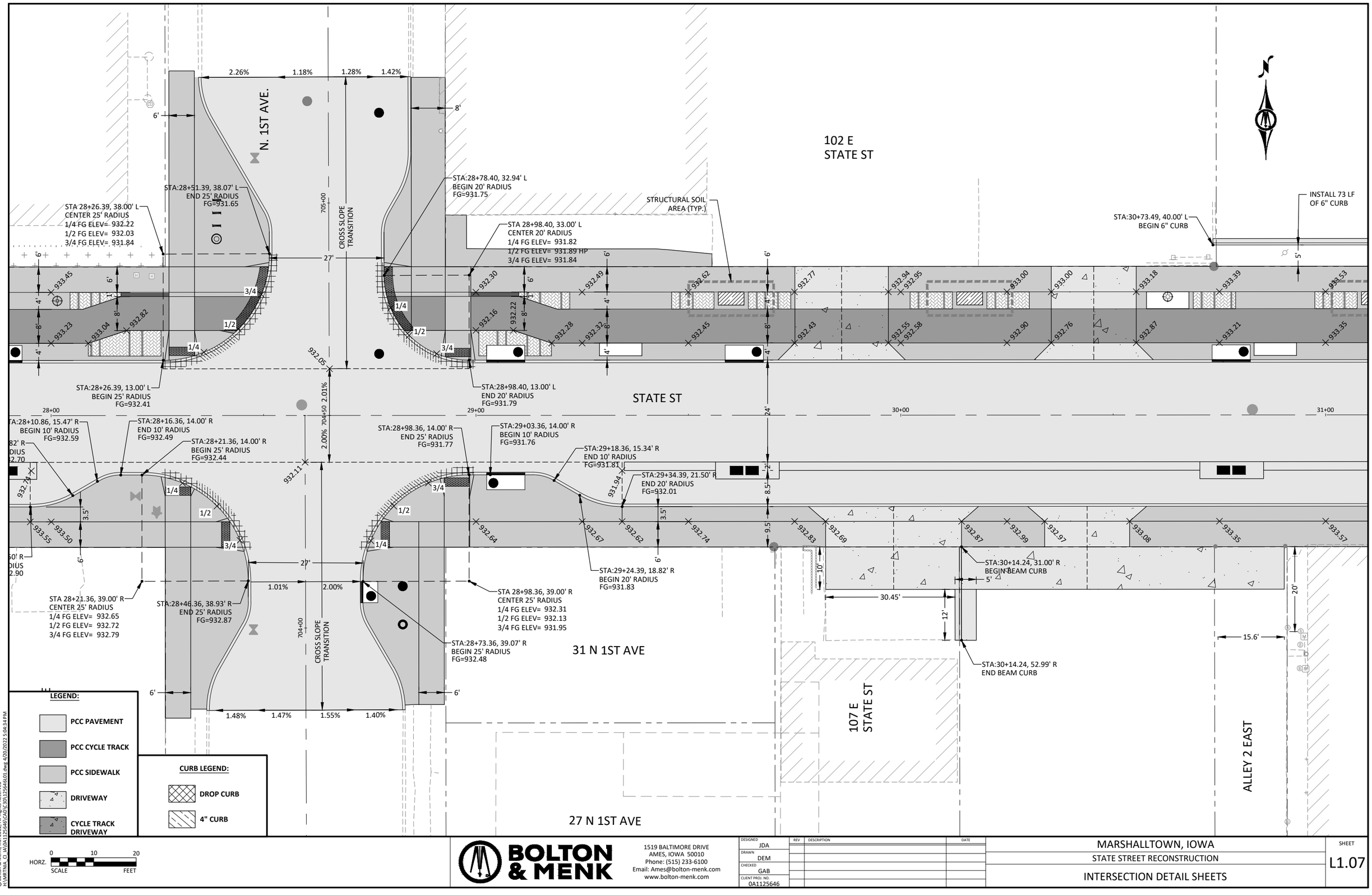
L1.06



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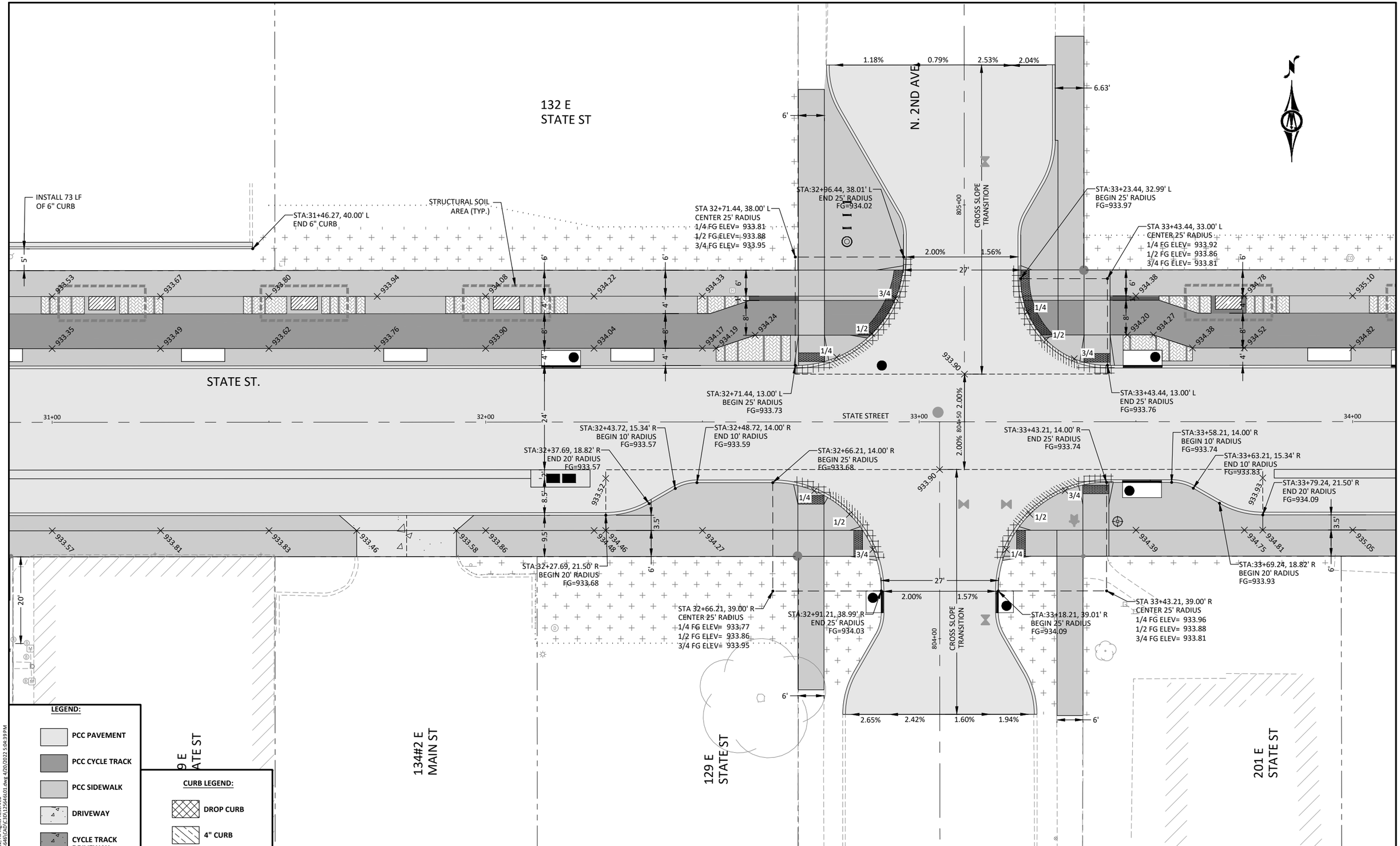
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
INTERSECTION DETAIL SHEETS

SHEET
L1.07



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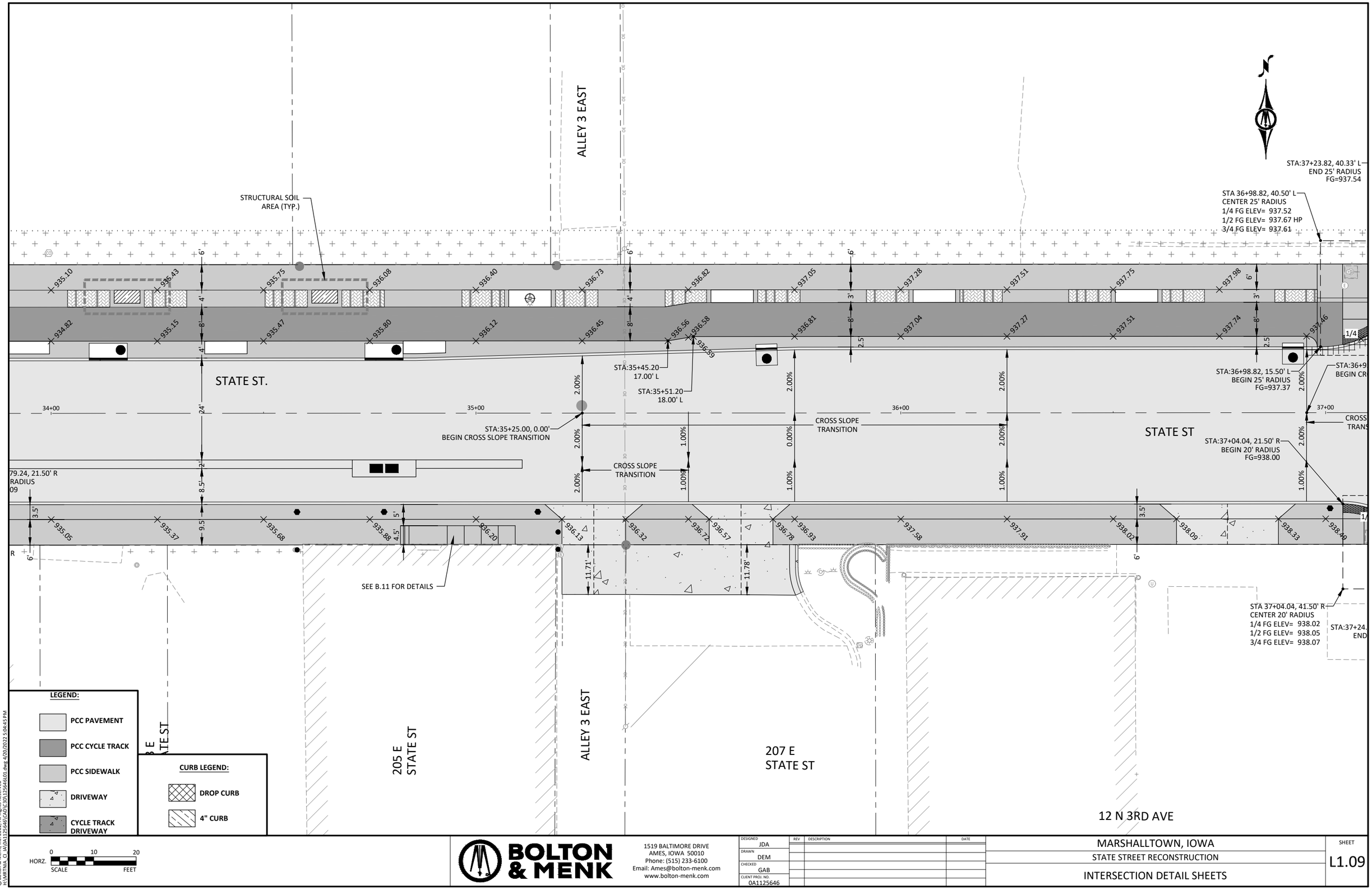
INTERSECTION DETAIL SHEETS

SHEET
L1.08



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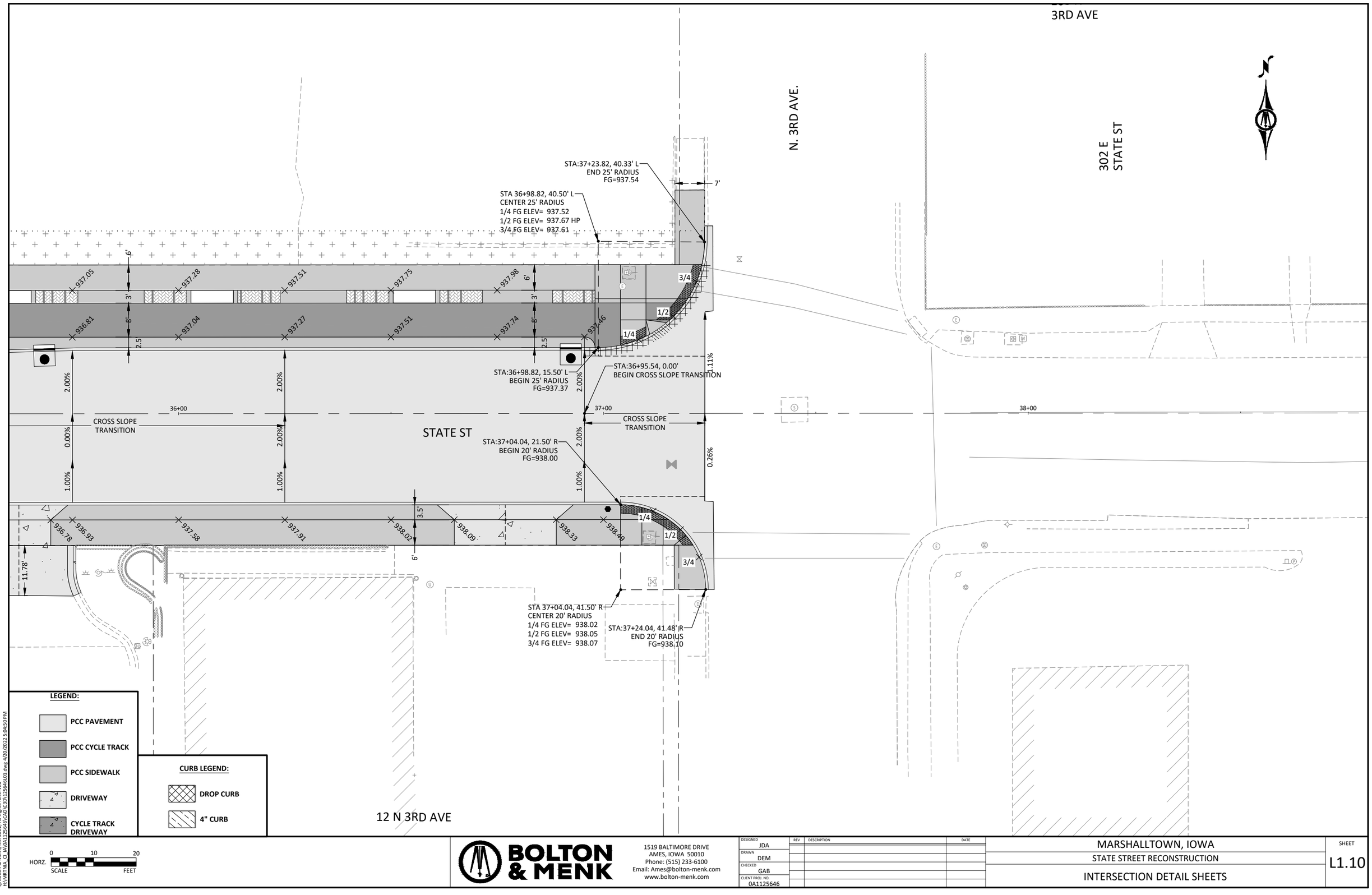
SHEET
L1.09



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MARSHALLTOWN, IOWA
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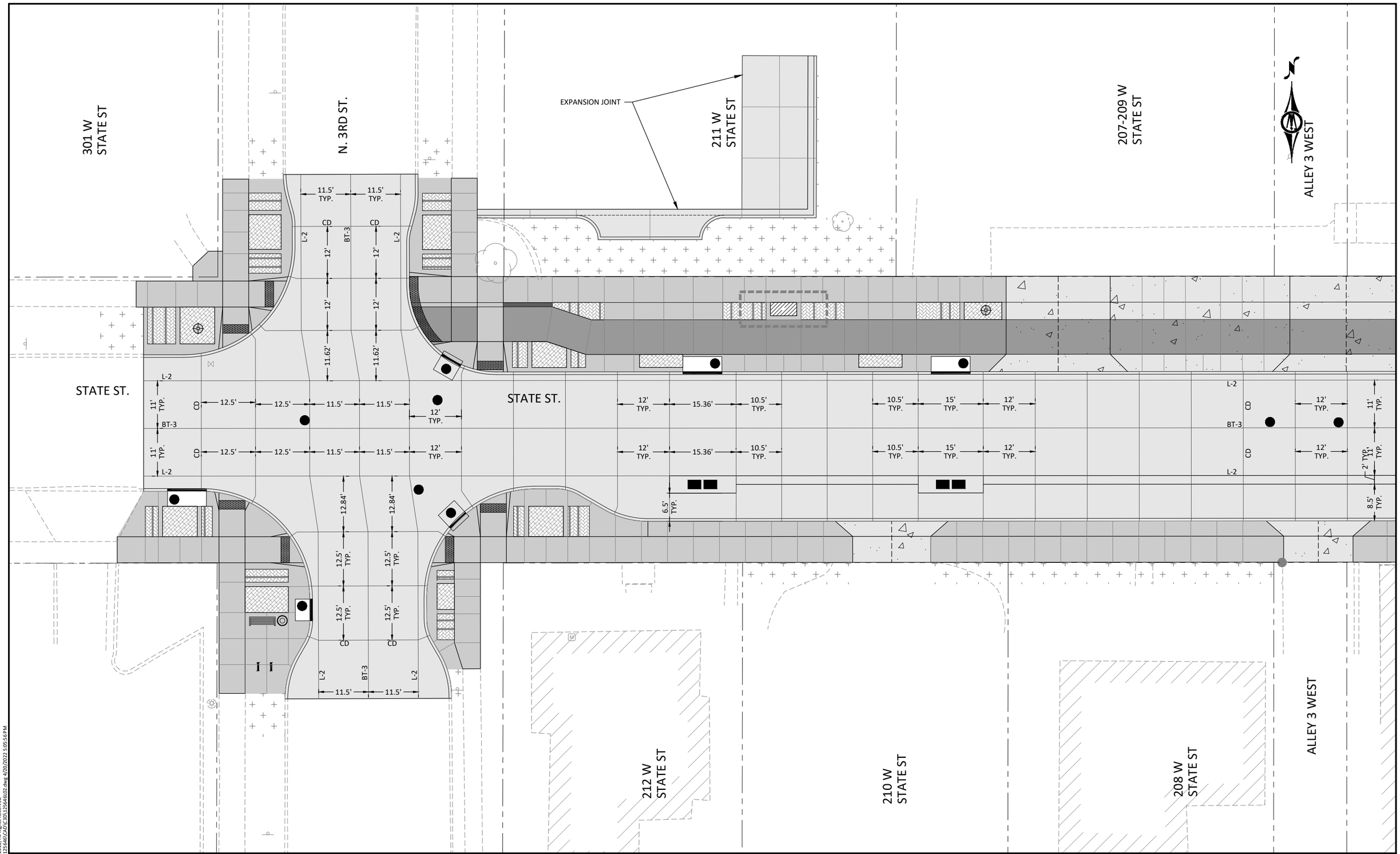
INTERSECTION DETAIL SHEETS

SHEET
L1.10



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REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
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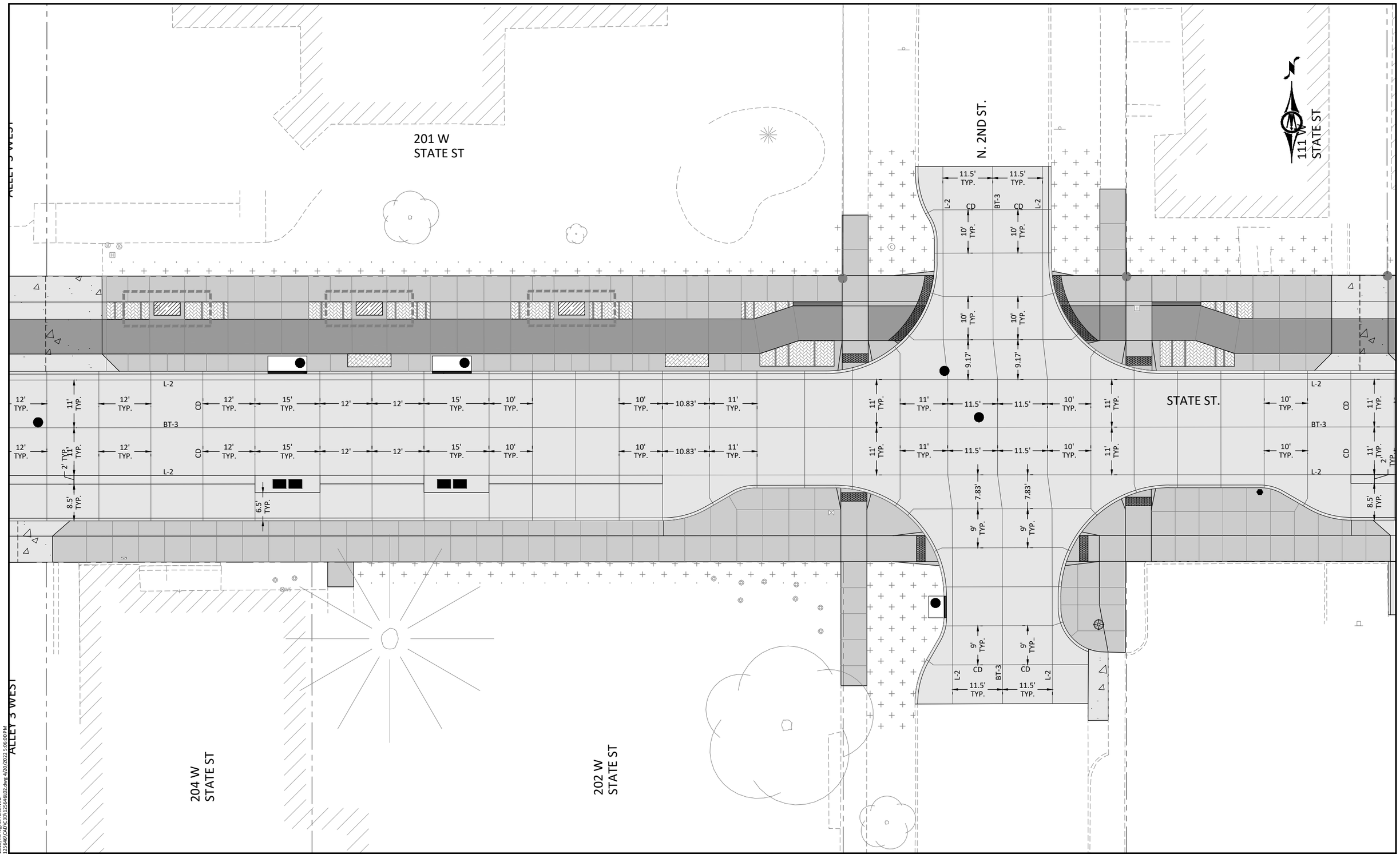
JOINTING SHEETS

SHEET
L2.01



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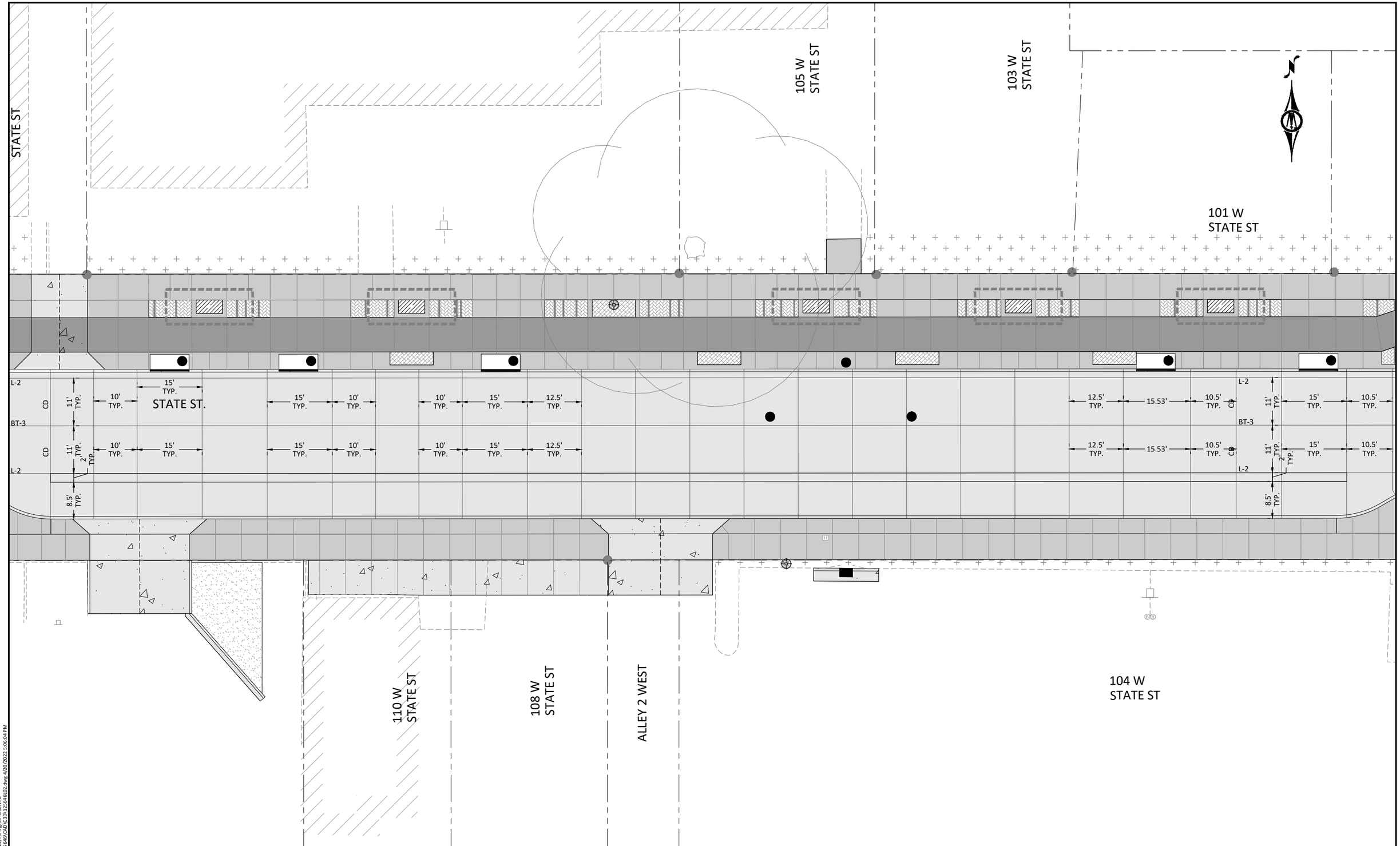
SHEET
L2.02



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SHEET
L2.03

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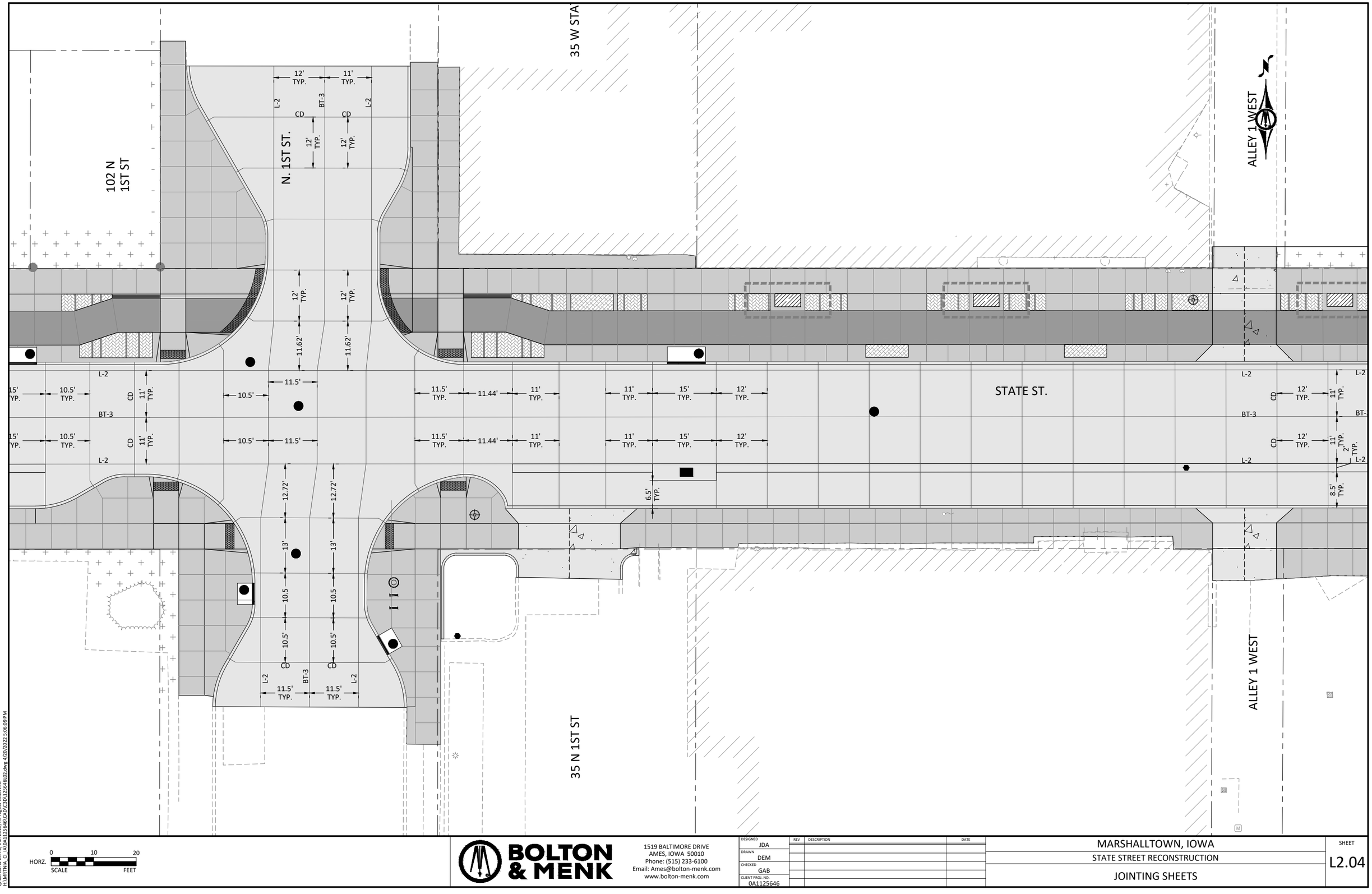

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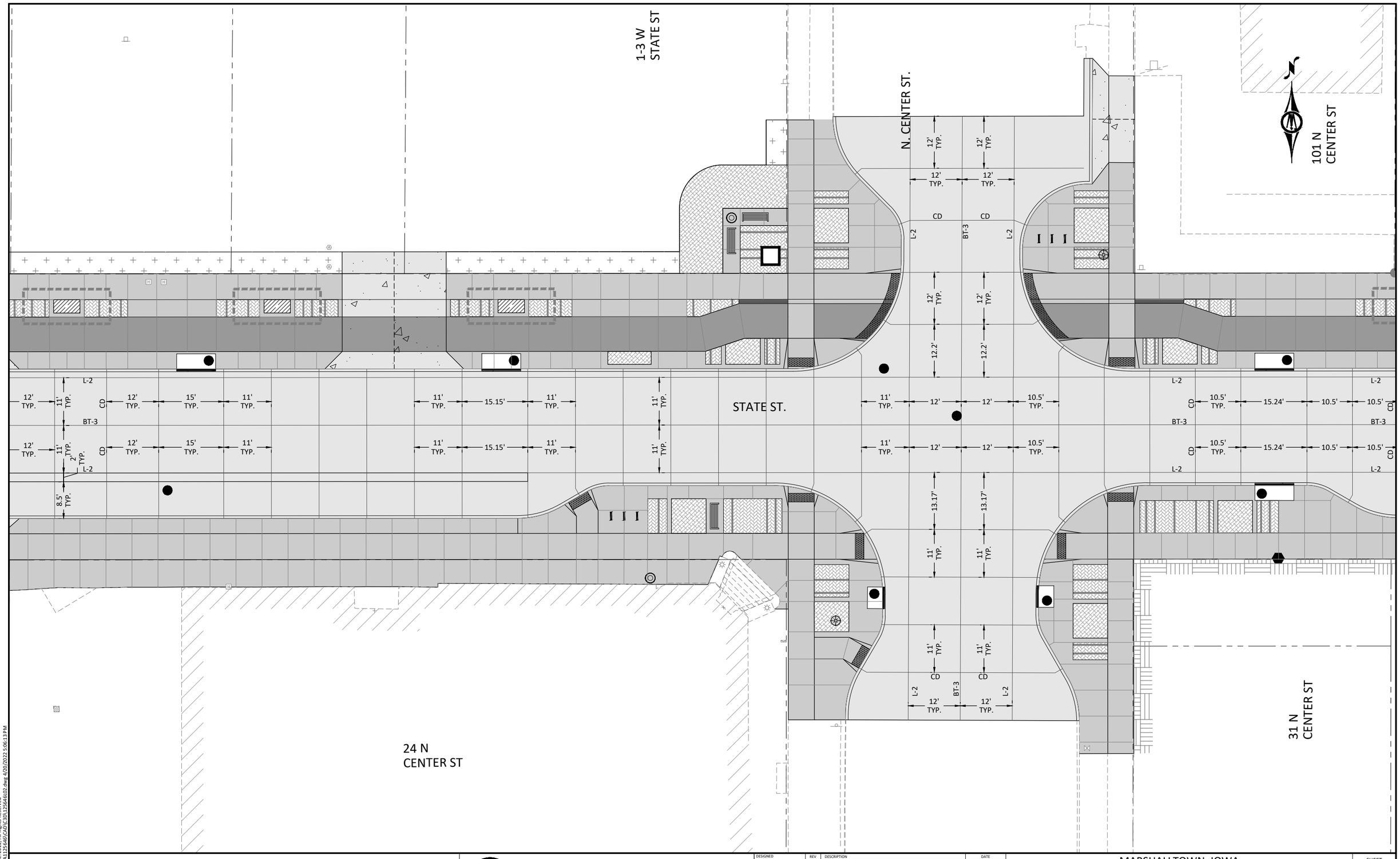
SHEET L2.04



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SHEET
L2.05

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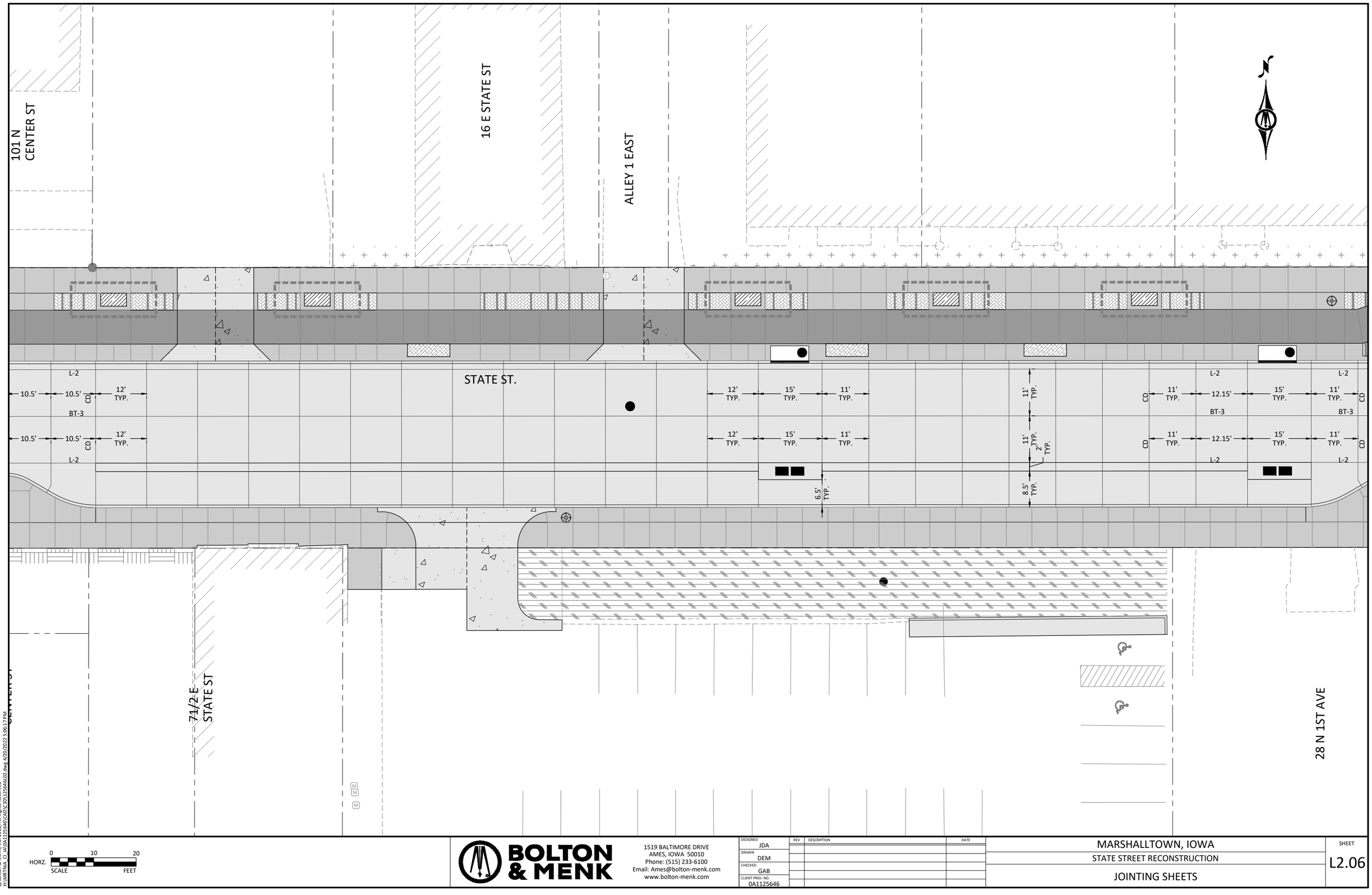

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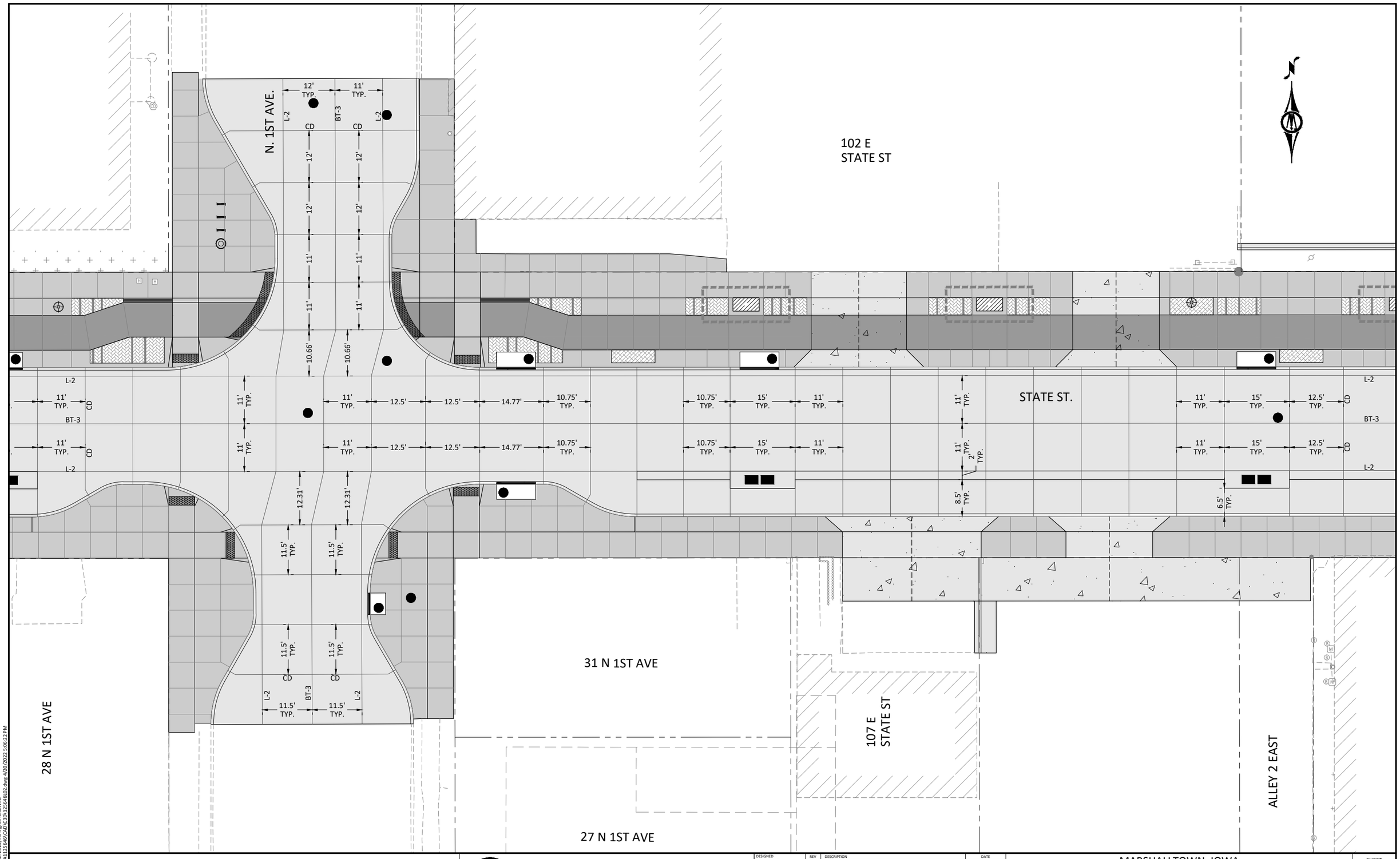
L2.06



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CLIENT PROJ. NO.			
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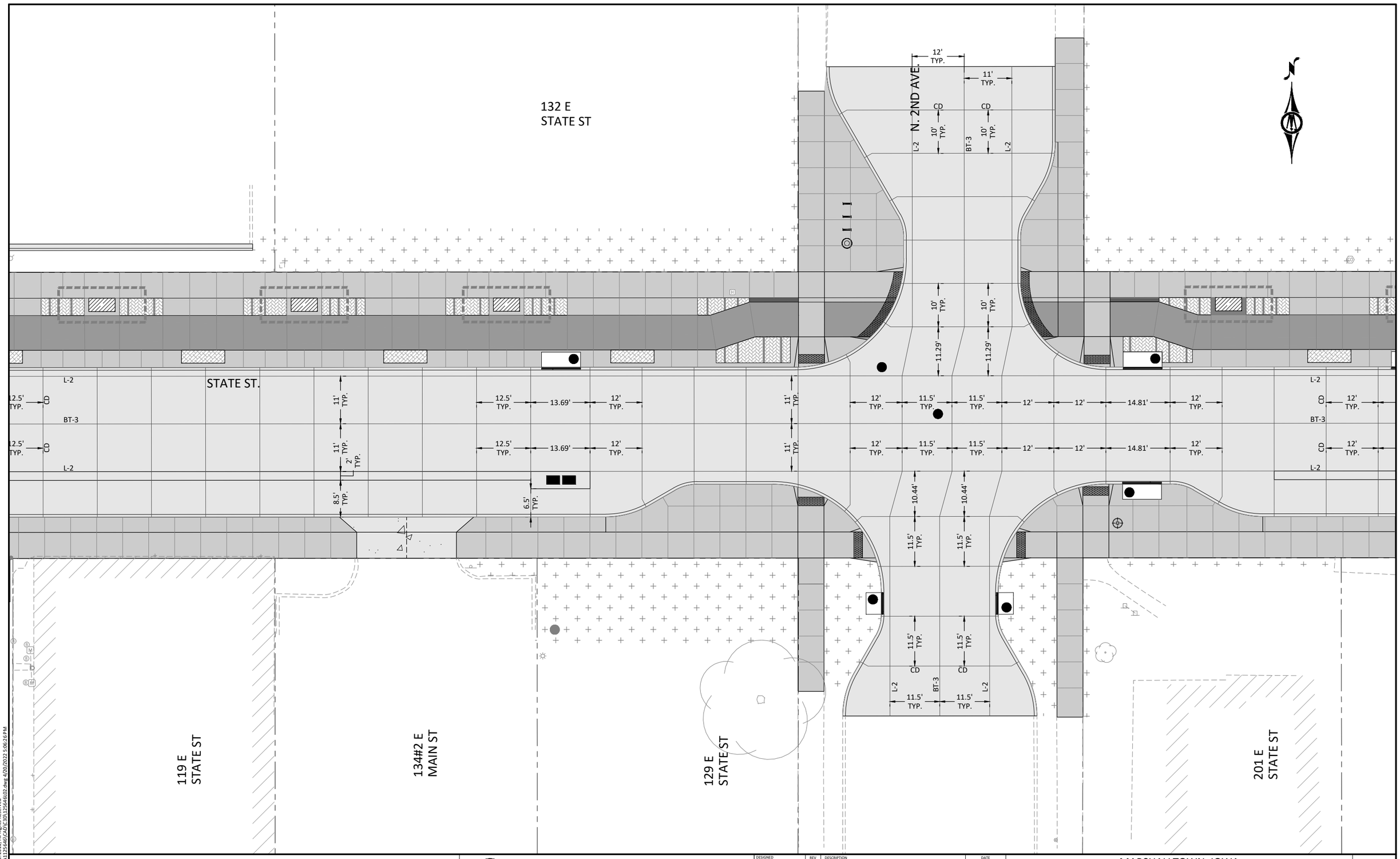
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
JOINTING SHEETS

SHEET
L2.07



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HORZ. SCALE 0 10 20 FEET

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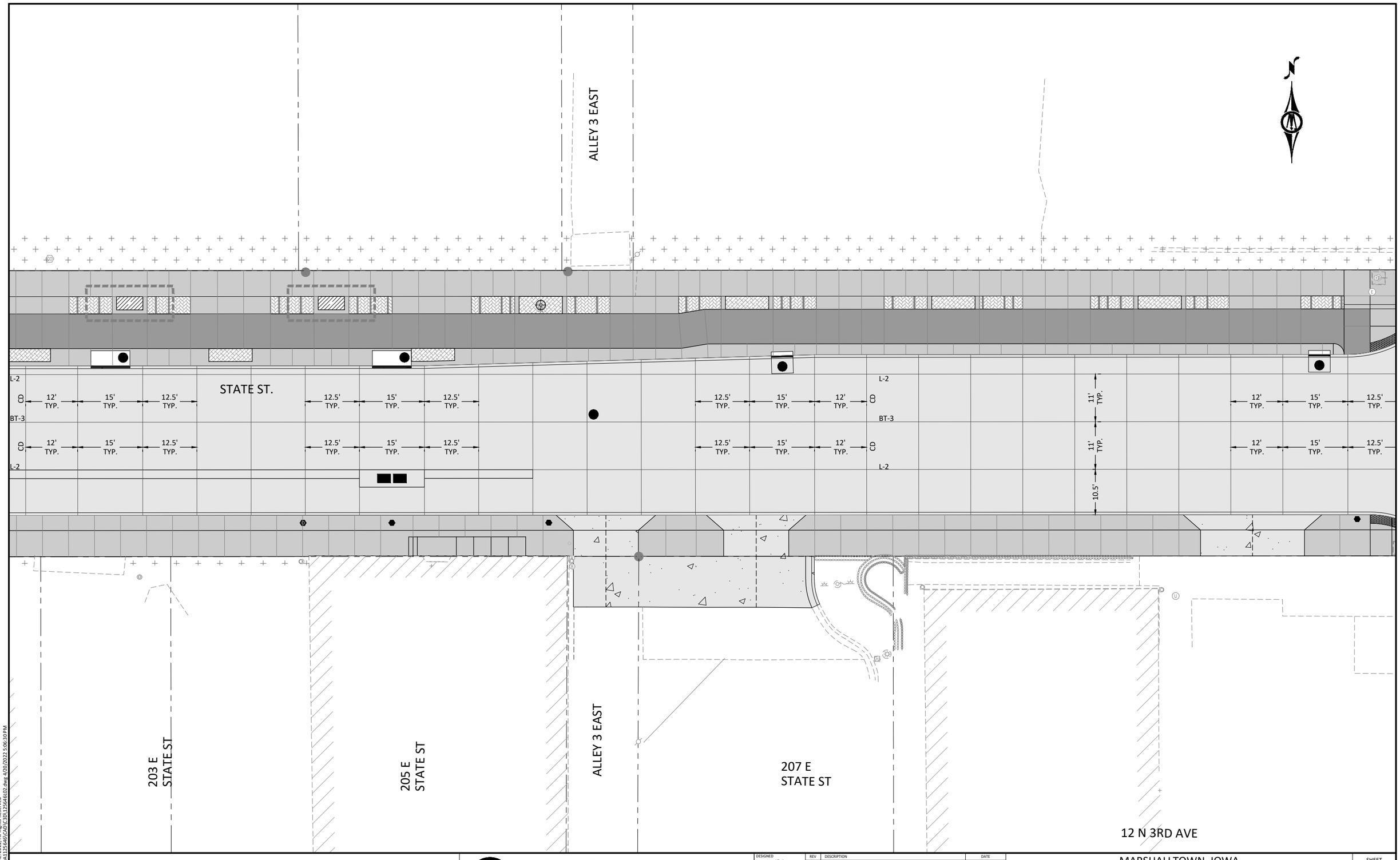
CLIENT PROJ. NO.	0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
JOINTING SHEETS

SHEET
L2.08



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HORZ. SCALE 0 10 20 FEET

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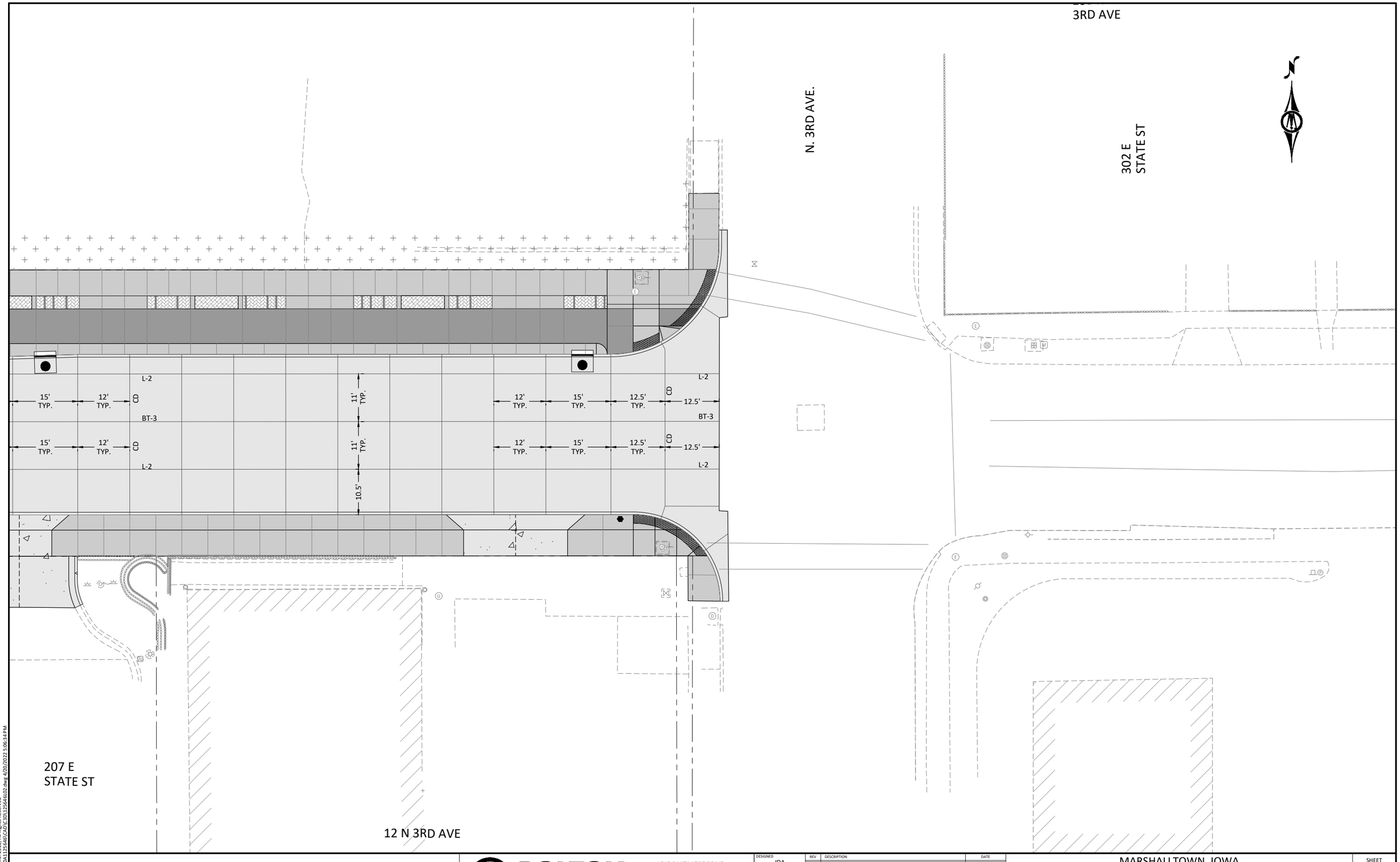
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
JOINTING SHEETS

SHEET L2.09



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HORZ. SCALE 0 10 20 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
JOINTING SHEETS

SHEET
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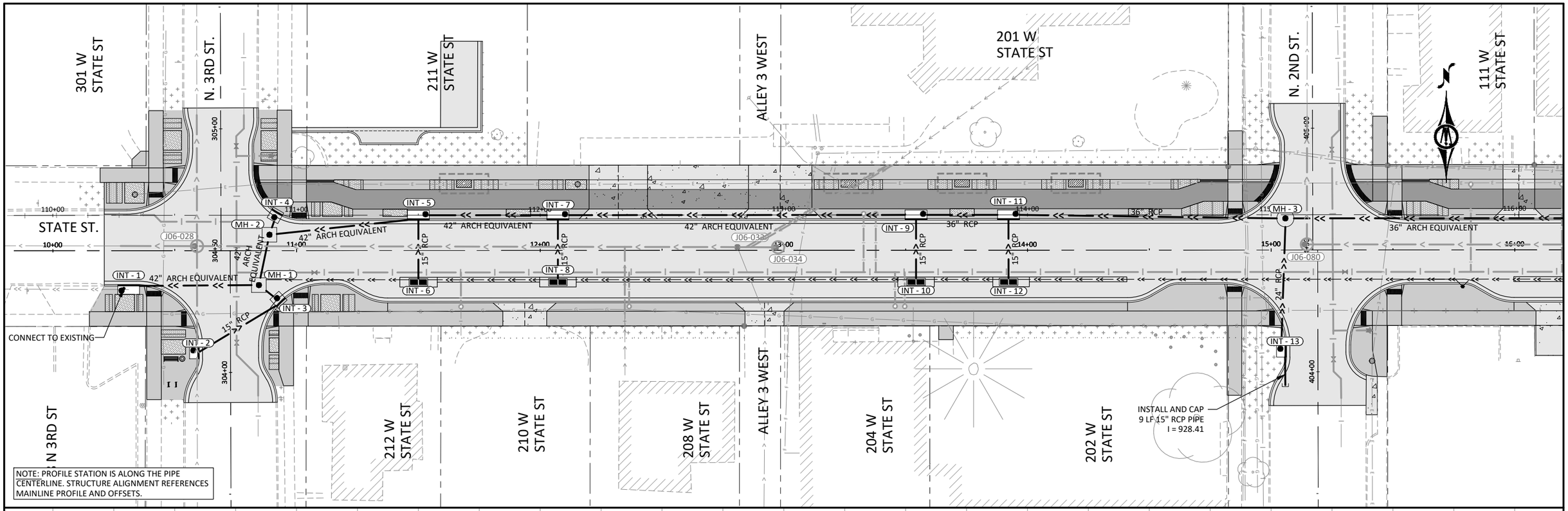

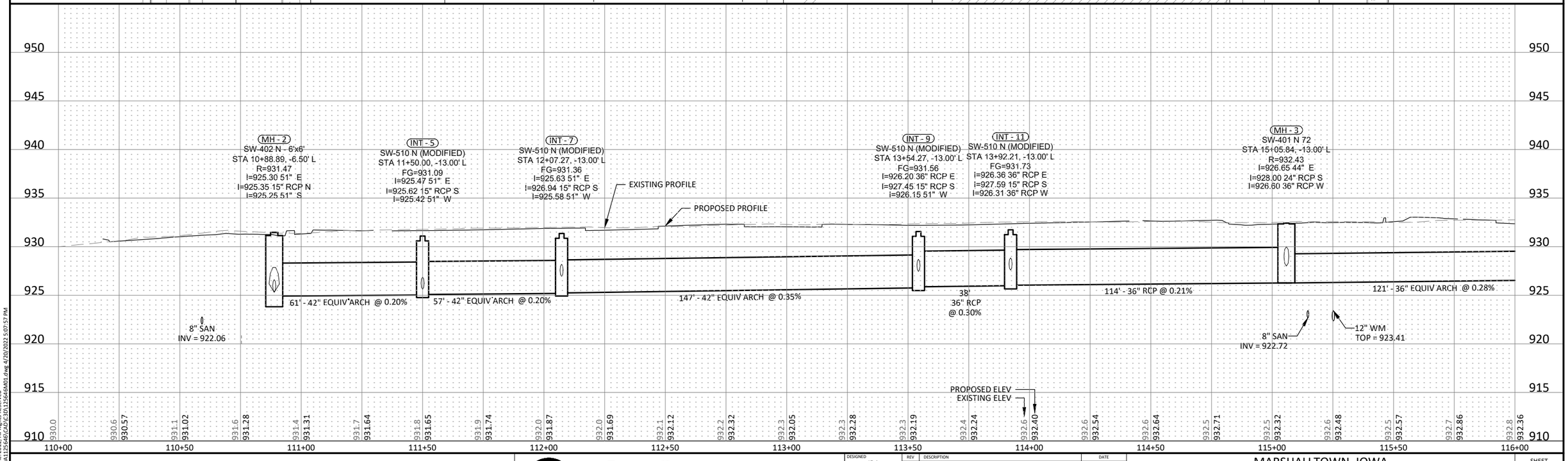

HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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STORM SEWER SHEETS - STATE ST

SHEET M.01

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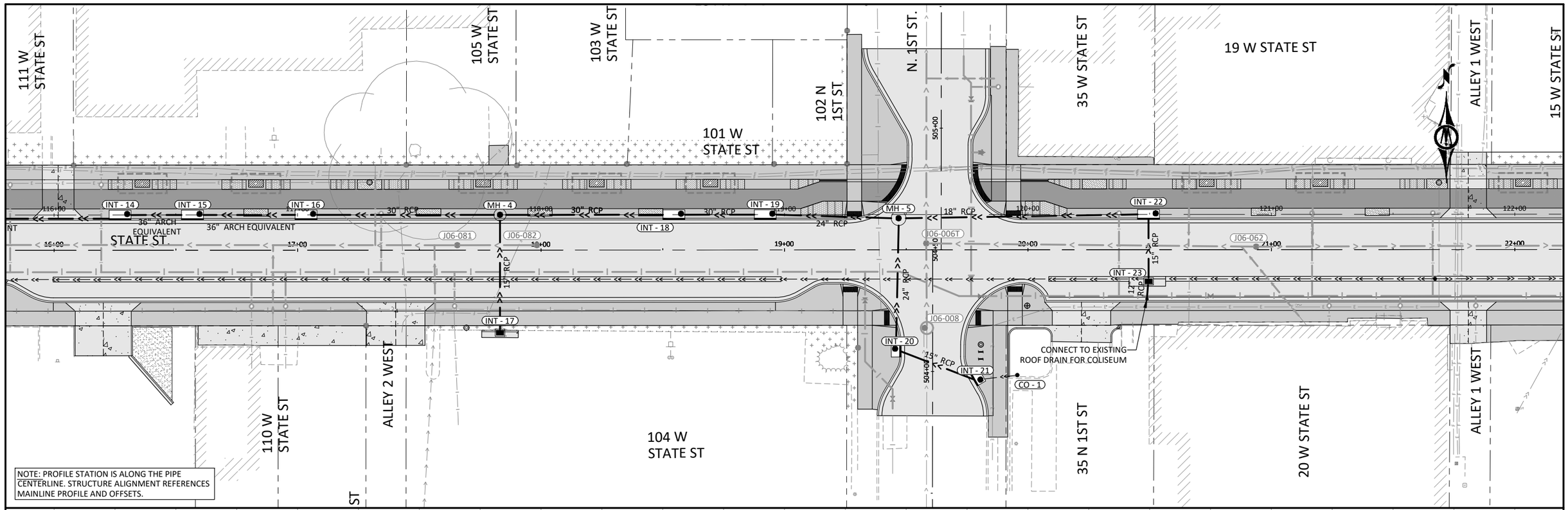

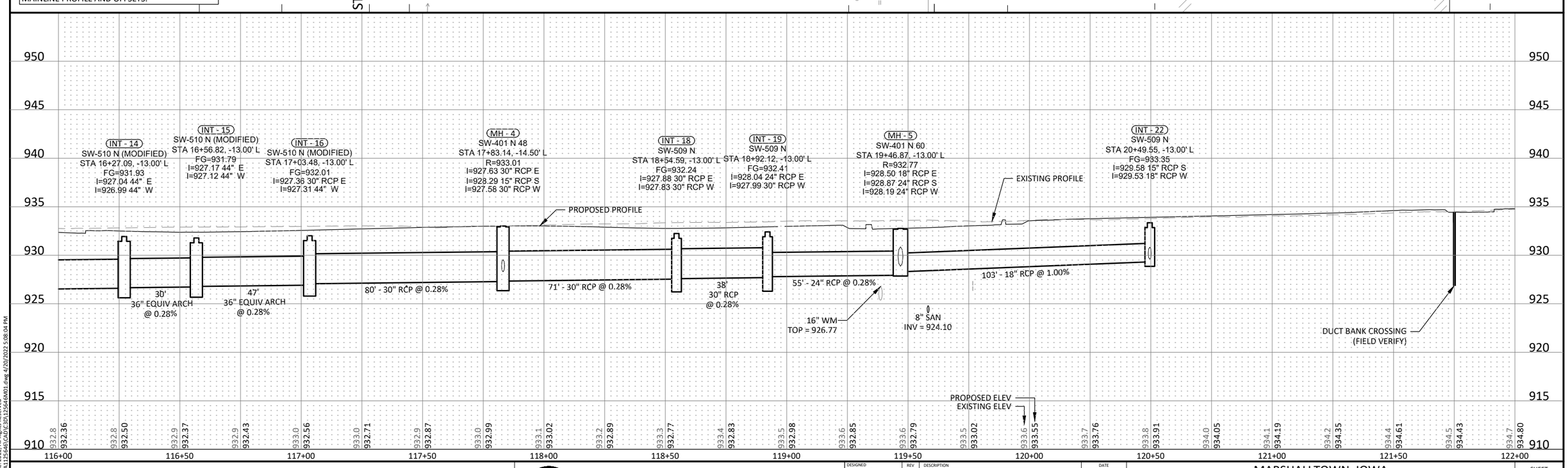

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VERT. SCALE 0 5 10 FEET

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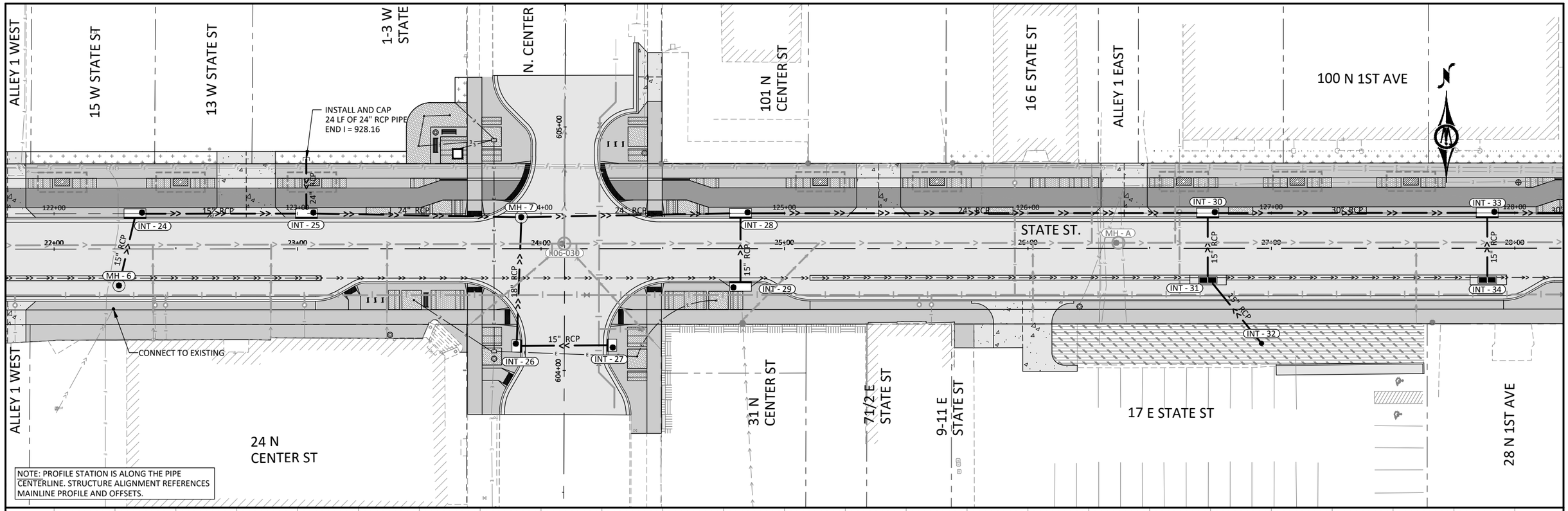
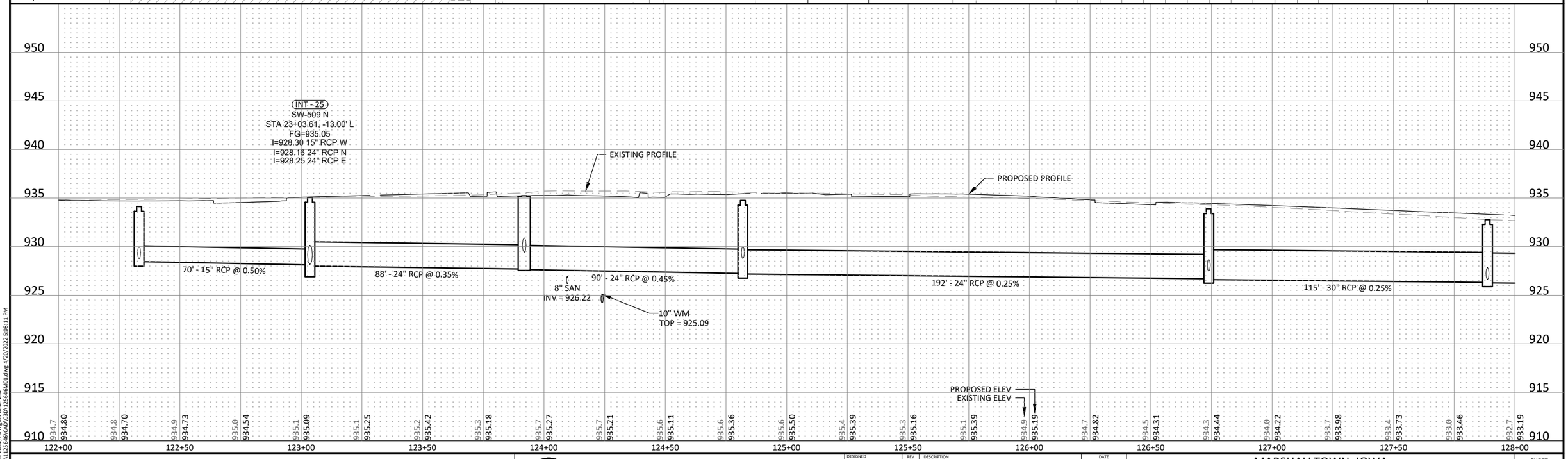
STORM SEWER SHEETS - STATE ST

SHEET M.02





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SHEET M.03

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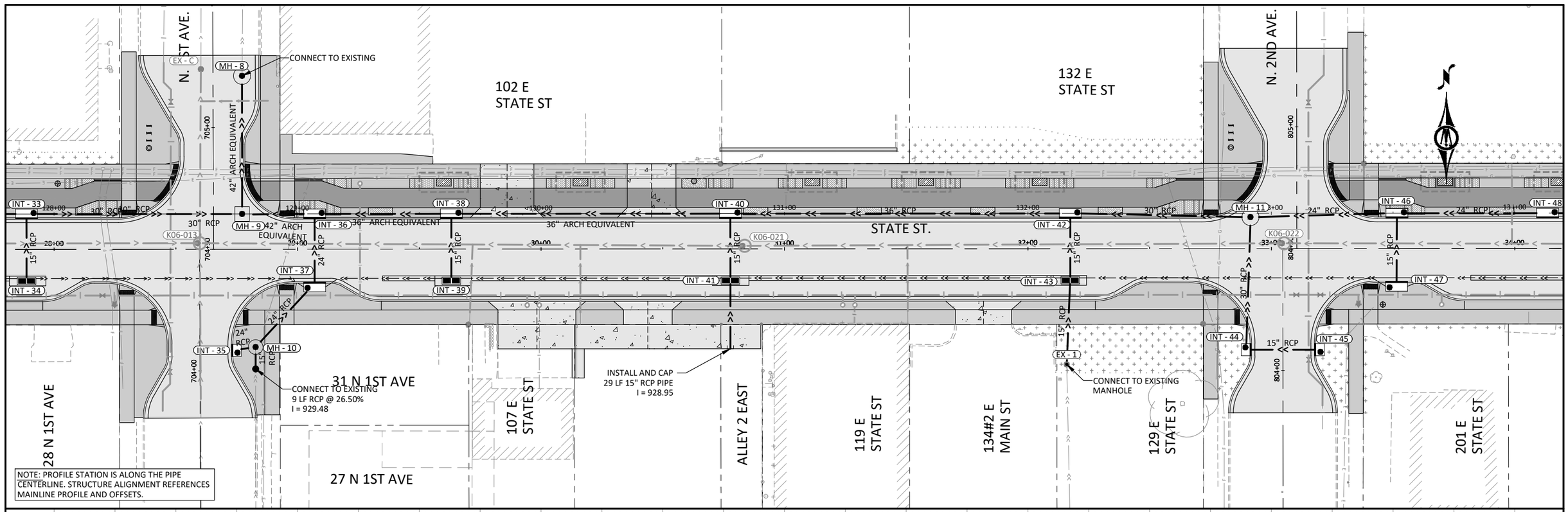

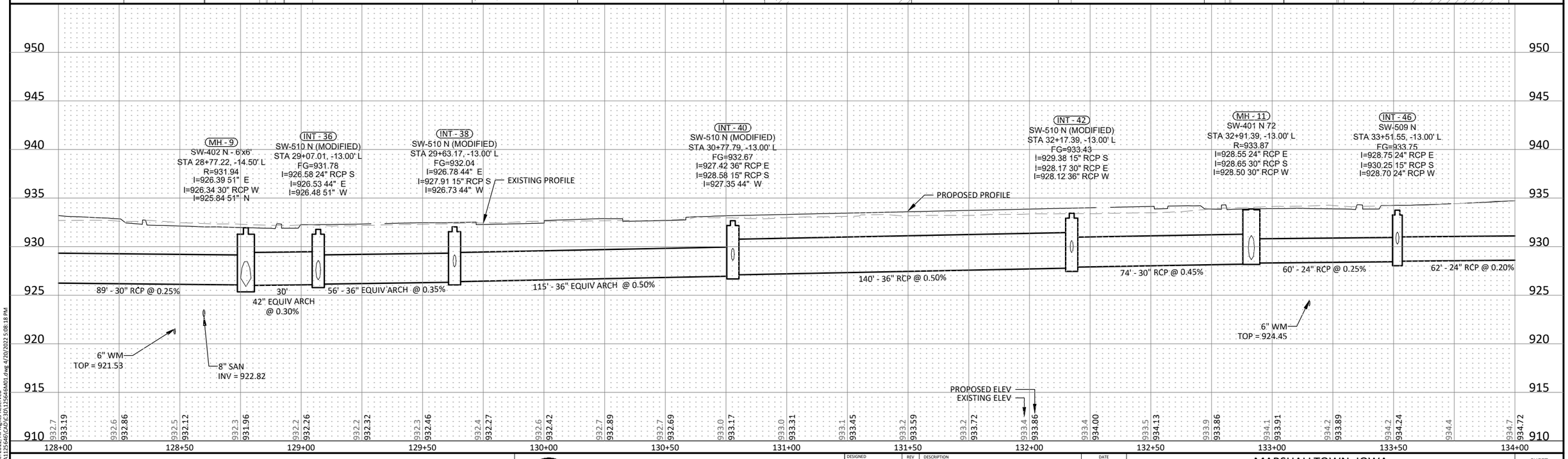

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VERT. SCALE 0 5 10 FEET

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SHEET M.04

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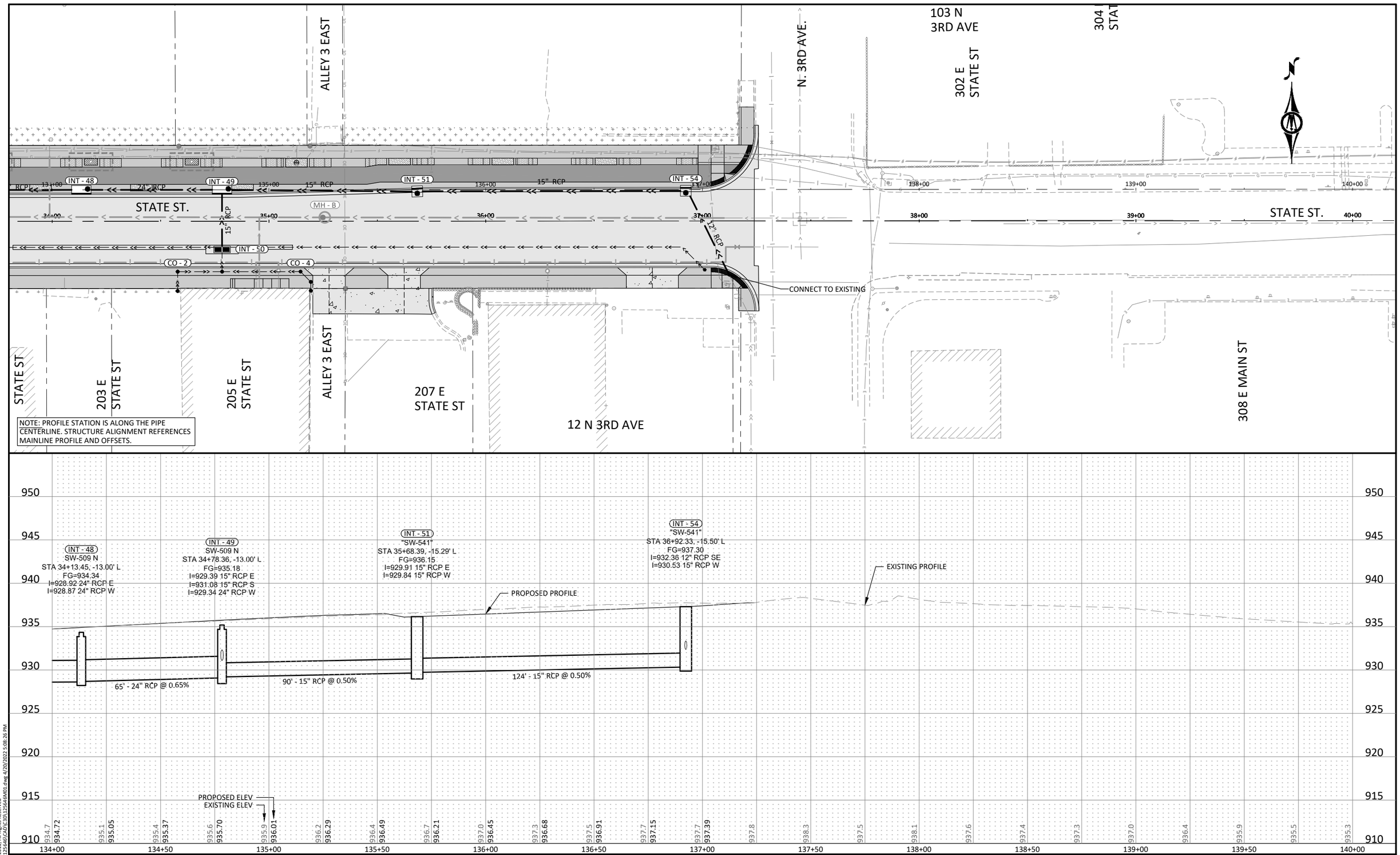

HORZ. SCALE 0 20 40 FEET

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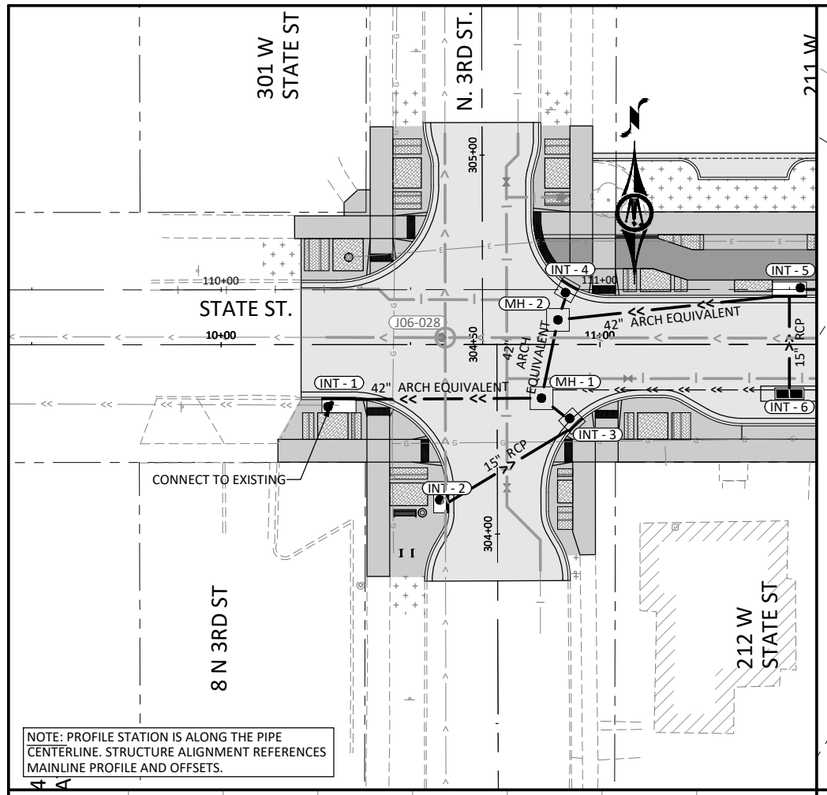
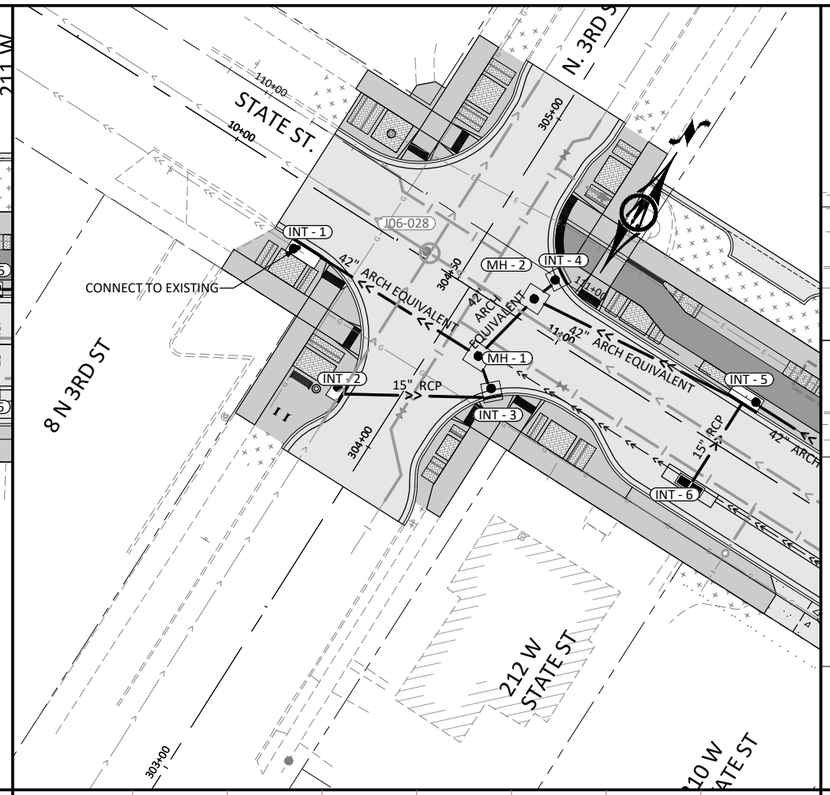
MARSHALLTOWN, IOWA

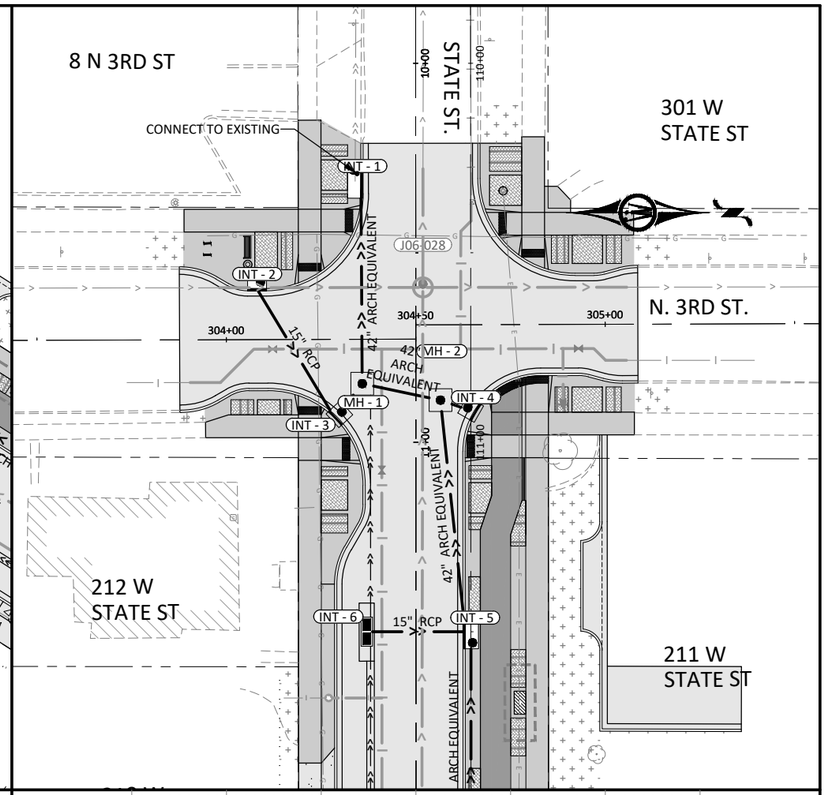
STATE STREET RECONSTRUCTION

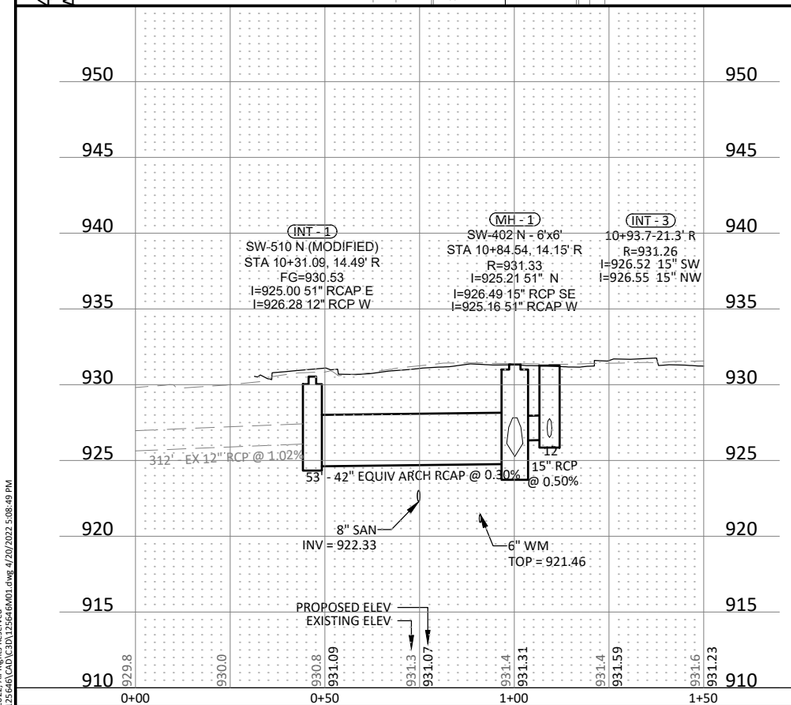
STORM SEWER SHEETS - STATE ST

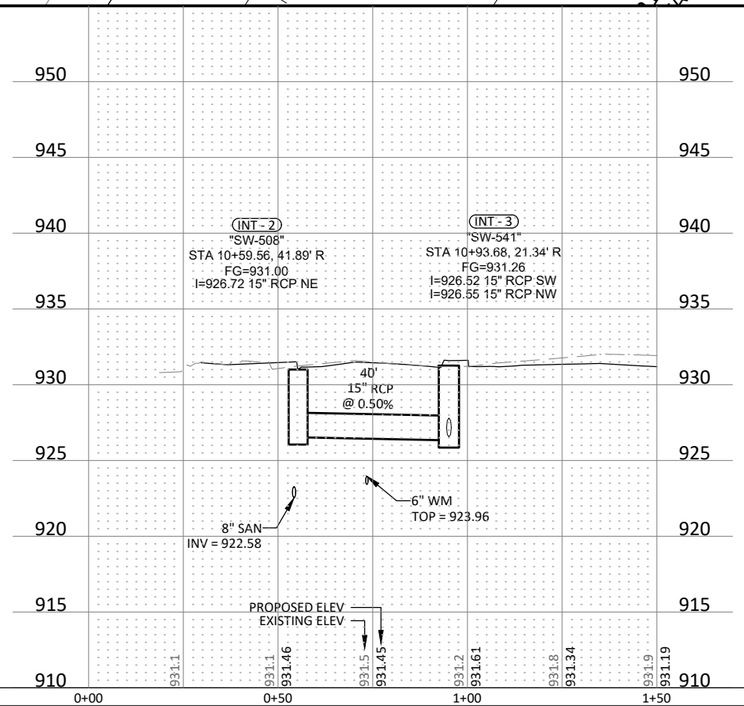
SHEET M.05

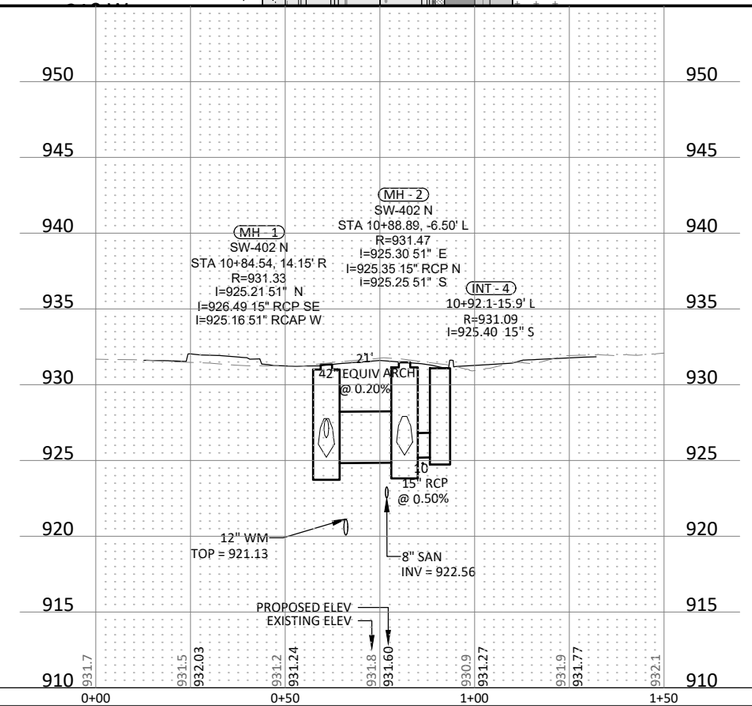












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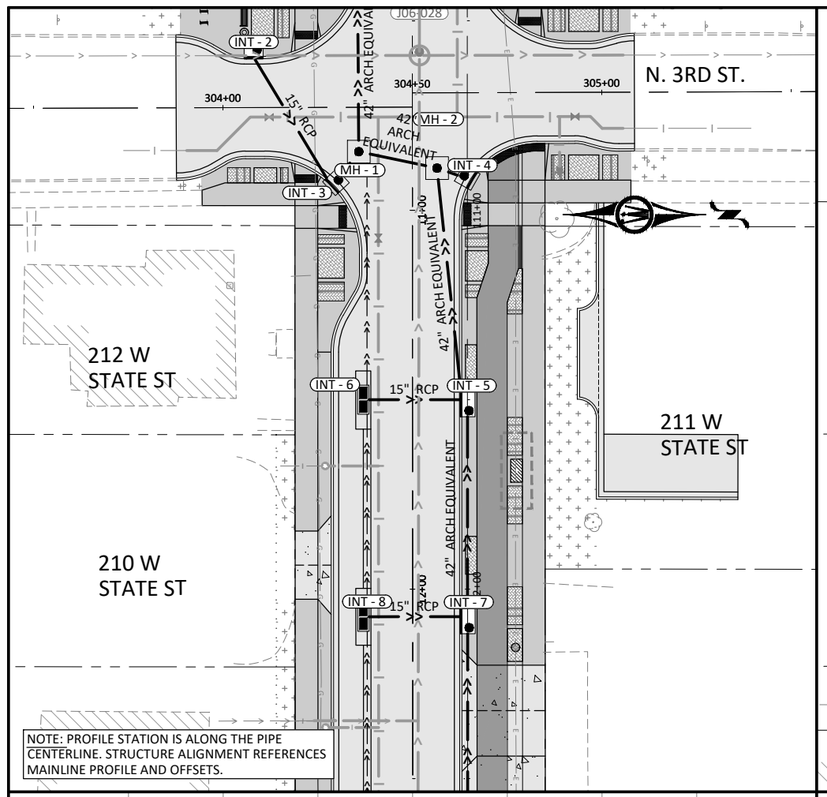
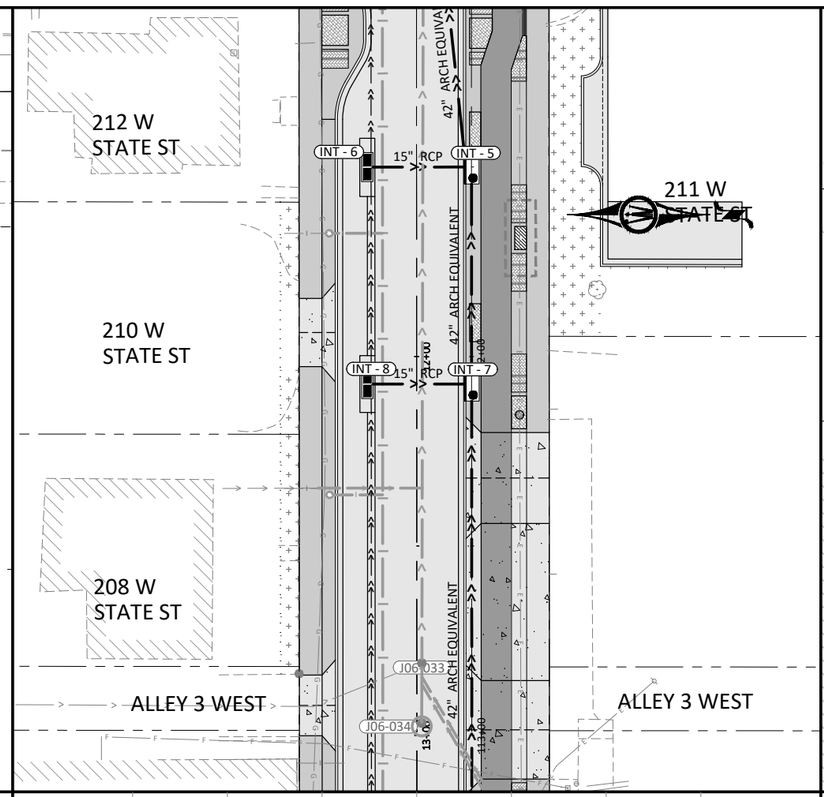
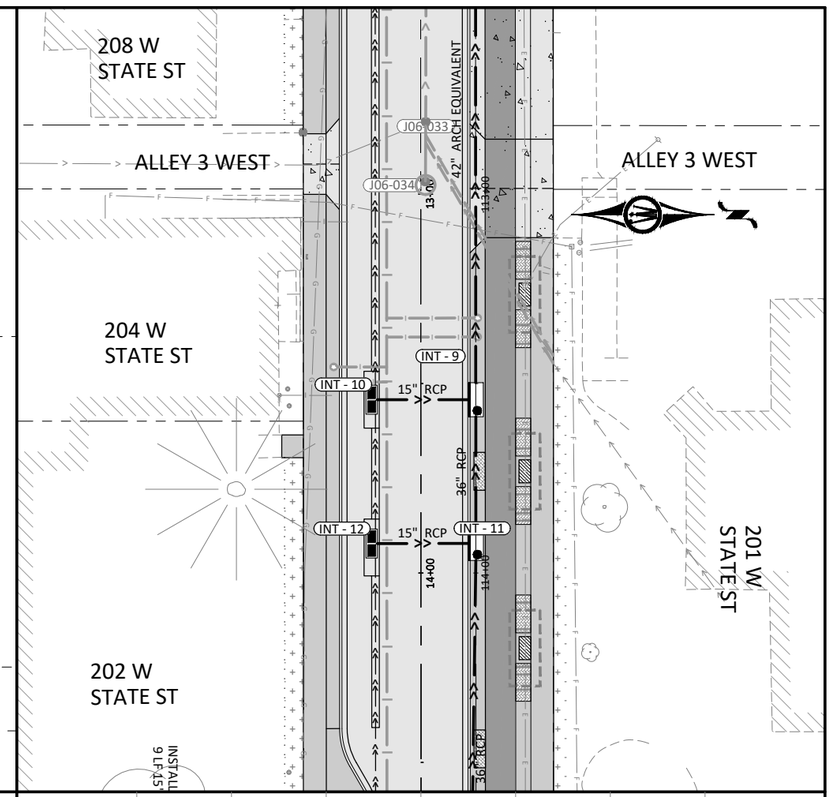
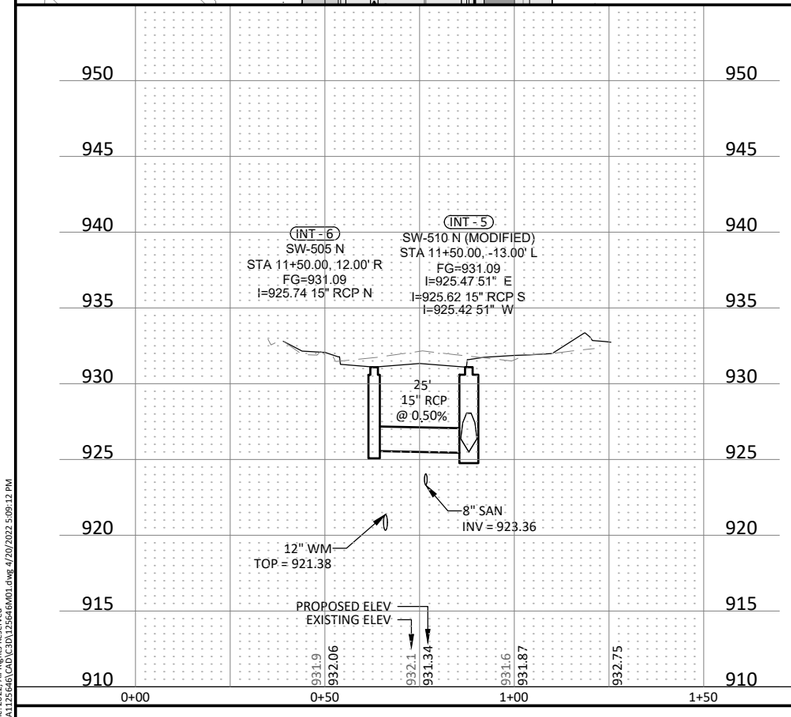
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STORM SEWER CROSS-RUNS

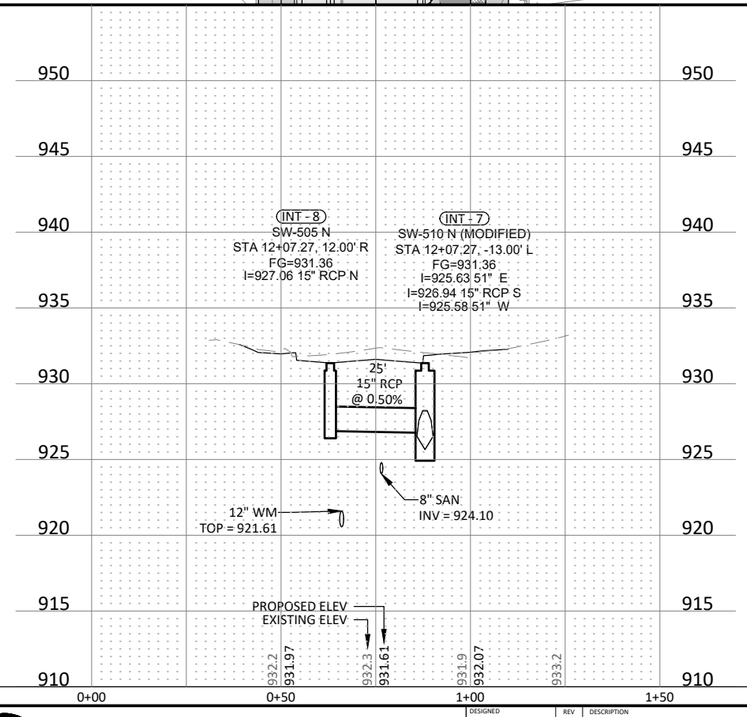
SHEET M.06

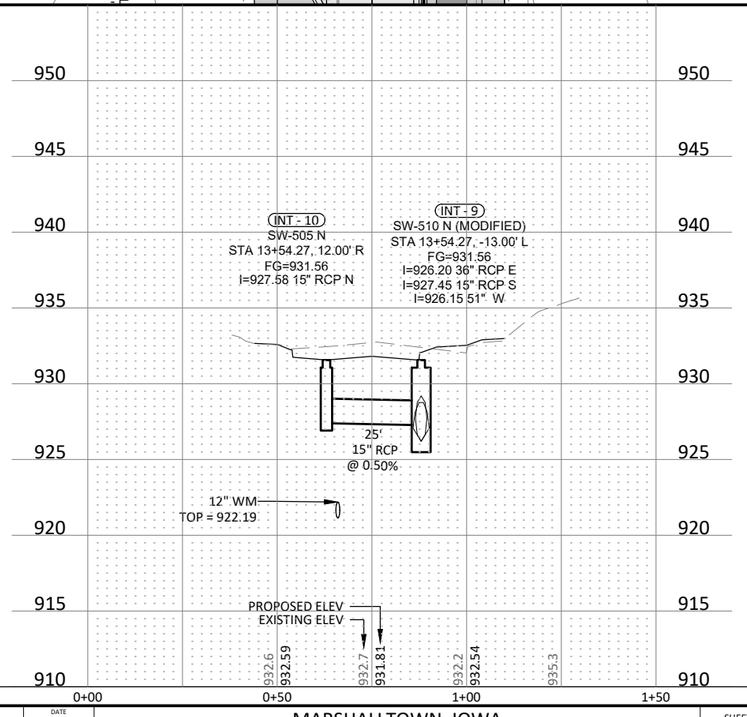












HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
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STORM SEWER CROSS-RUNS

SHEET M.07

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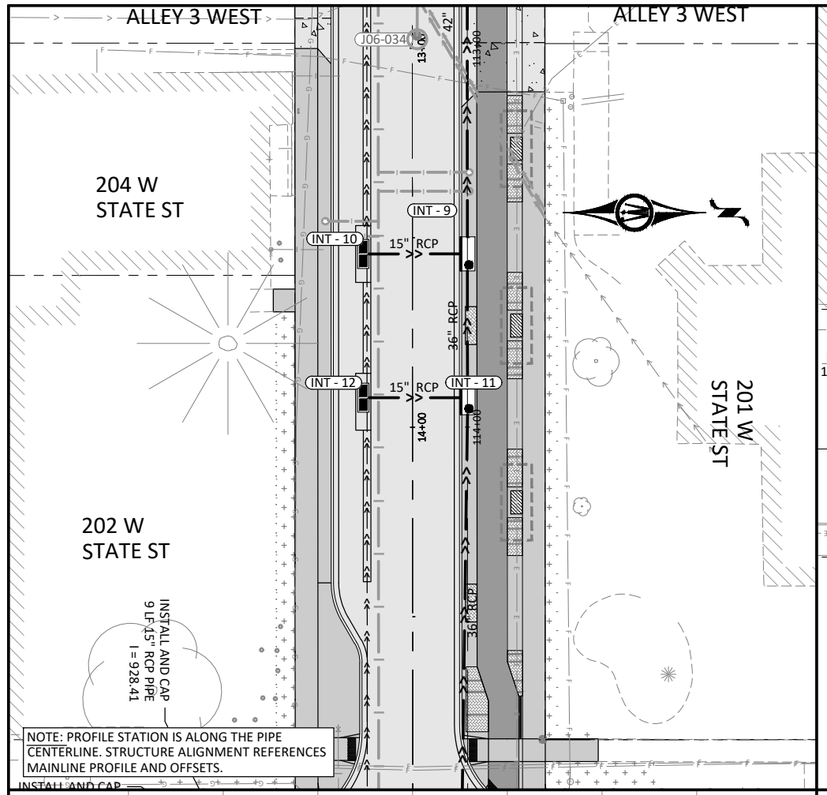

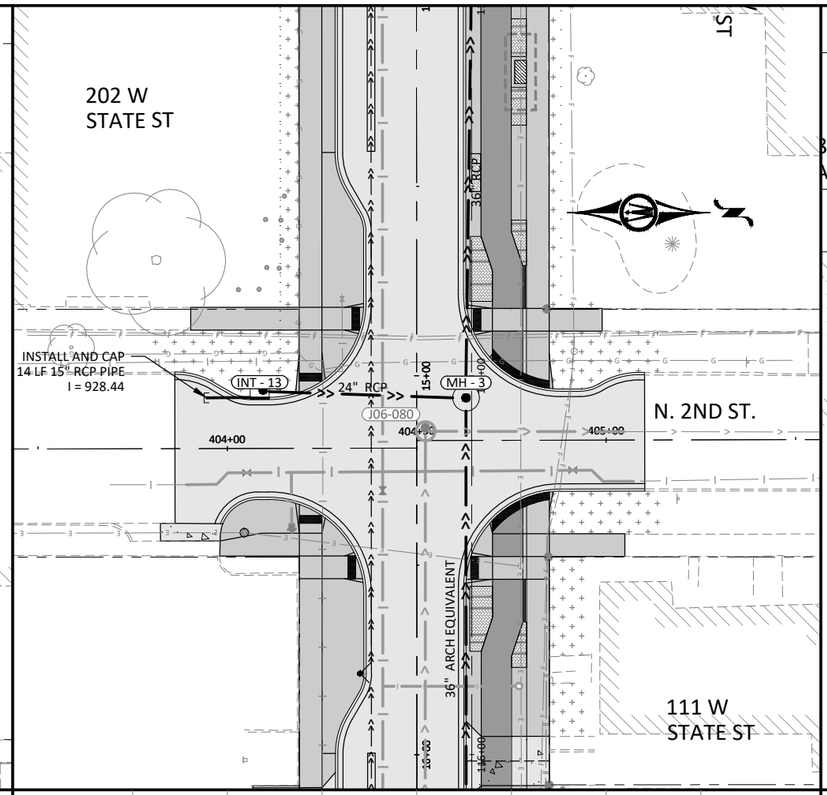

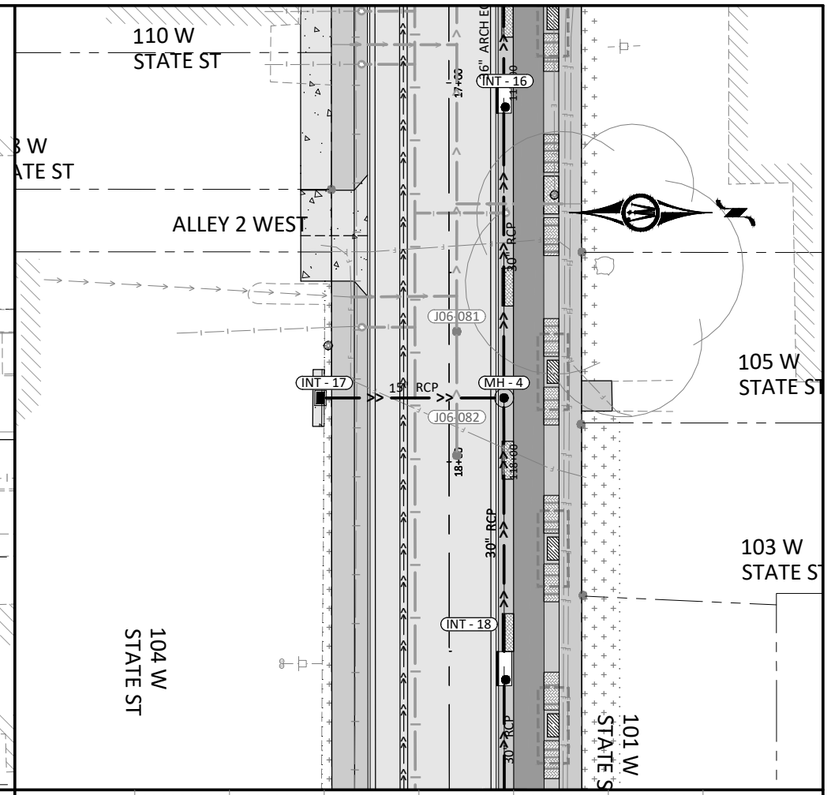

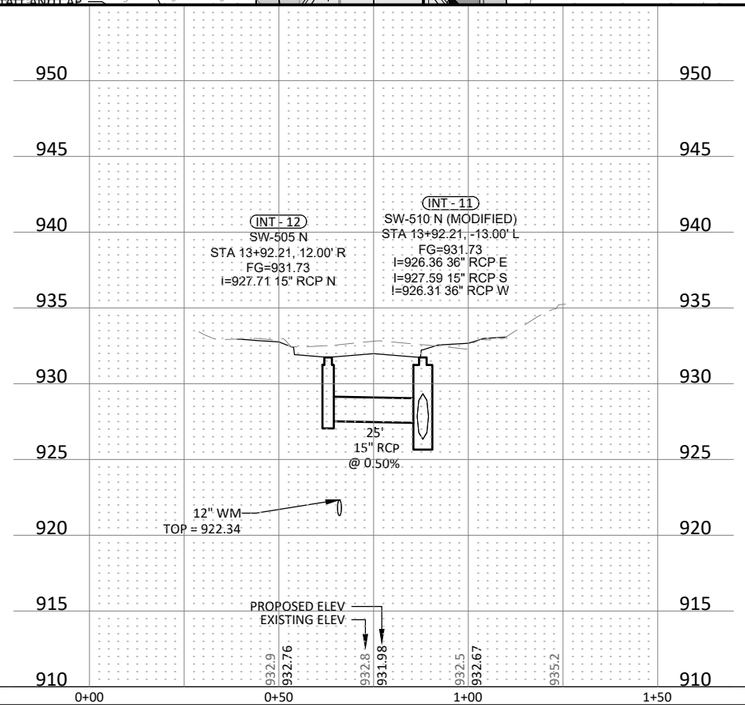

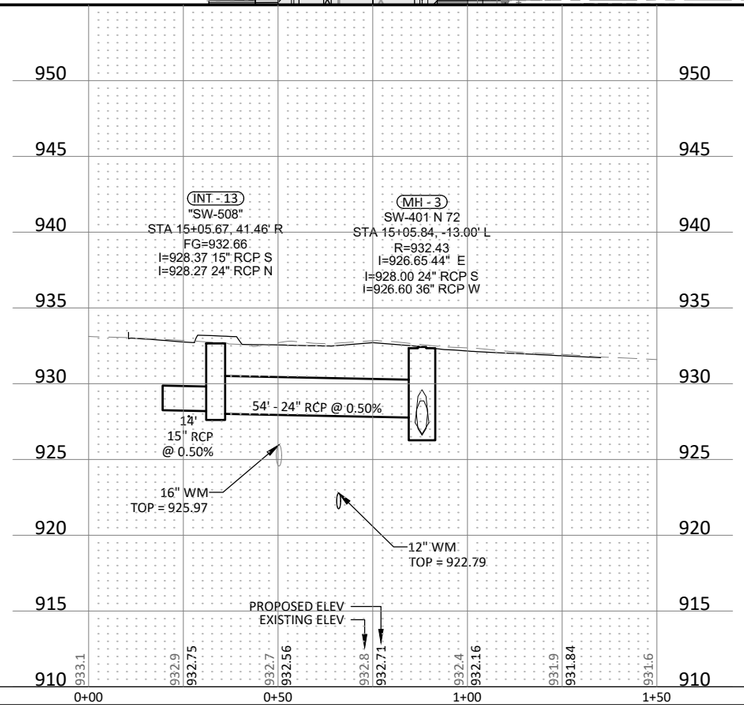

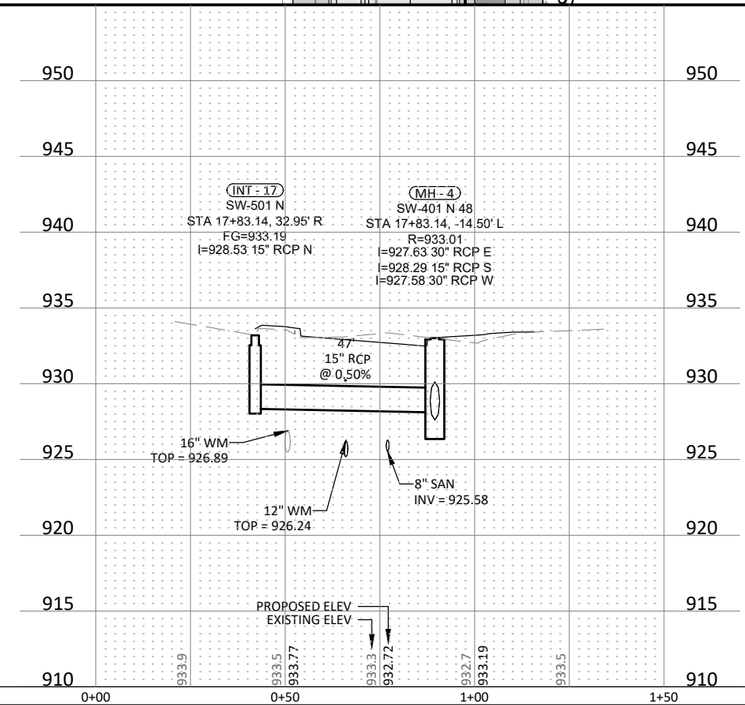

HORZ. SCALE 0 20 40 FEET
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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STORM SEWER CROSS-RUNS

SHEET
M.08

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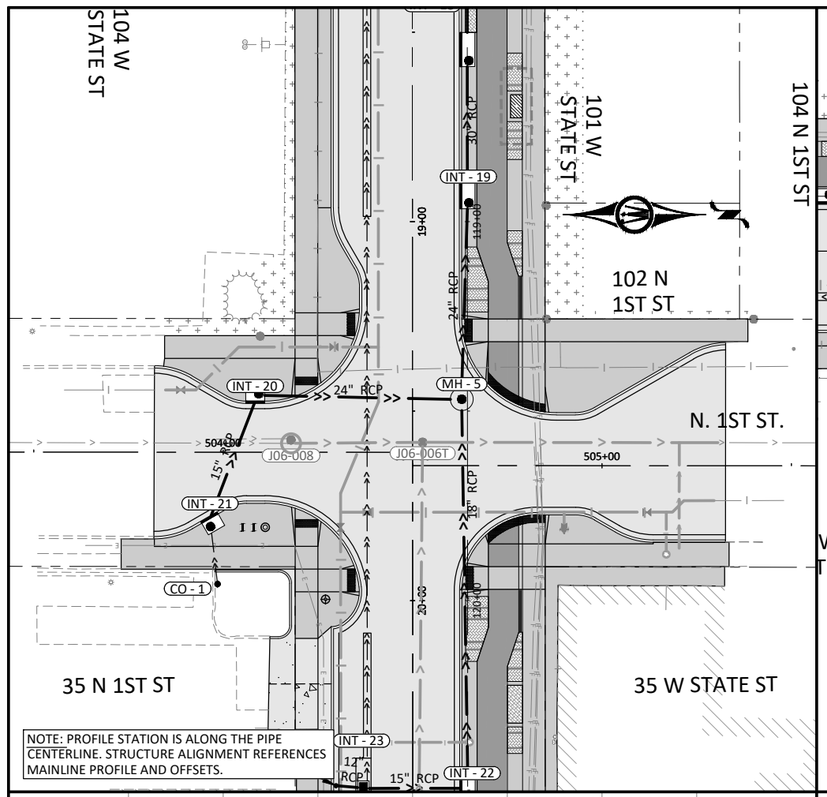

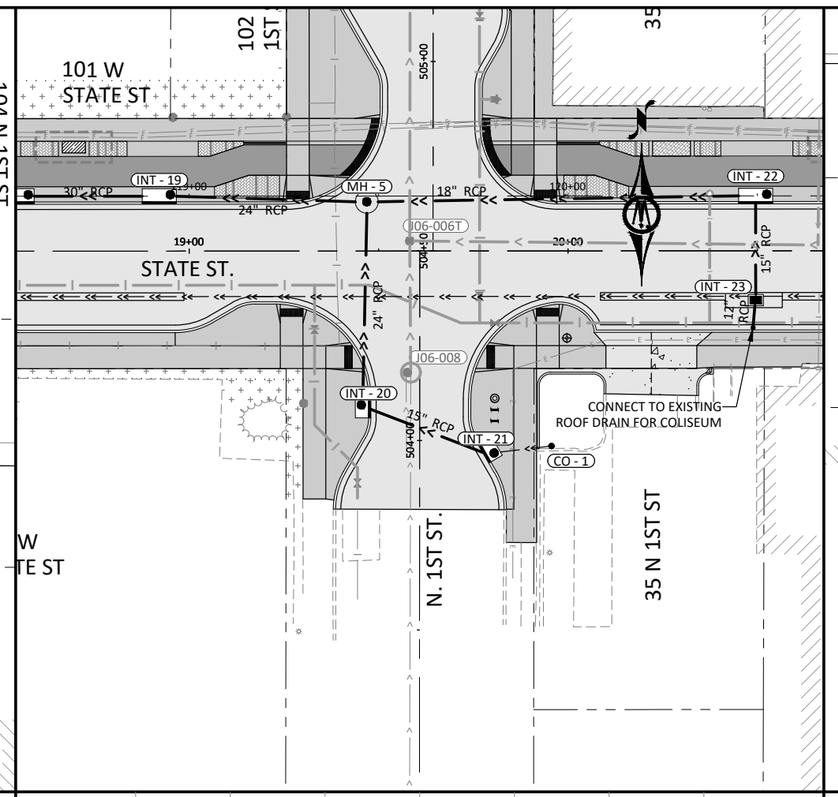

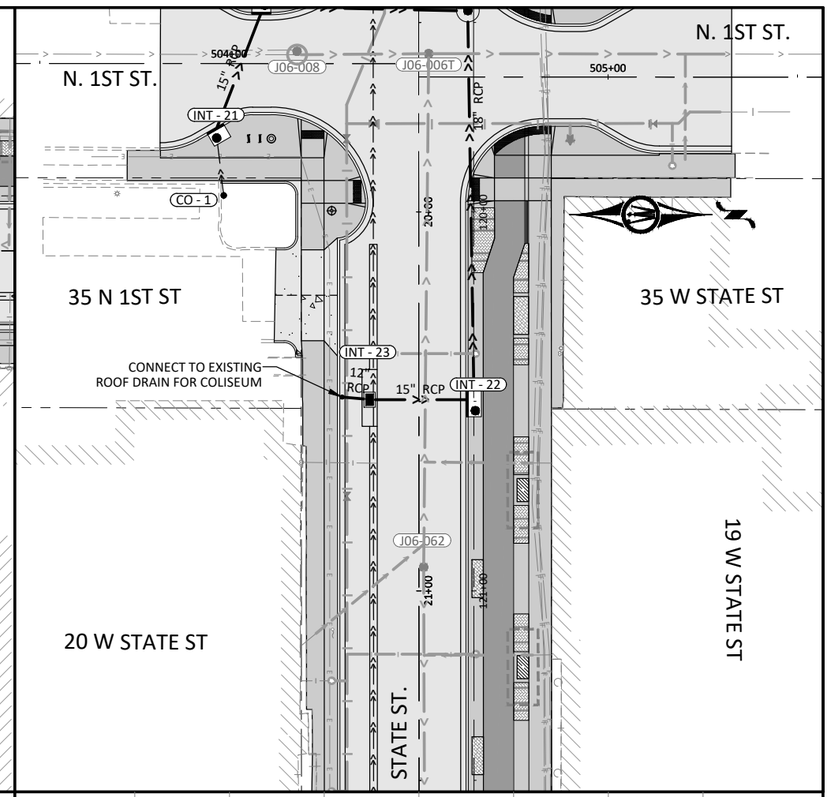

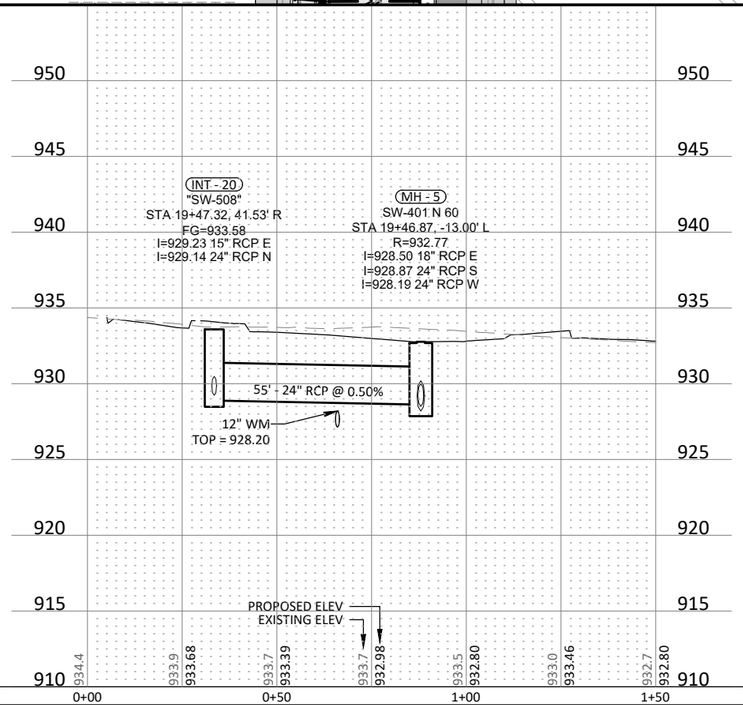

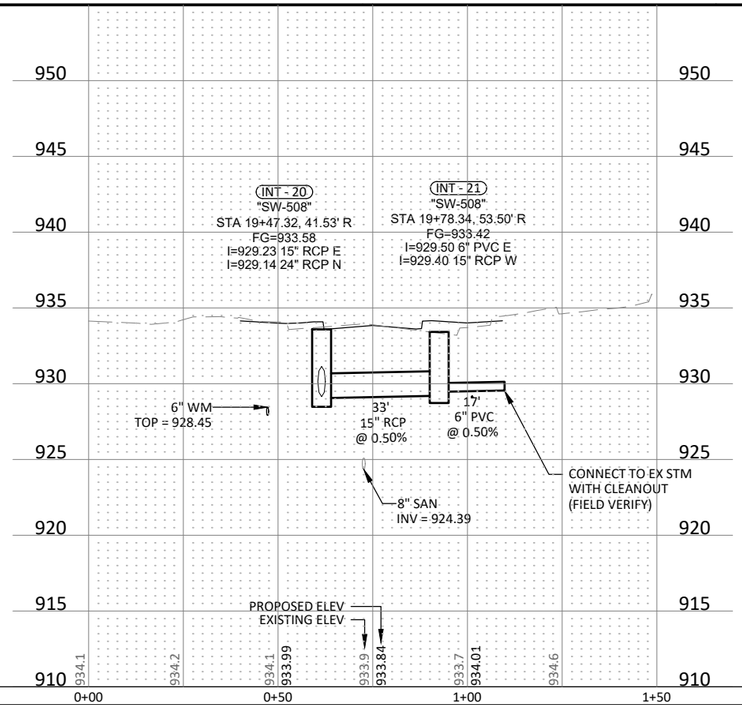

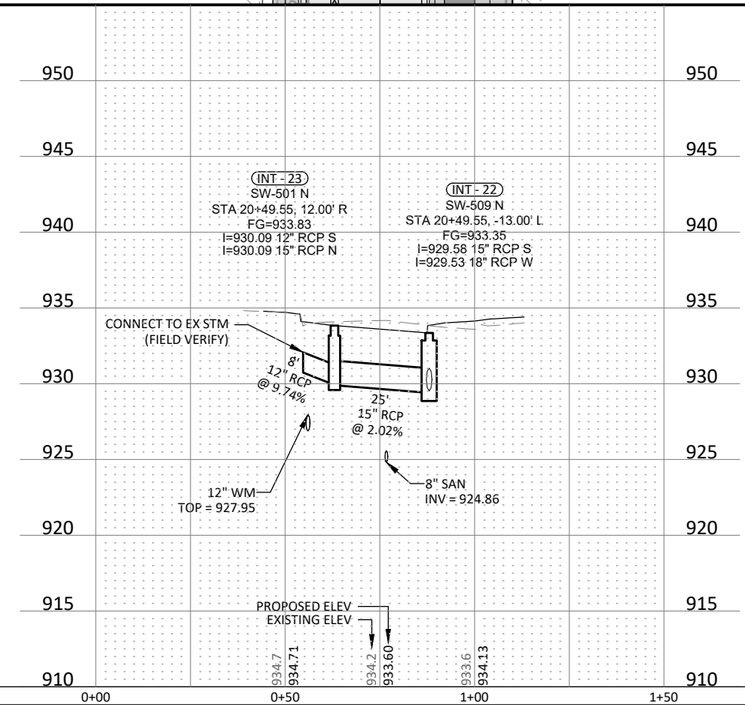

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
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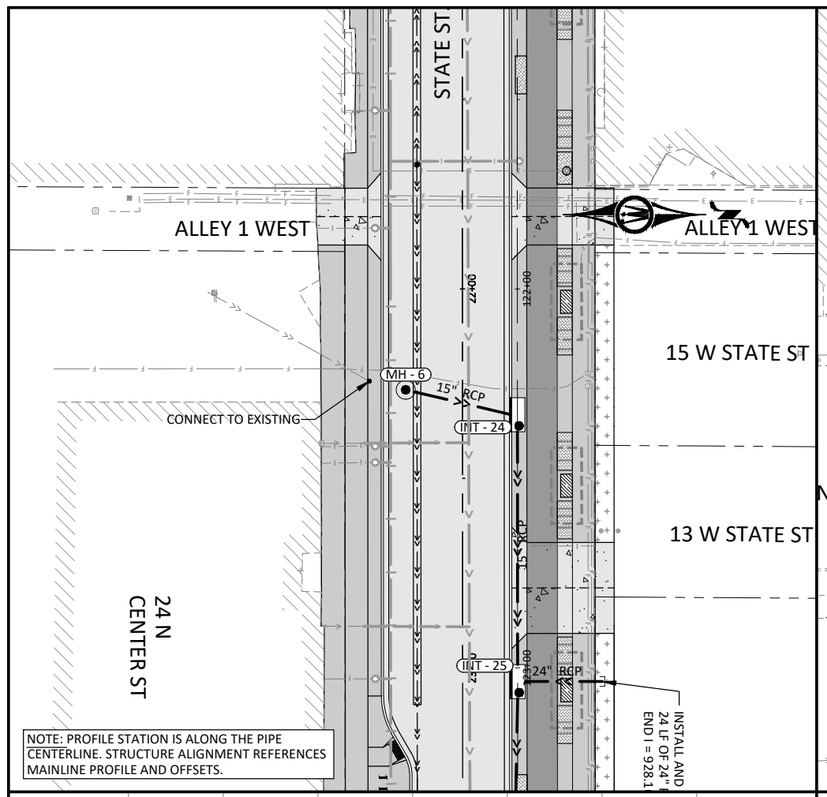
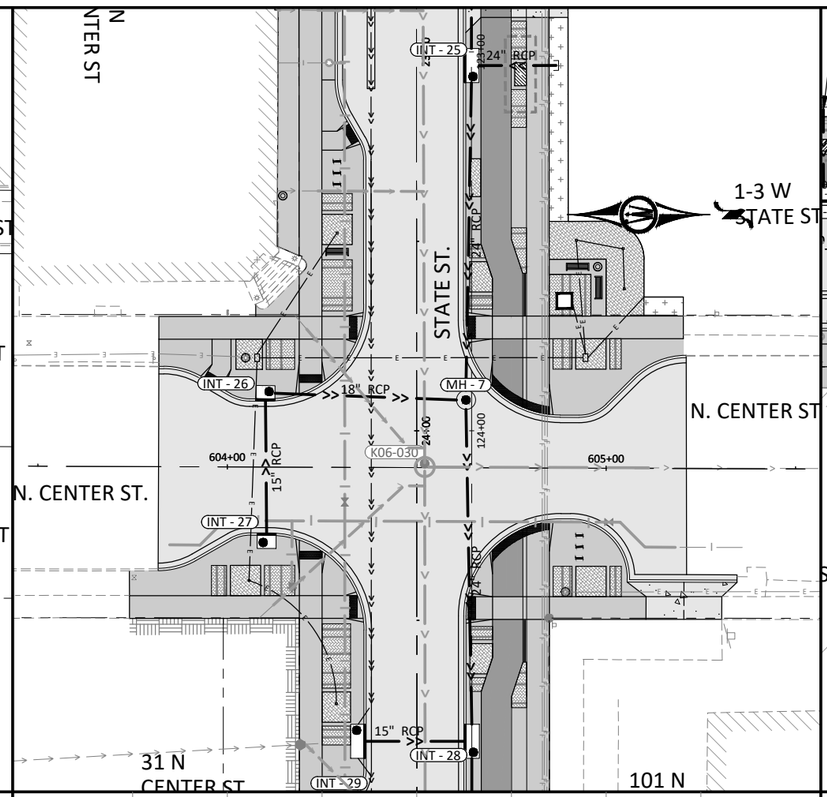
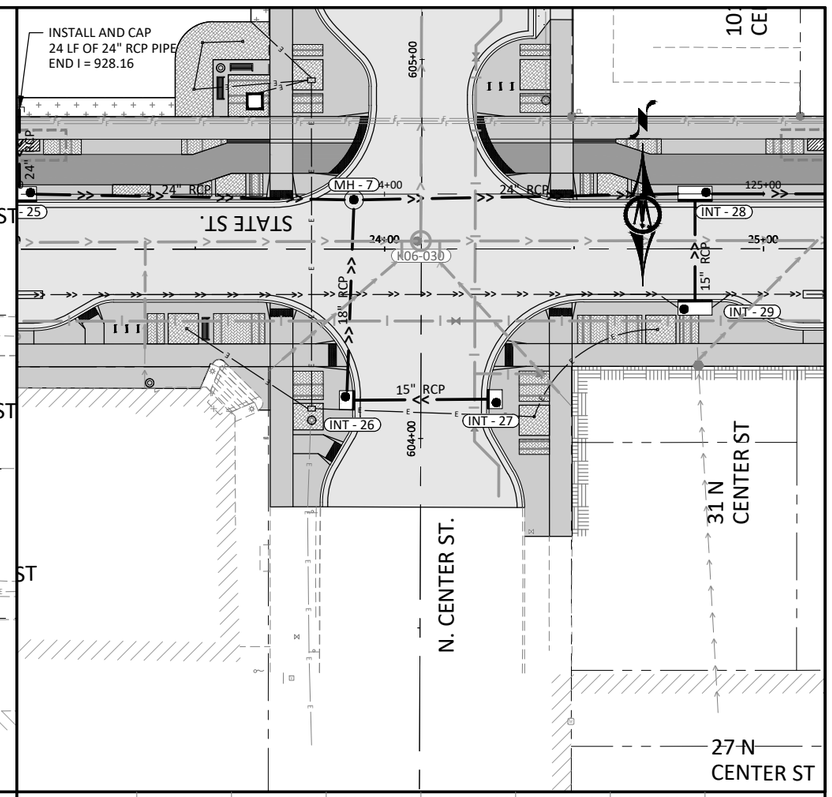
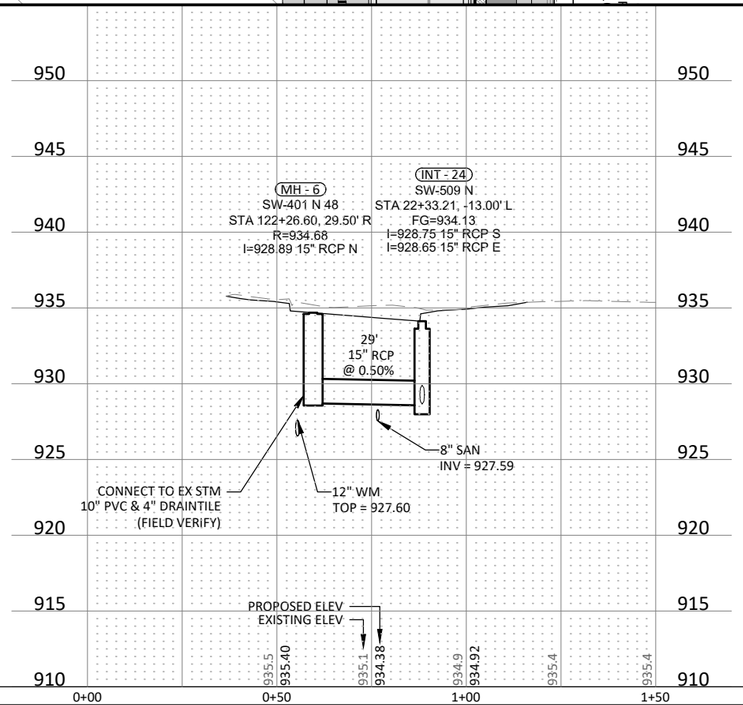
STORM SEWER CROSS-RUNS

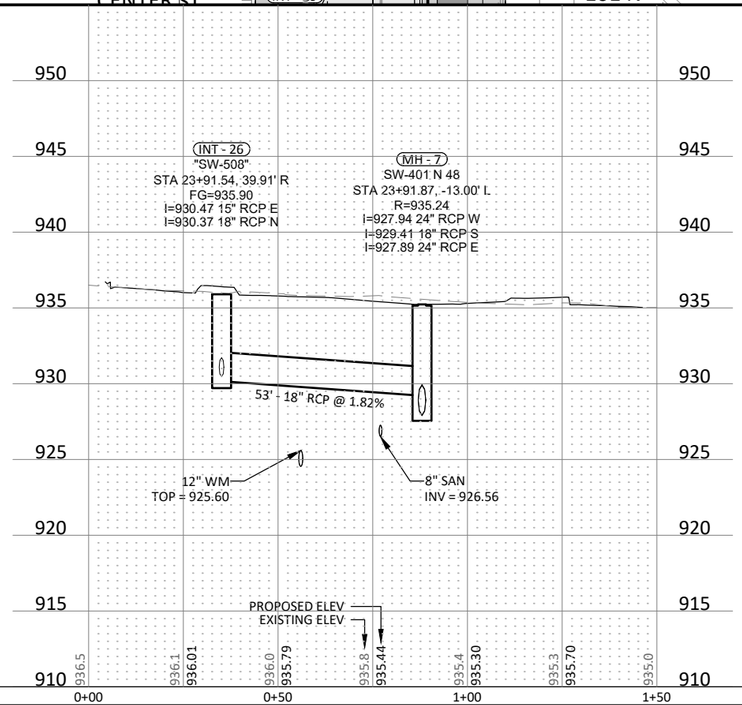
SHEET M.09

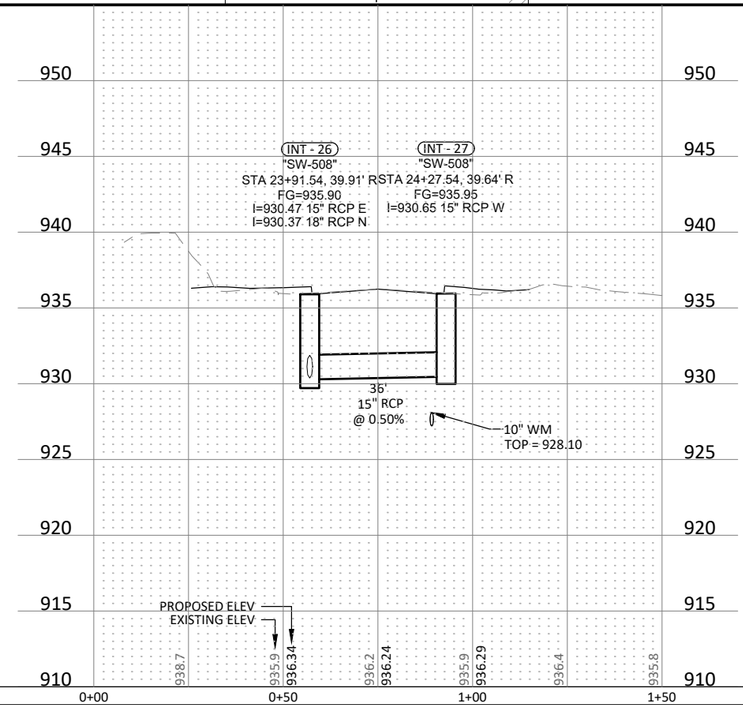












HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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STATE STREET RECONSTRUCTION
STORM SEWER CROSS-RUNS

SHEET M.10

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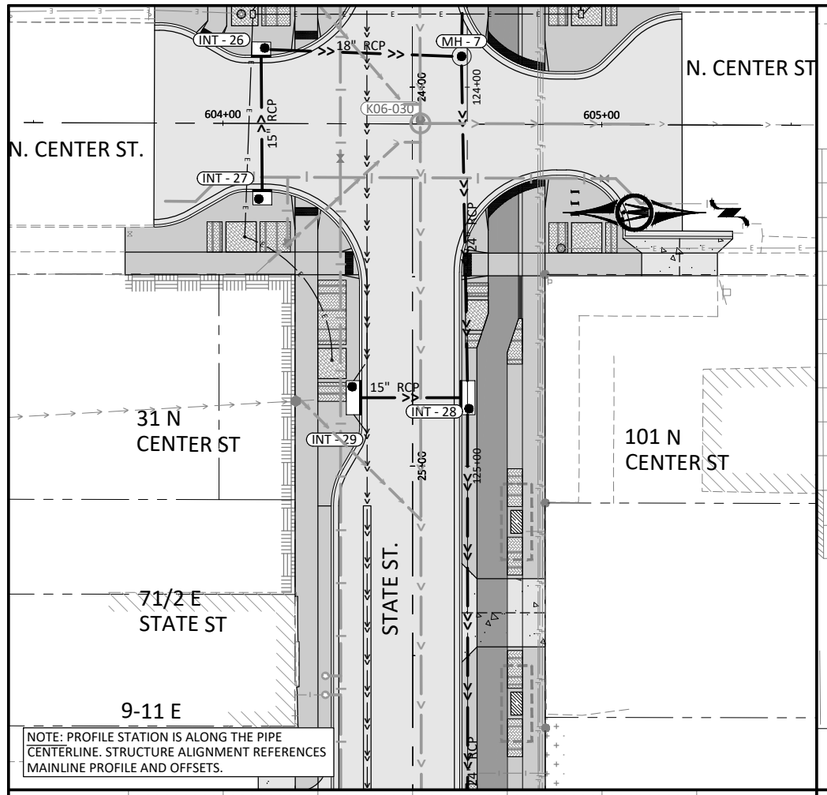

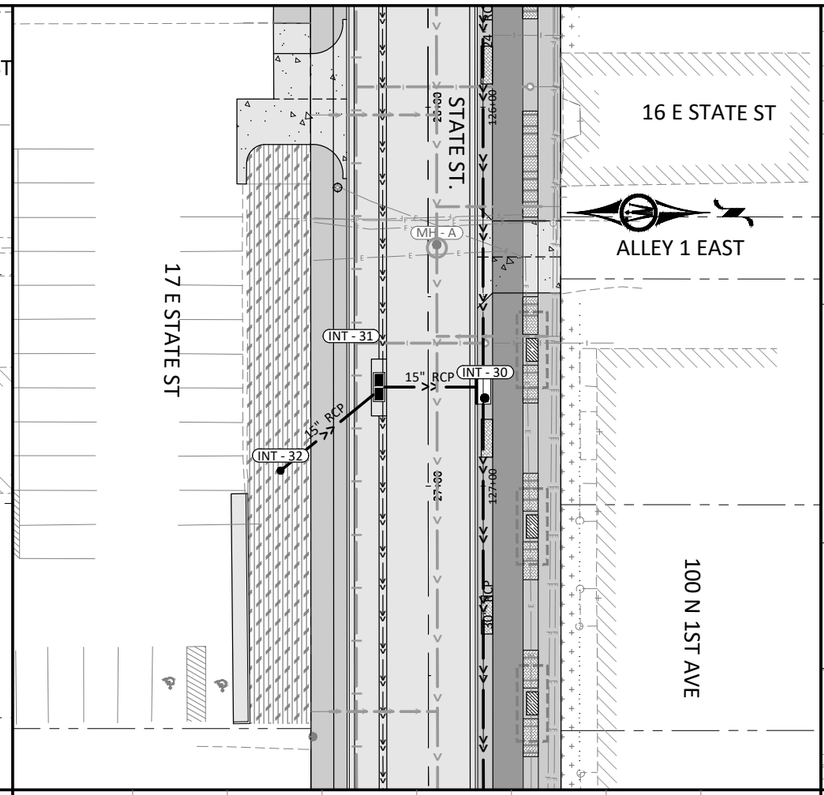

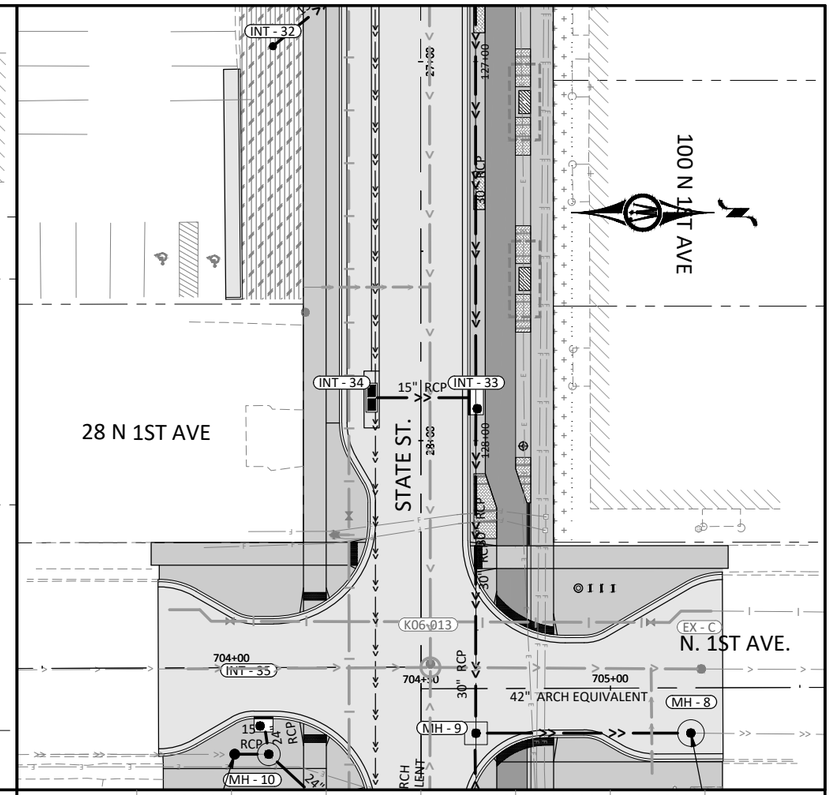

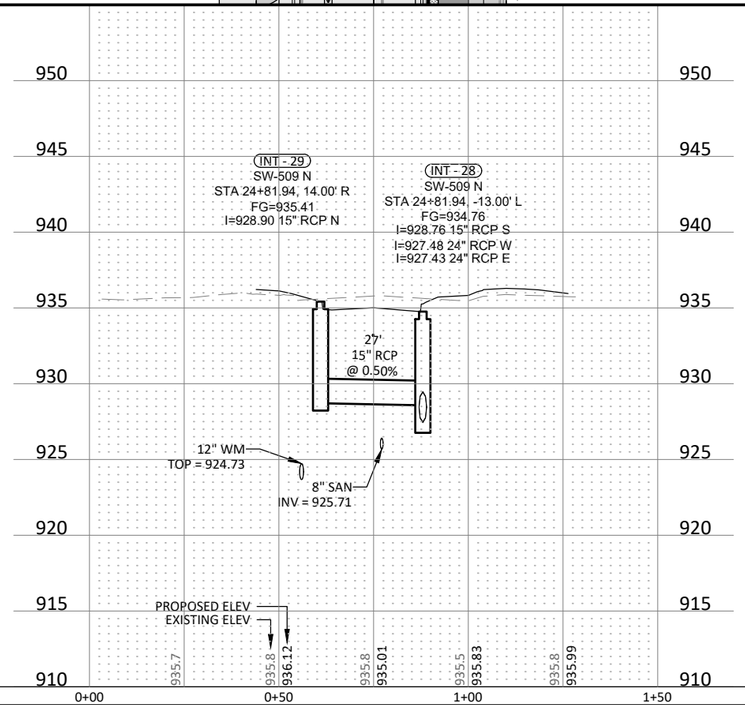

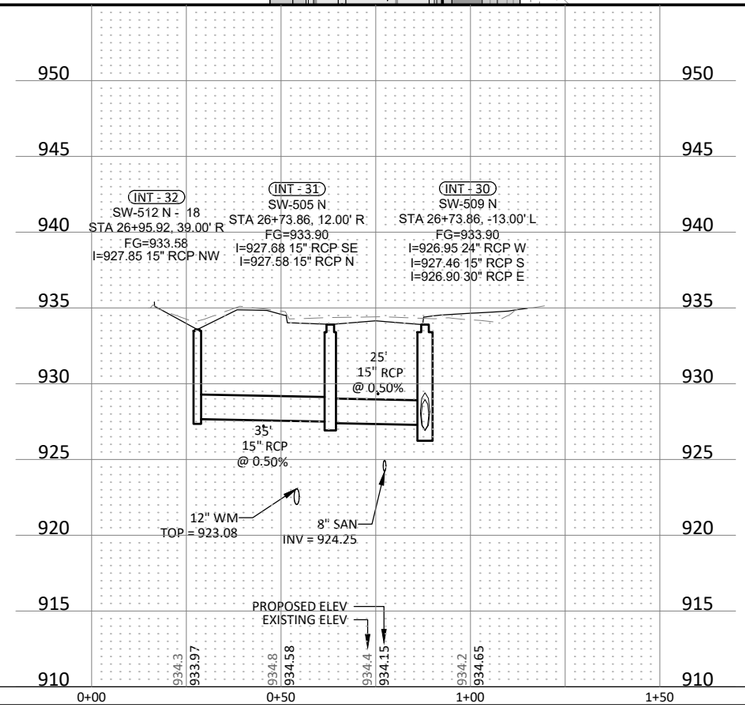

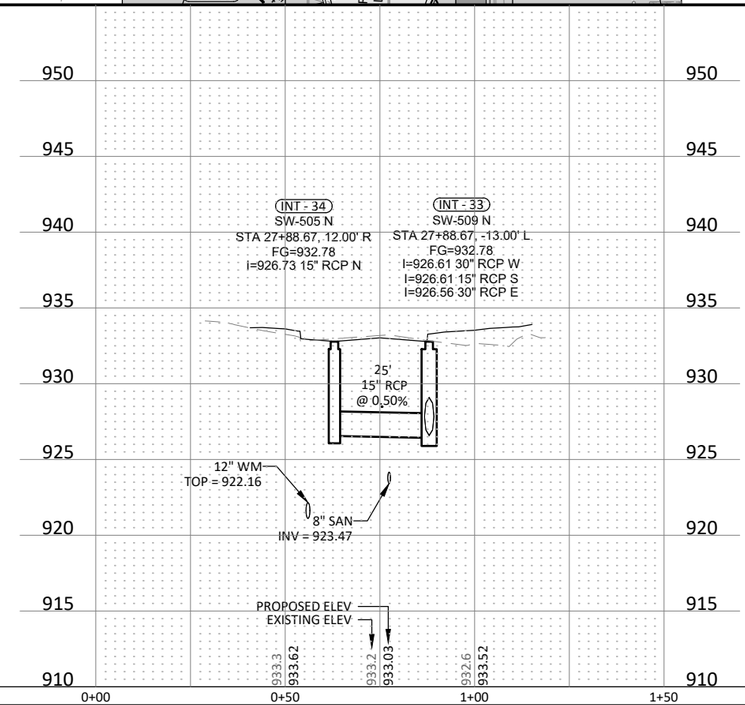

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
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SHEET M.11

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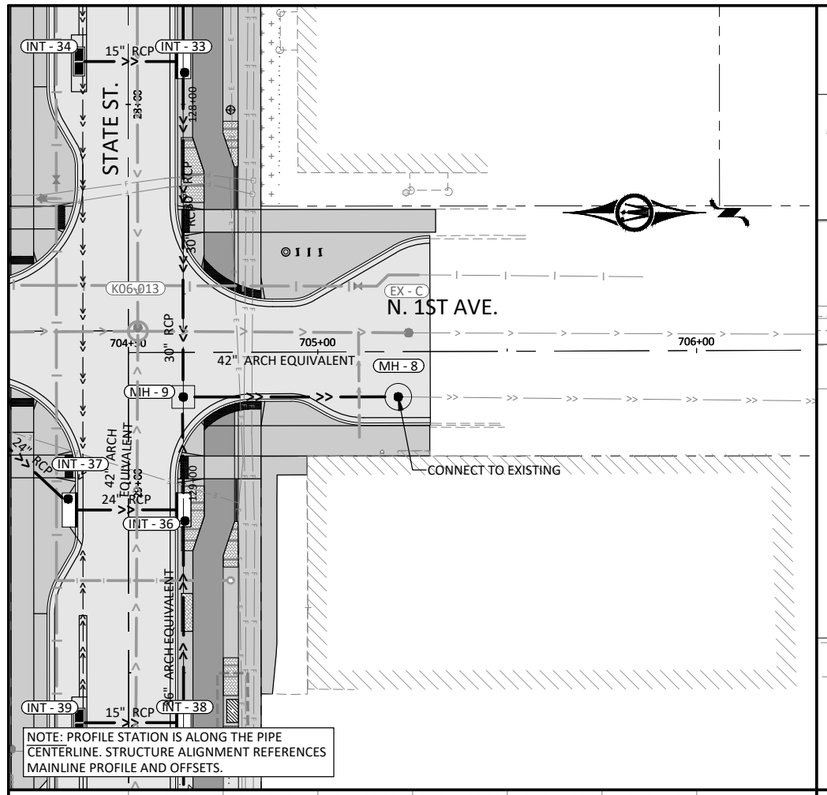

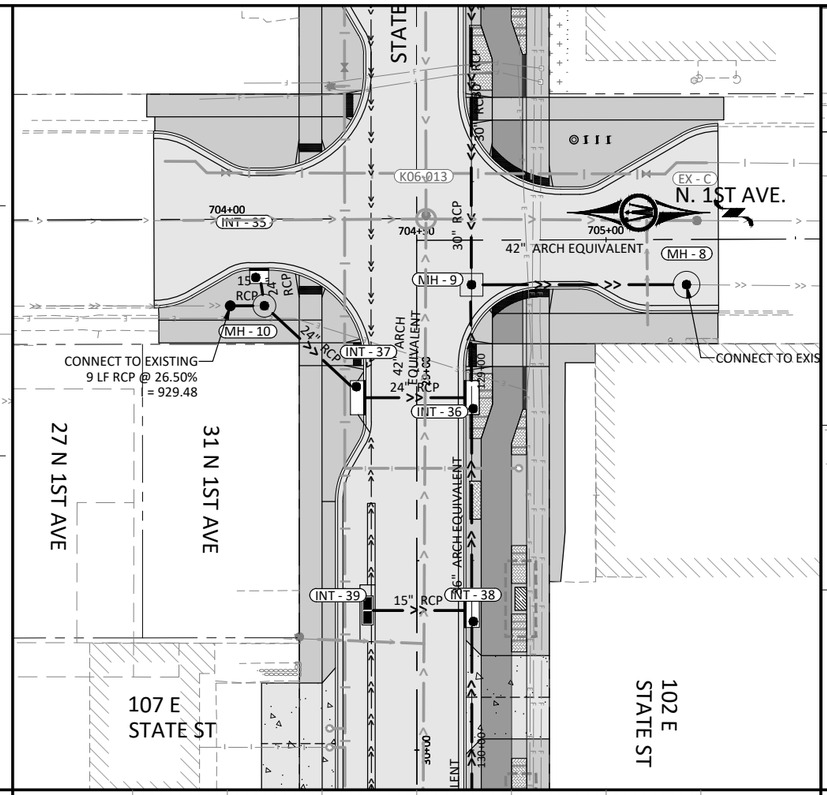

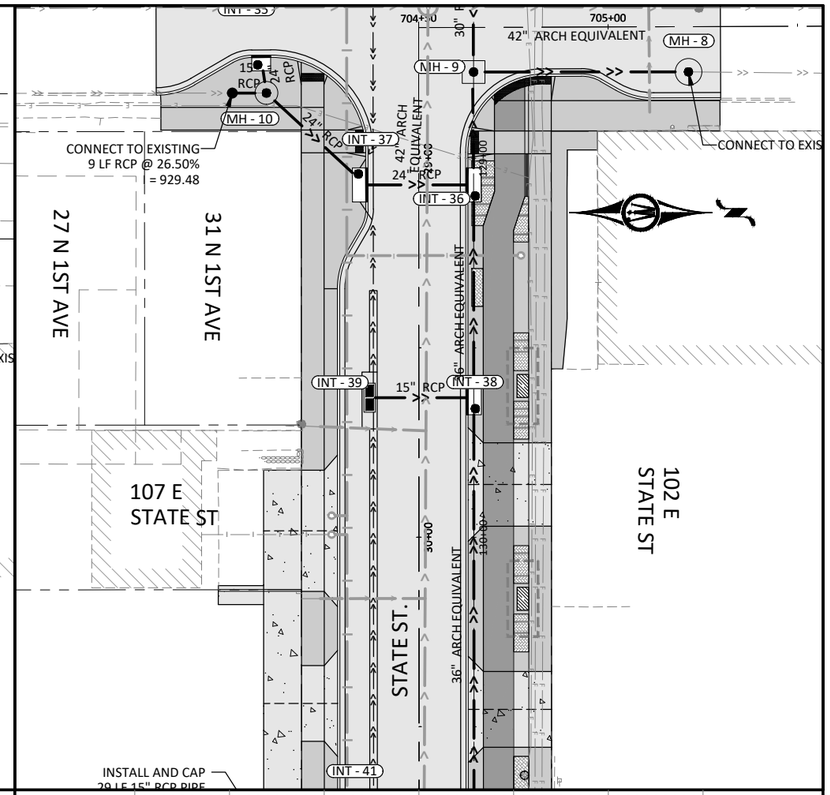

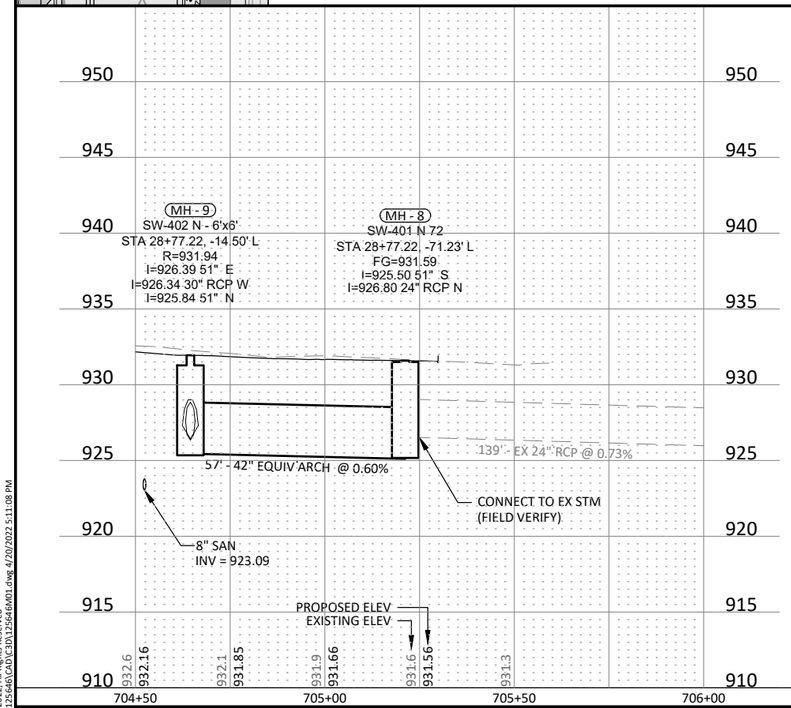

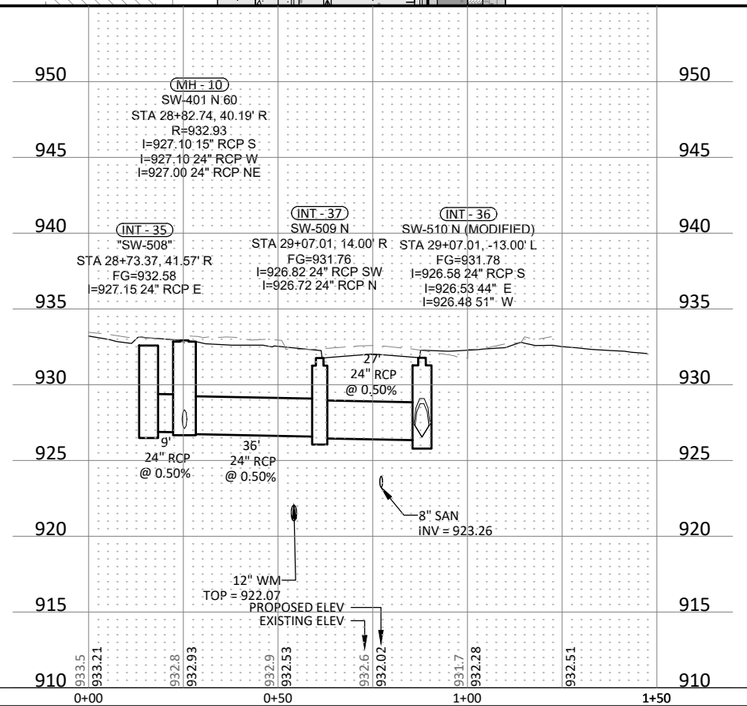

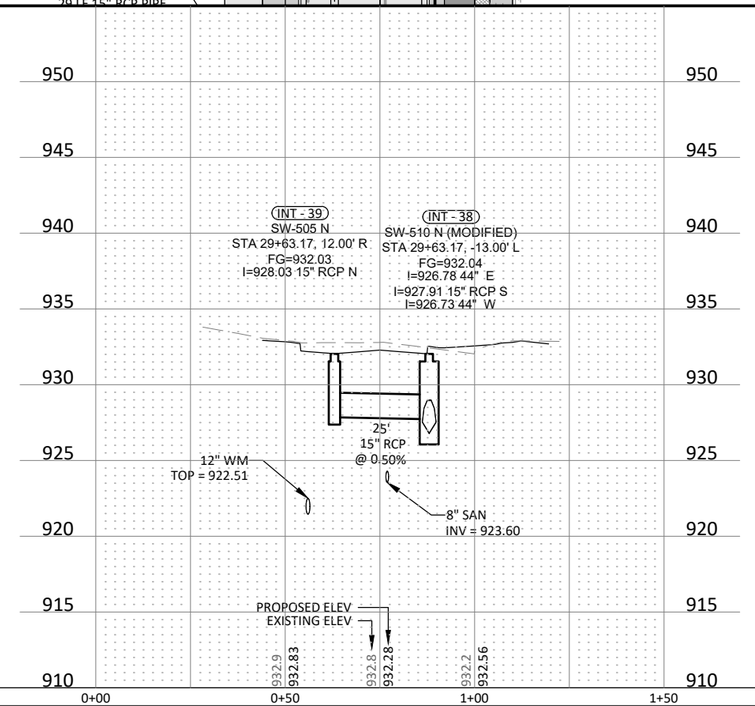

HORZ. SCALE 0 20 40 FEET

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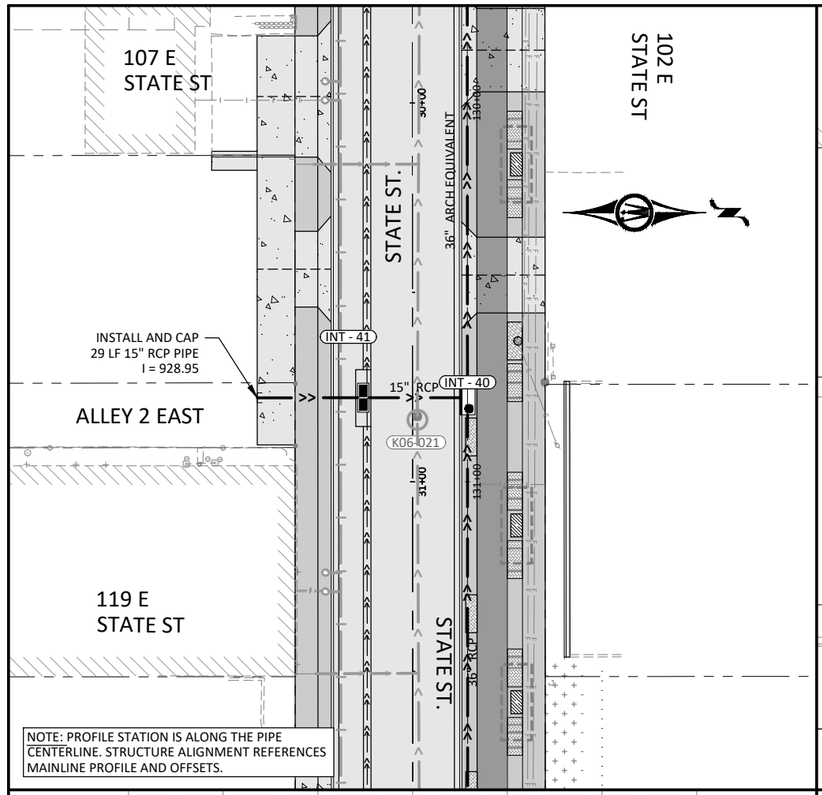
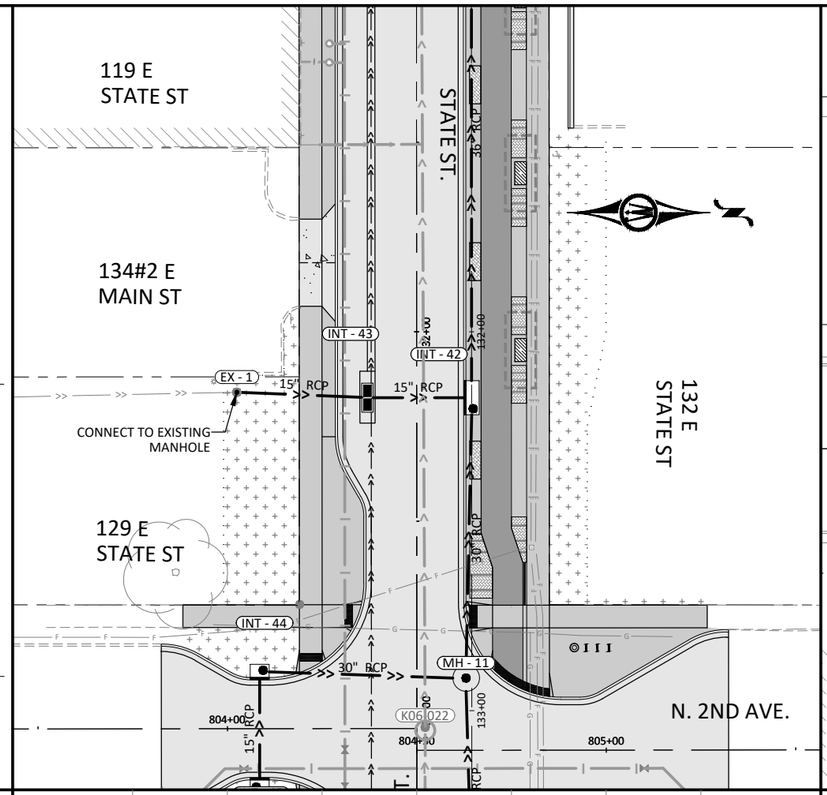
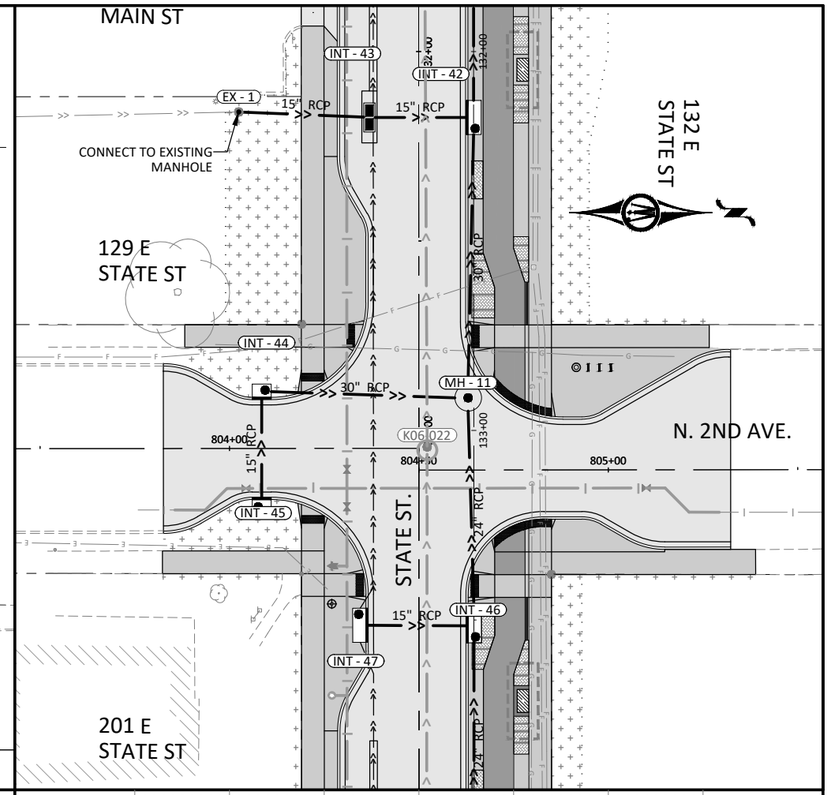
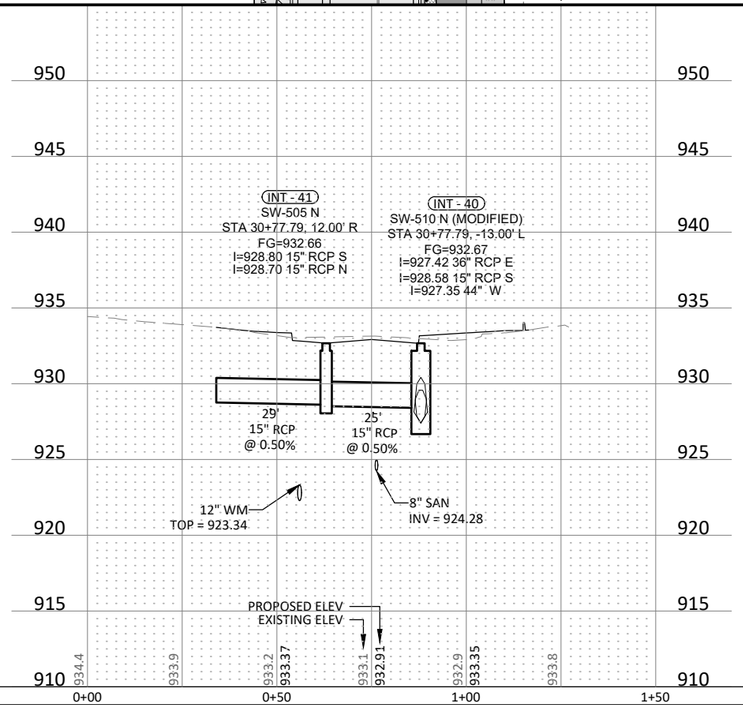
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STORM SEWER CROSS-RUNS

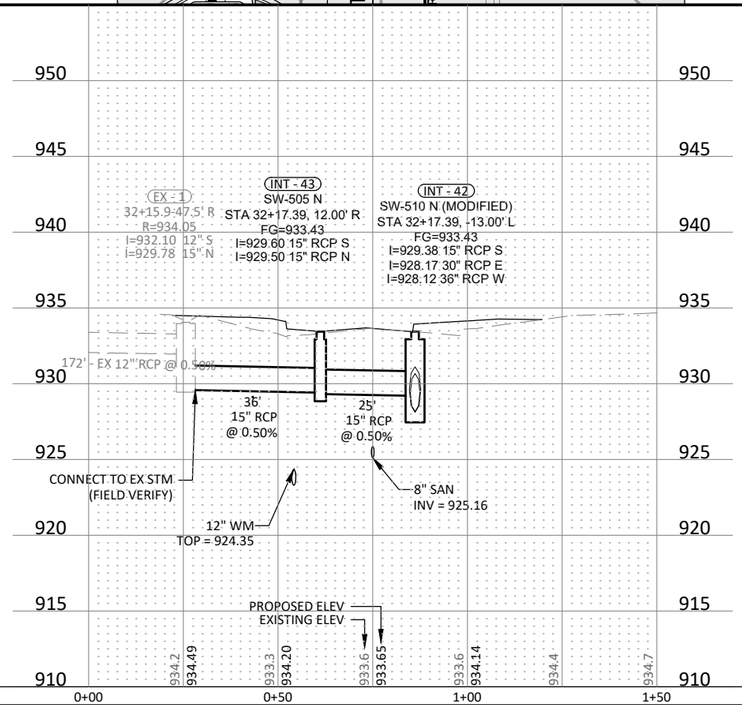
SHEET M.12

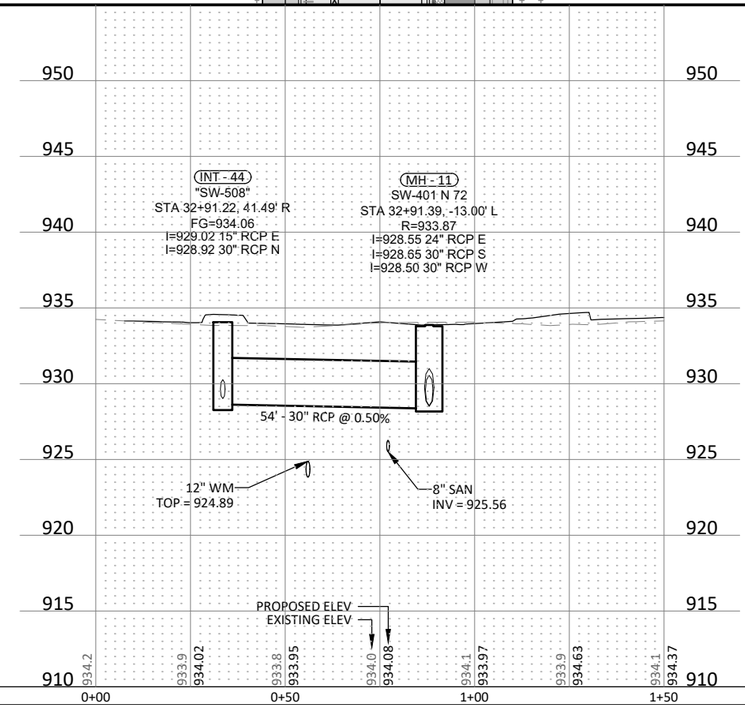












HORZ. SCALE 0 20 40 FEET

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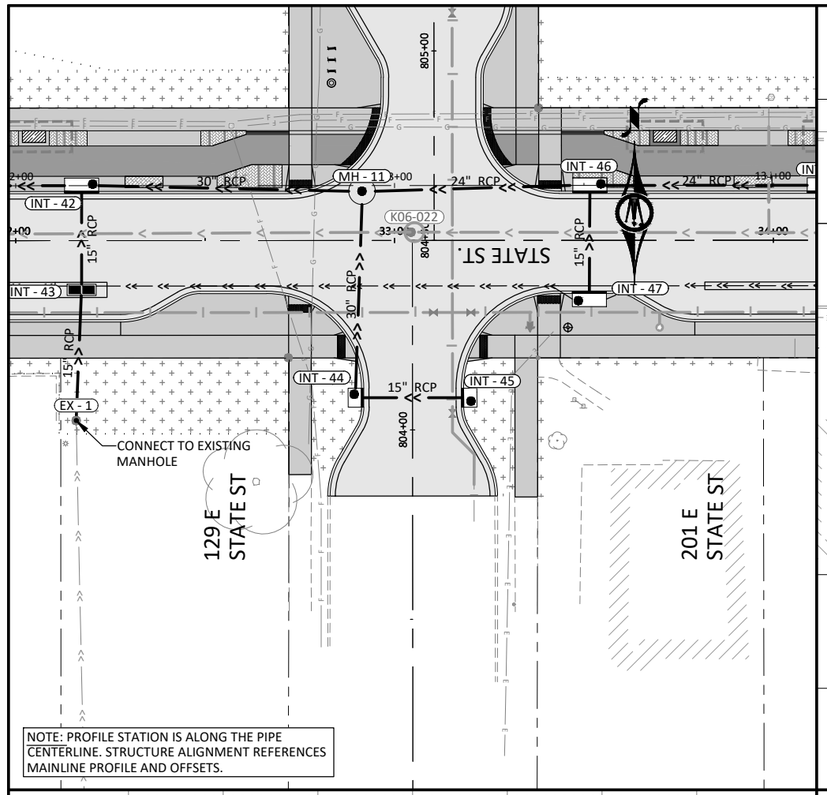
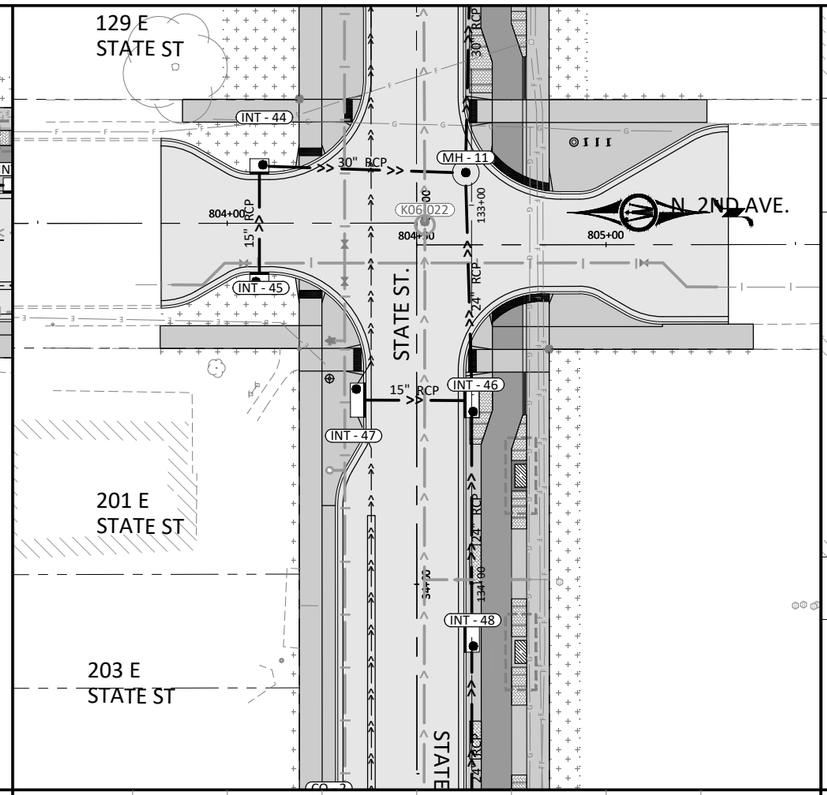
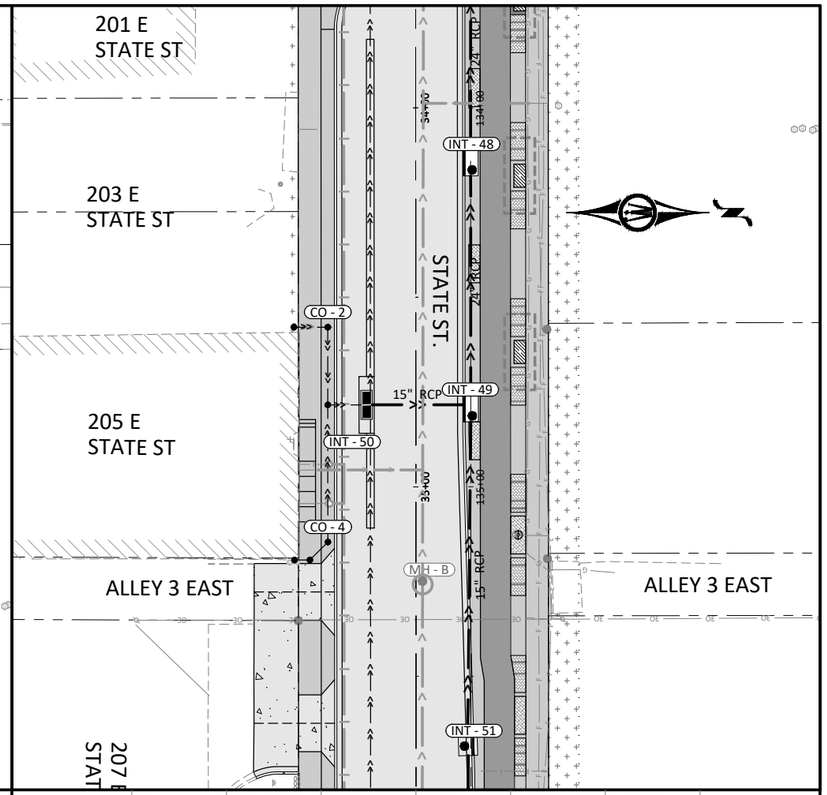
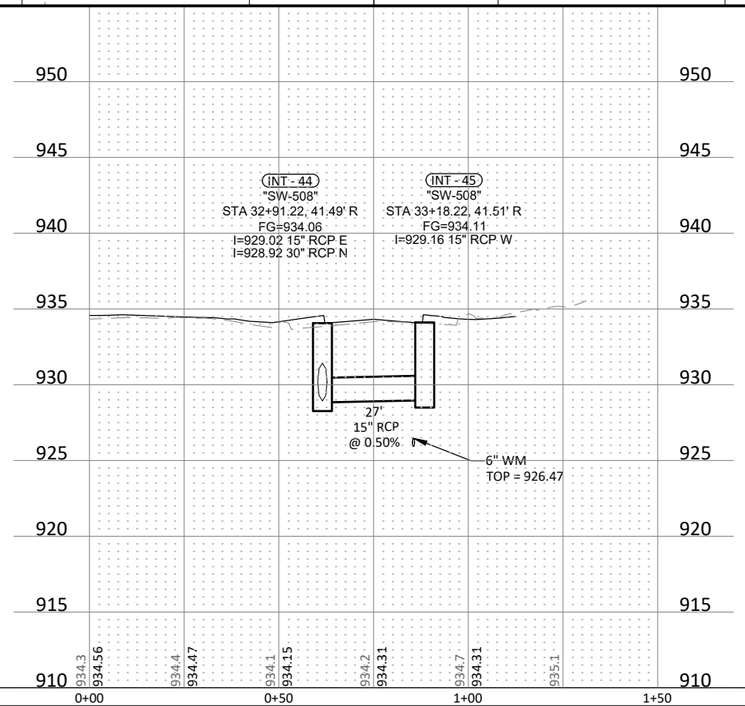
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STORM SEWER CROSS-RUNS

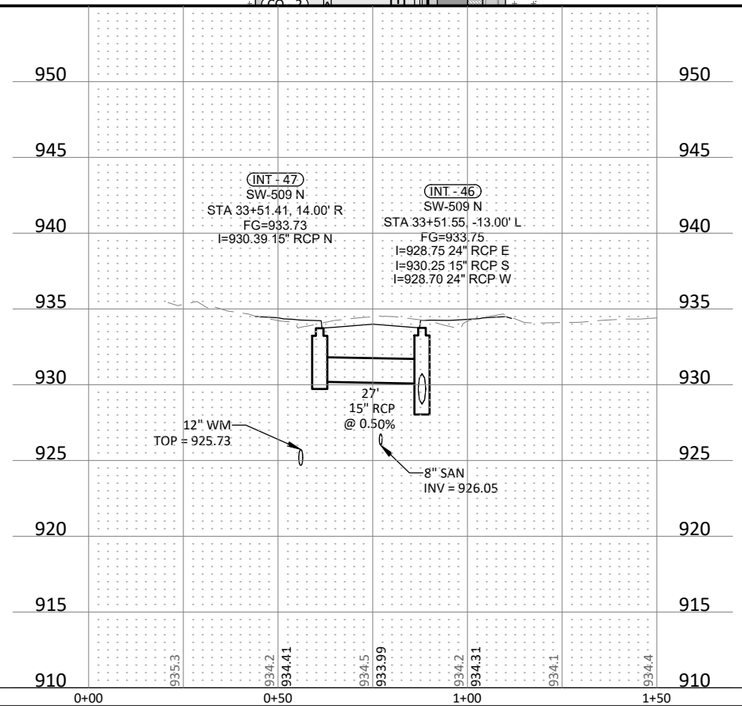
SHEET M.13

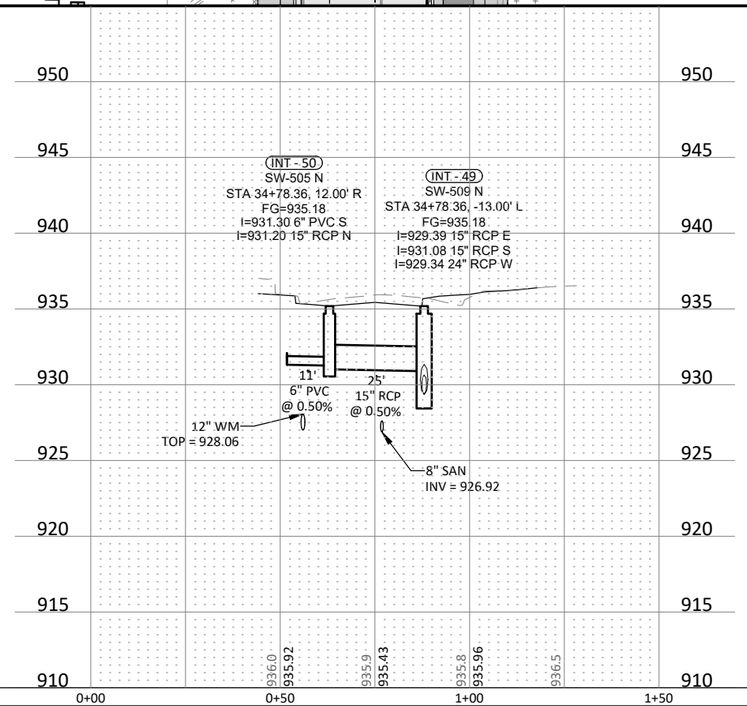












HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
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STORM SEWER CROSS-RUNS

SHEET
M.14

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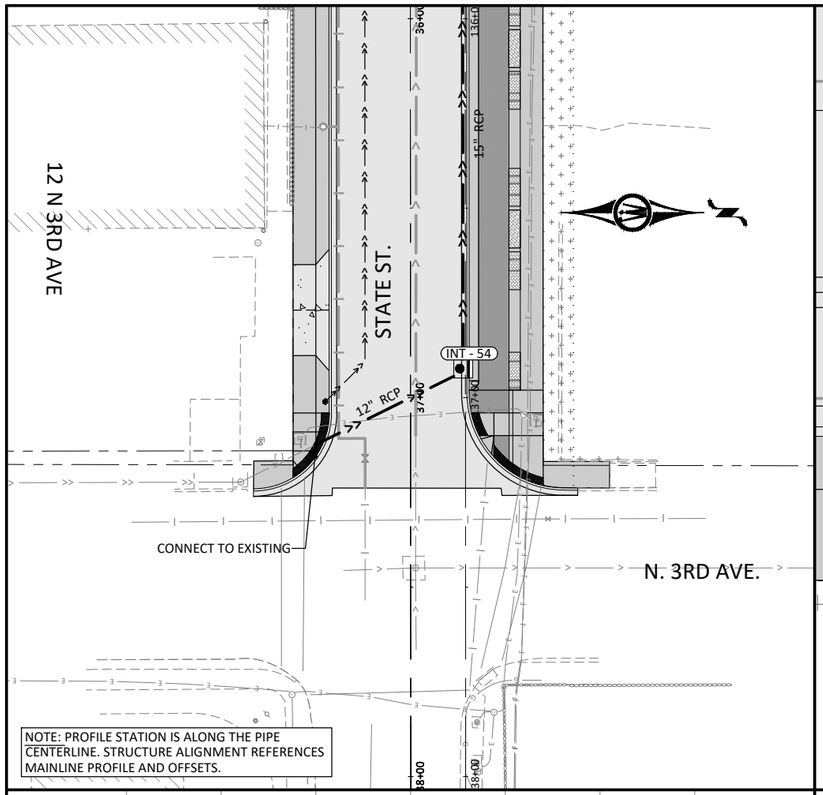

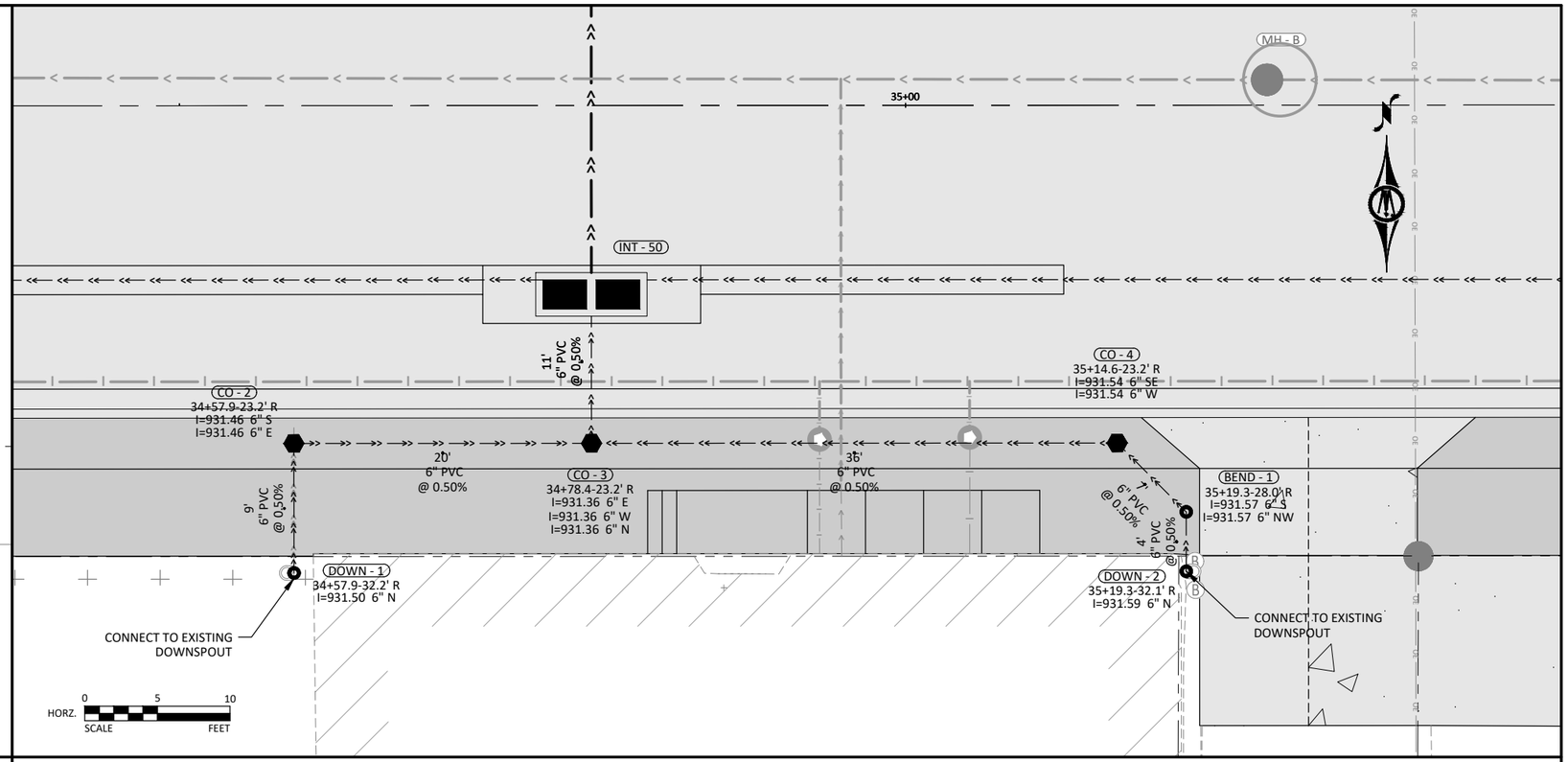

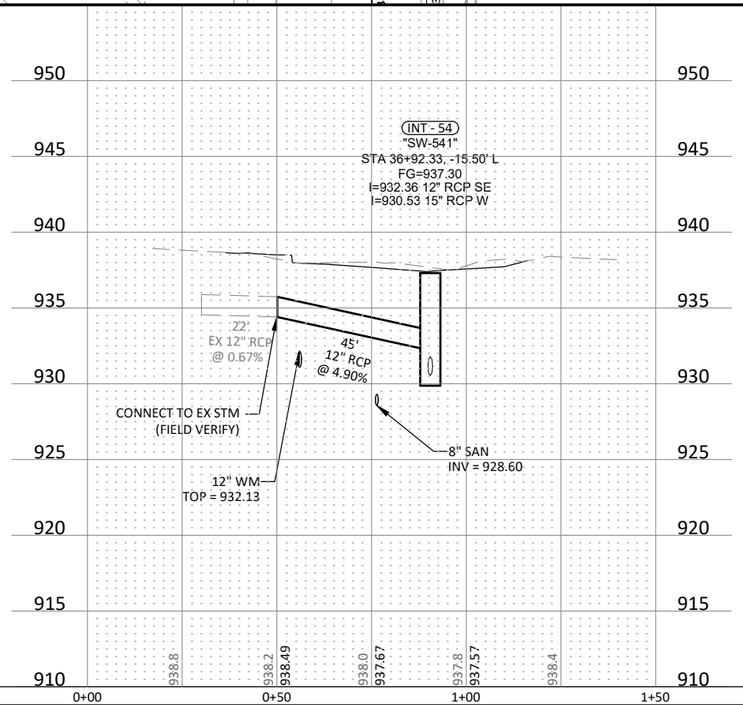

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MARSHALLTOWN, IOWA
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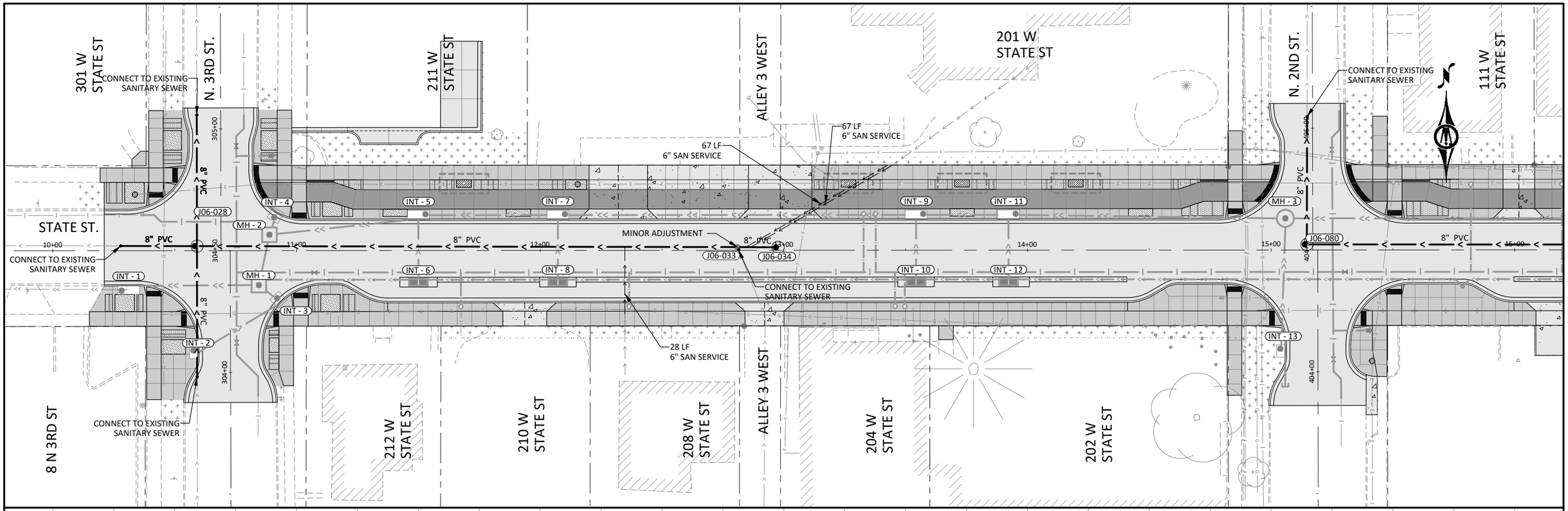
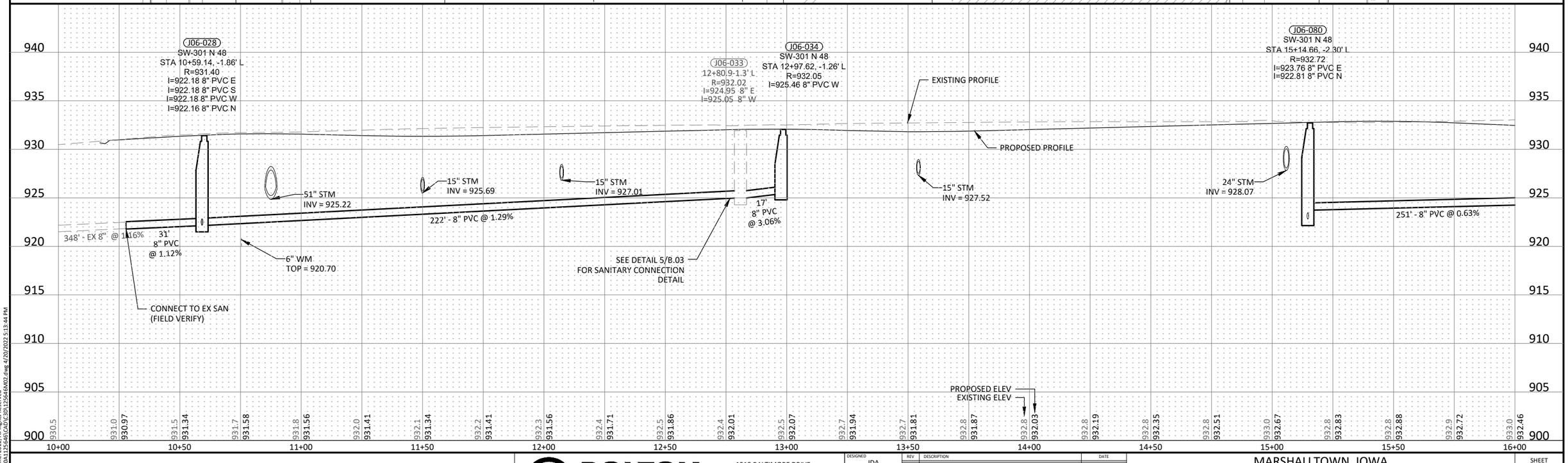
STORM SEWER CROSS-RUNS

SHEET
M.15





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HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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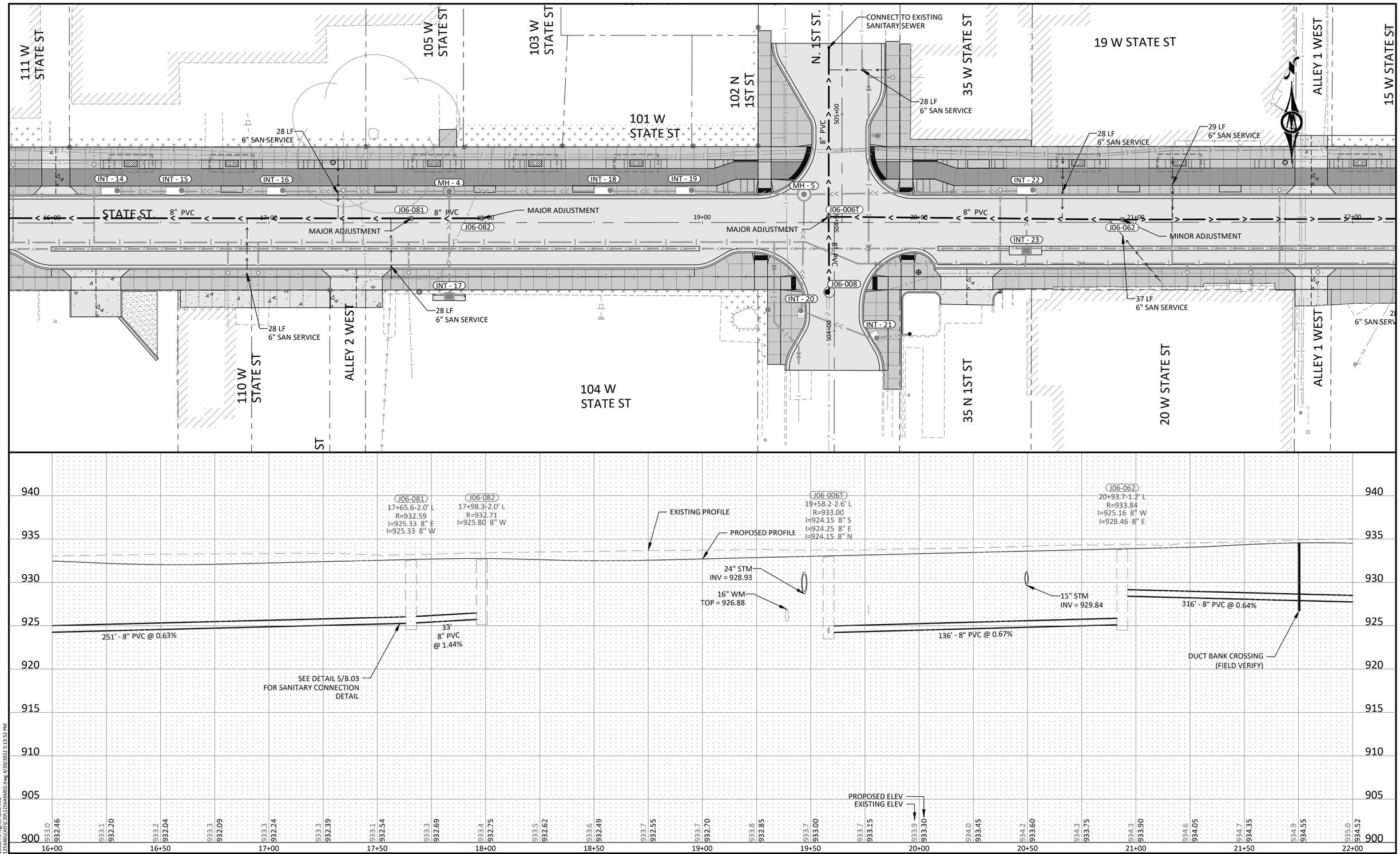
SANITARY SEWER SHEETS

SHEET M.16



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HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
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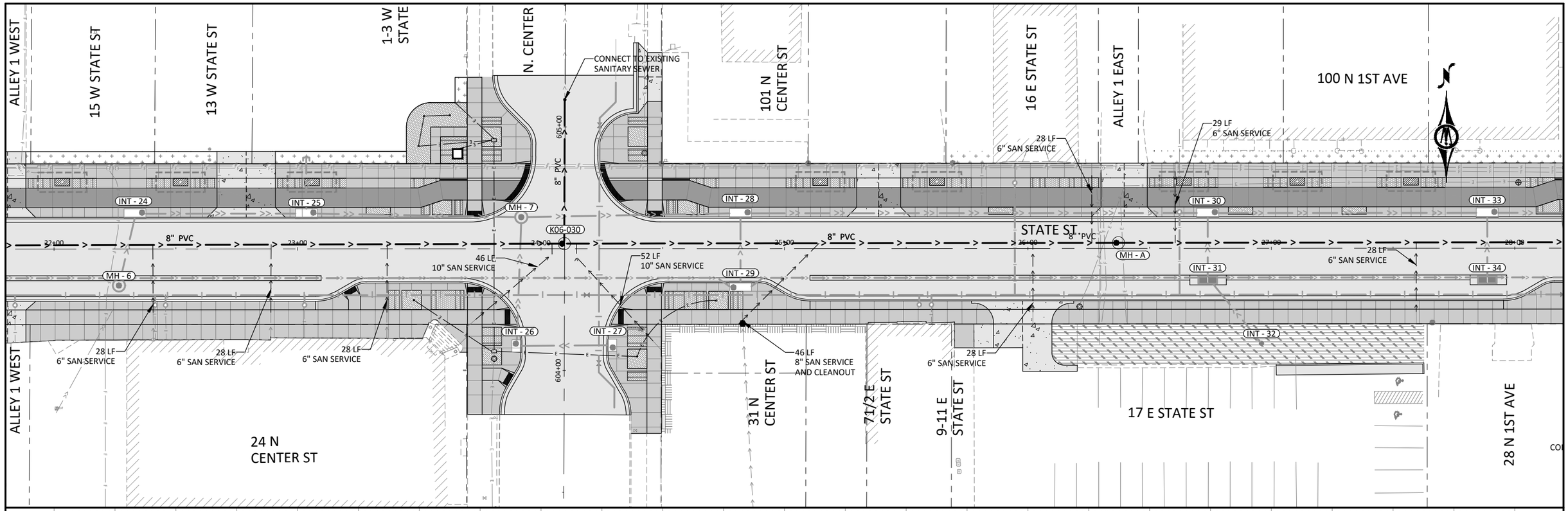
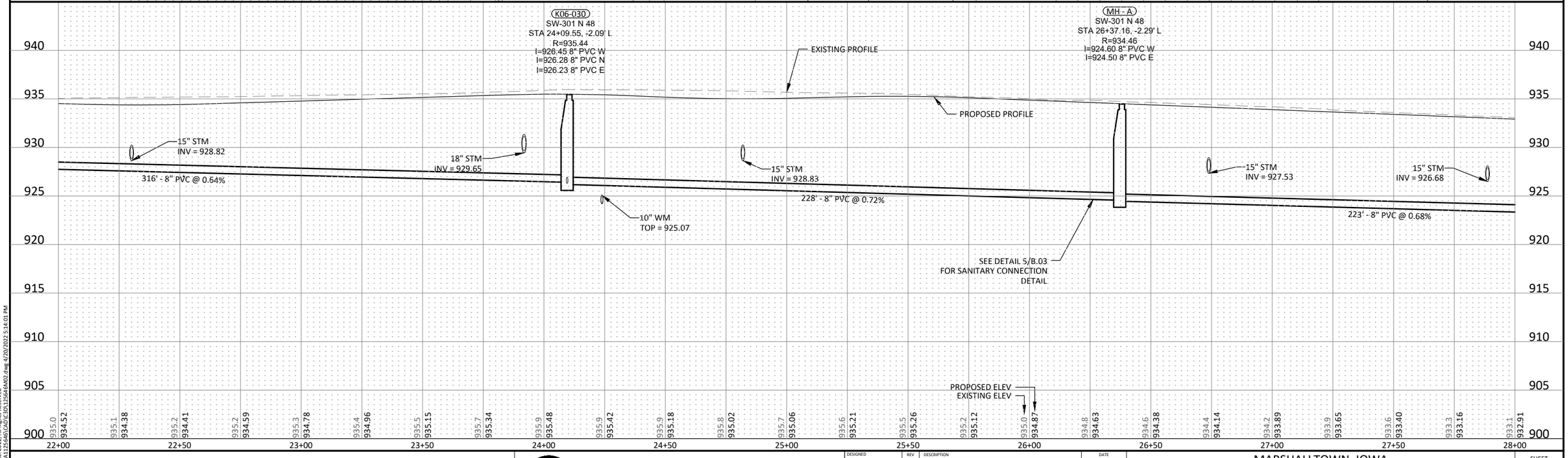
SANITARY SEWER SHEETS

SHEET M.17





HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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SHEET M.18

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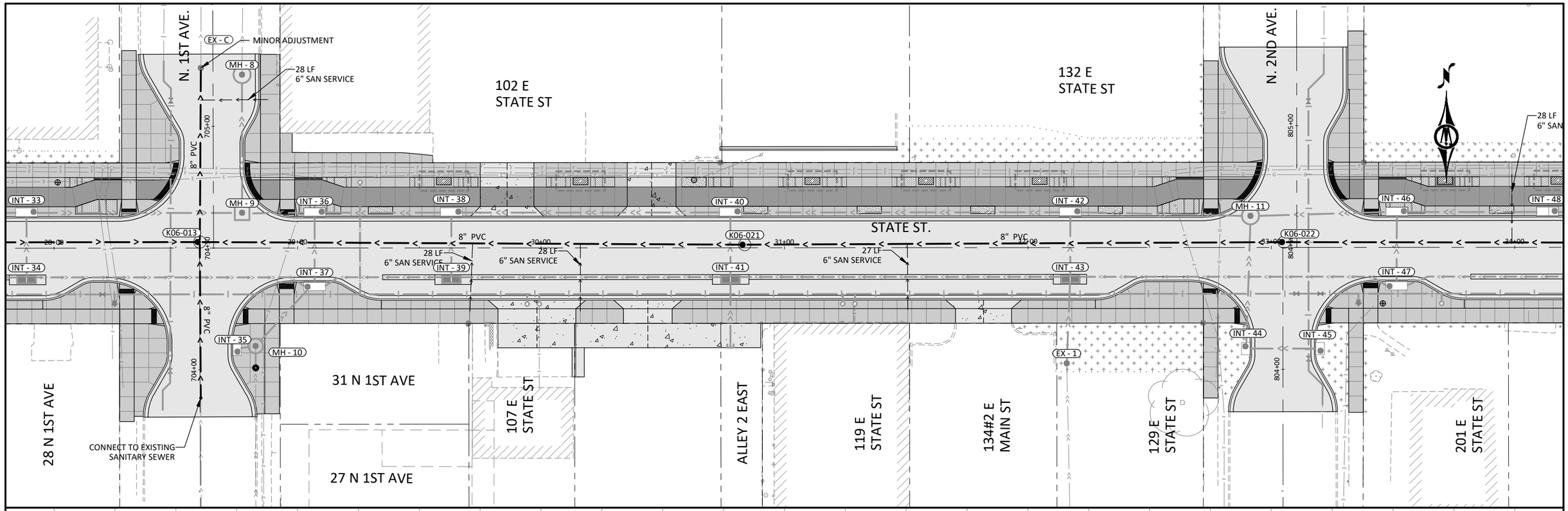

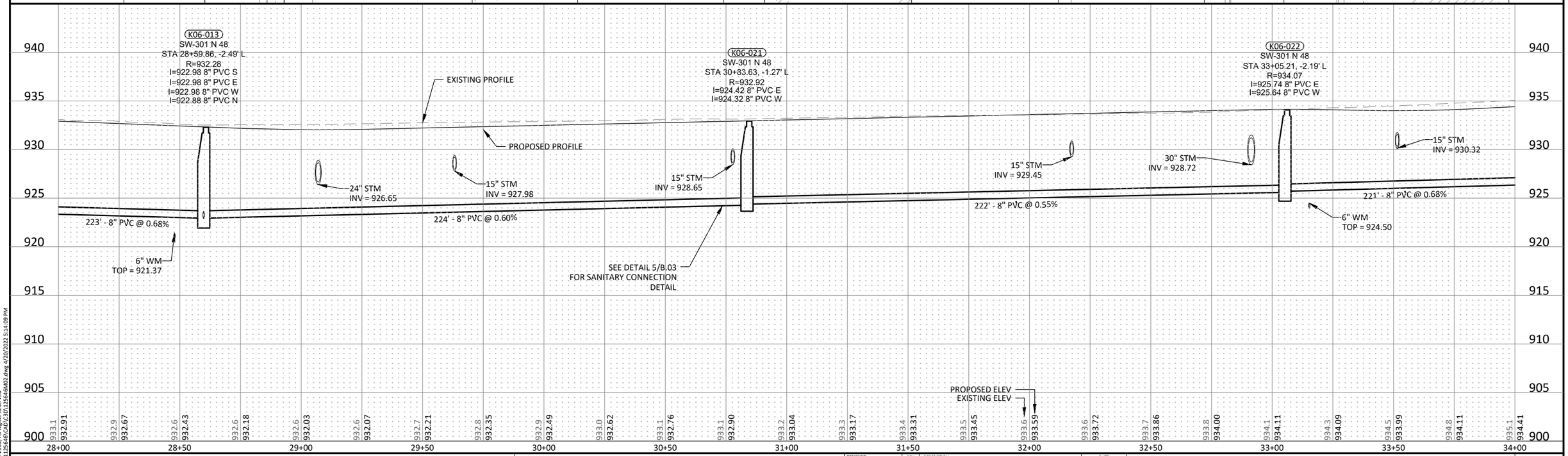

HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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SHEET M.19

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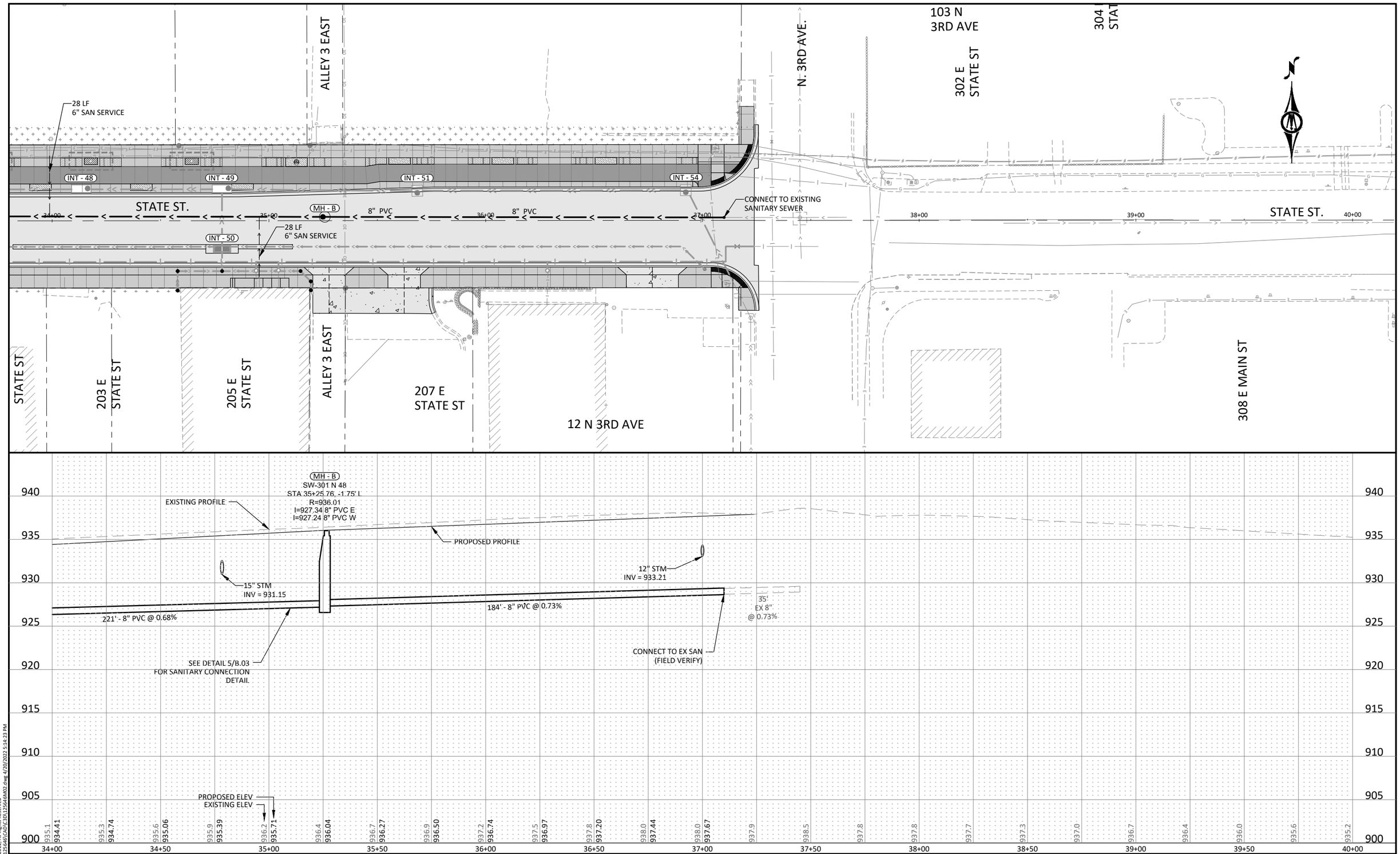

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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DRAWN DEM			
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CLIENT PROJ. NO. 0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
SANITARY SEWER SHEETS

SHEET M.20

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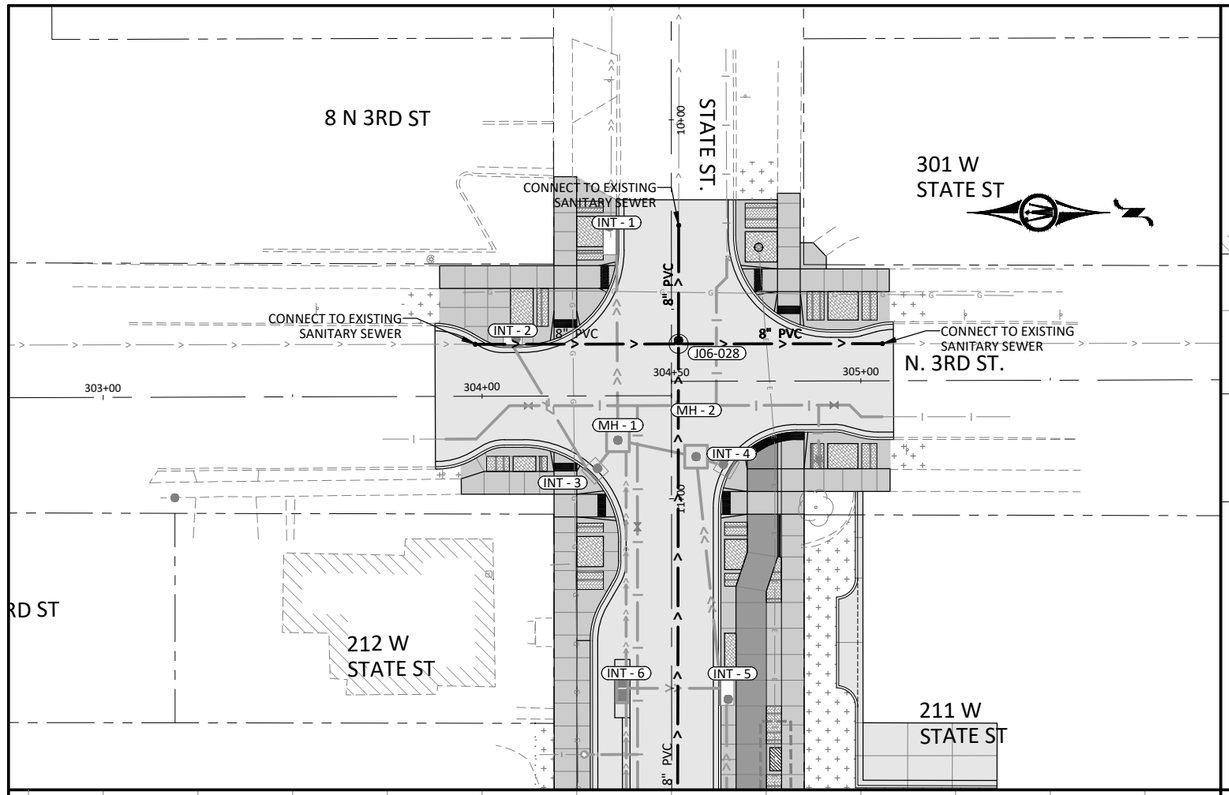

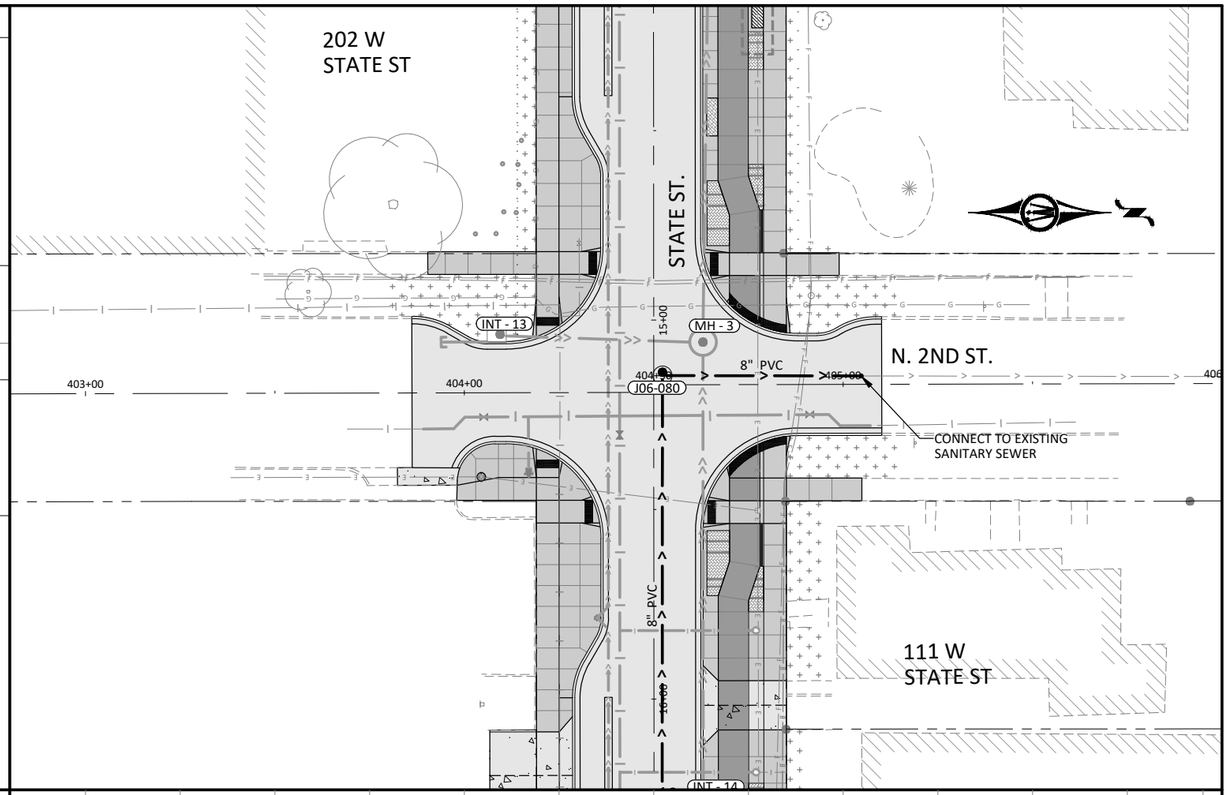

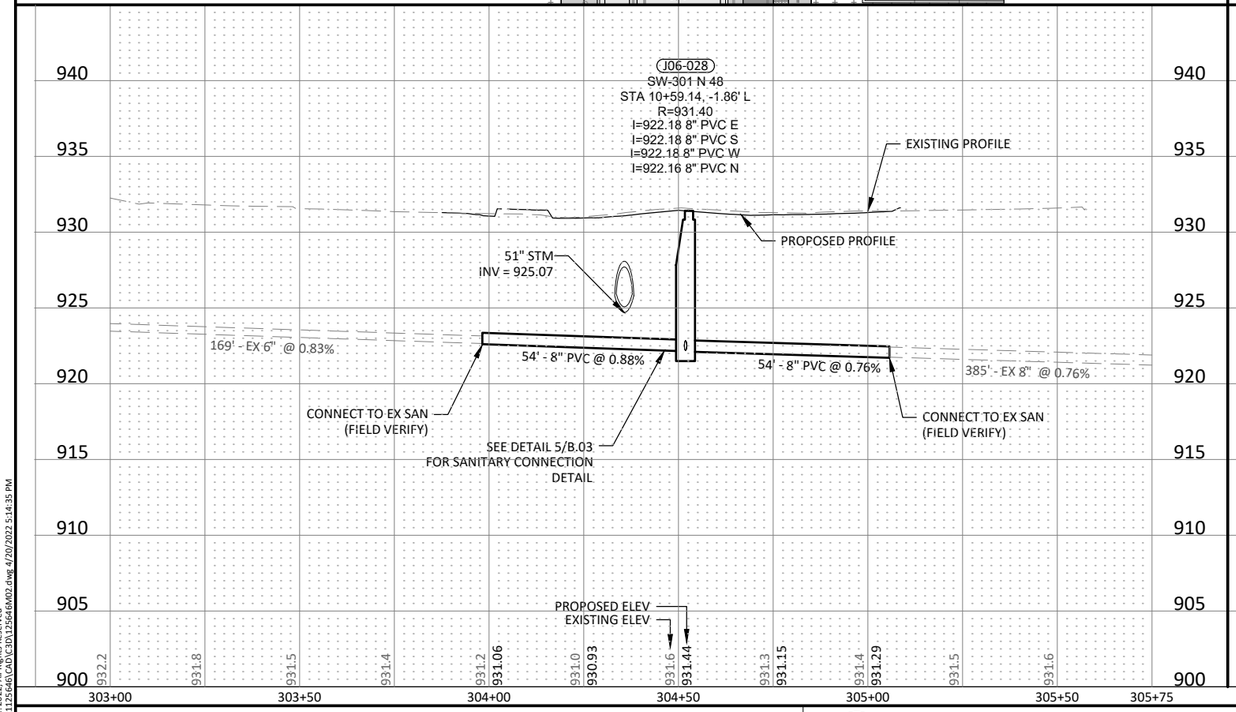

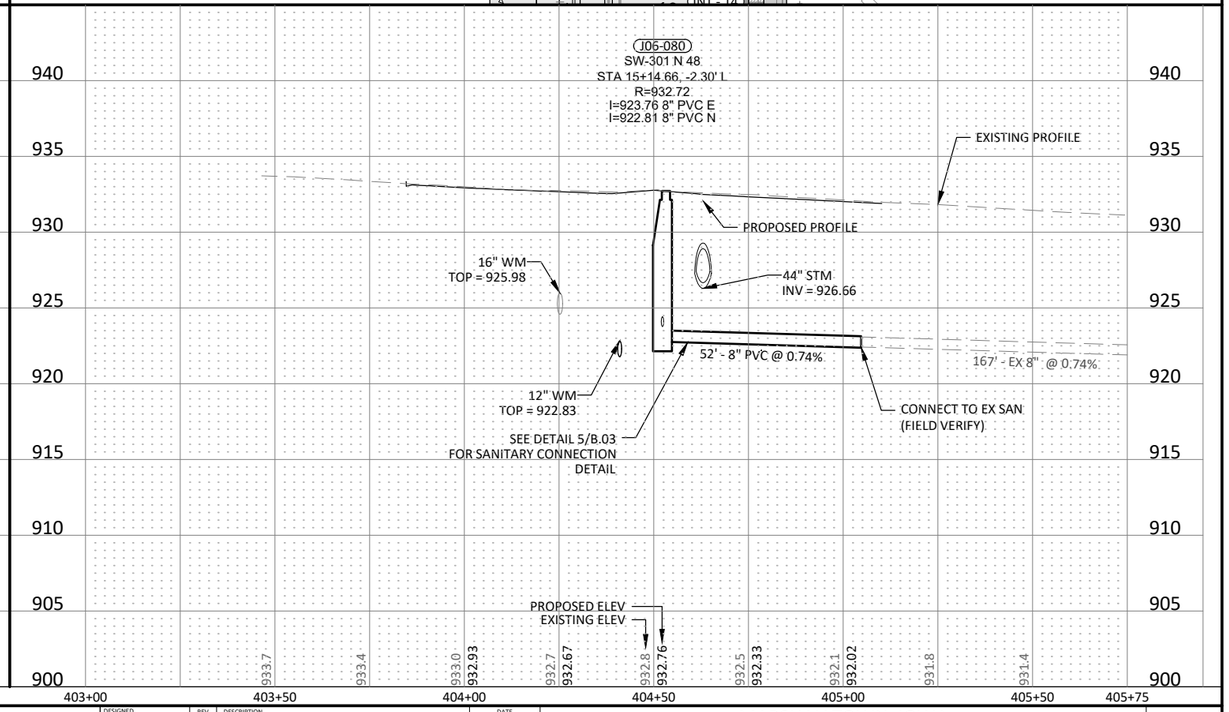

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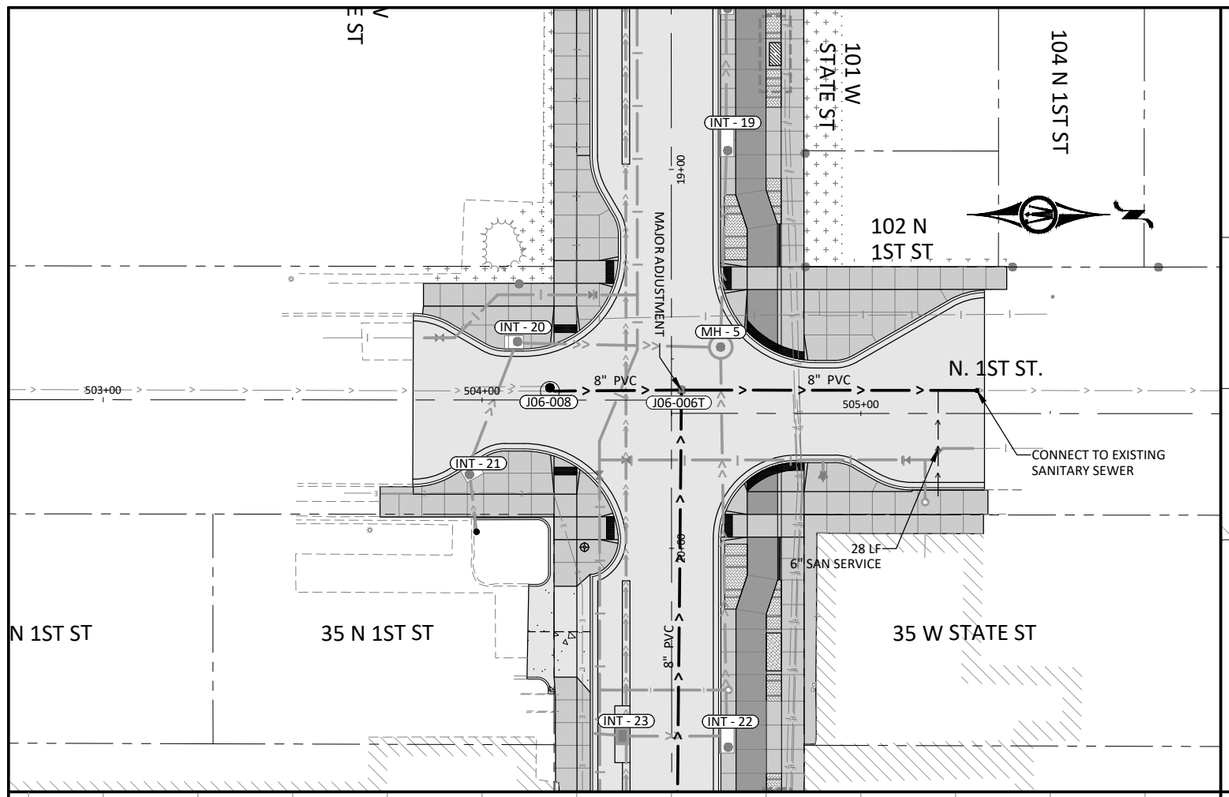
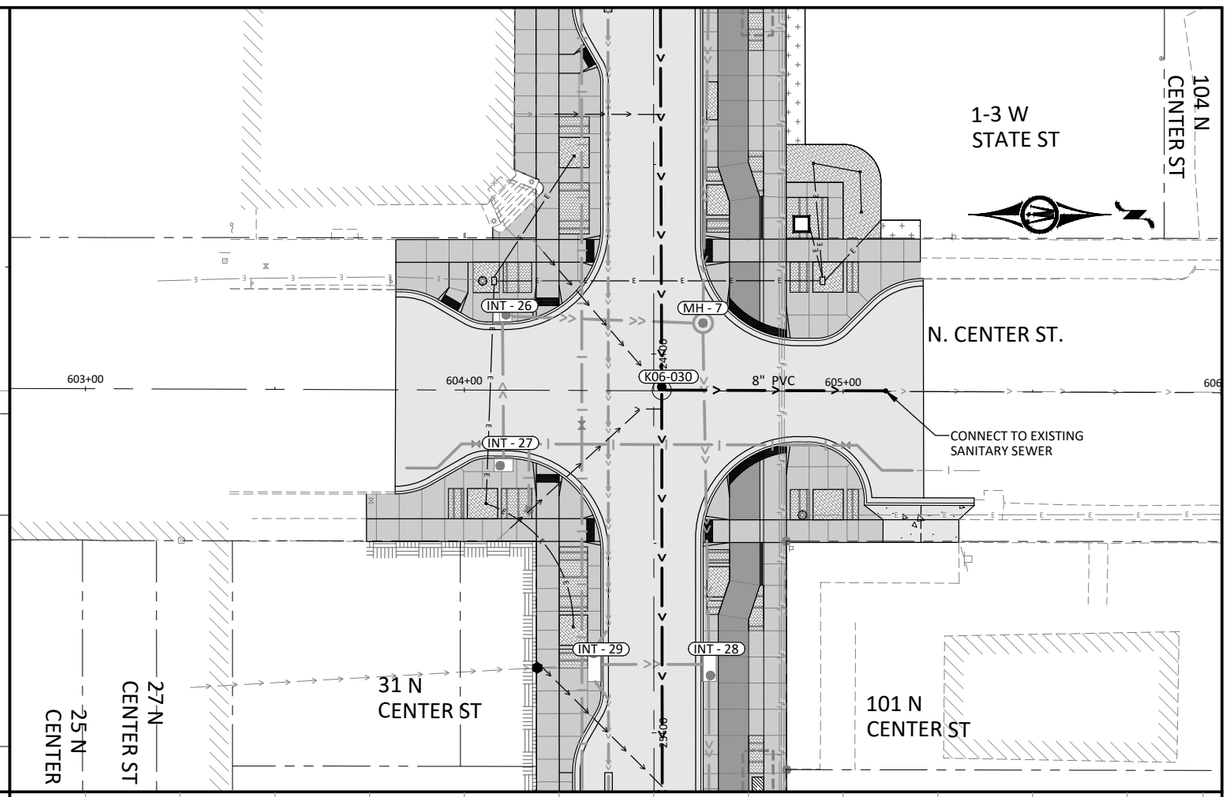
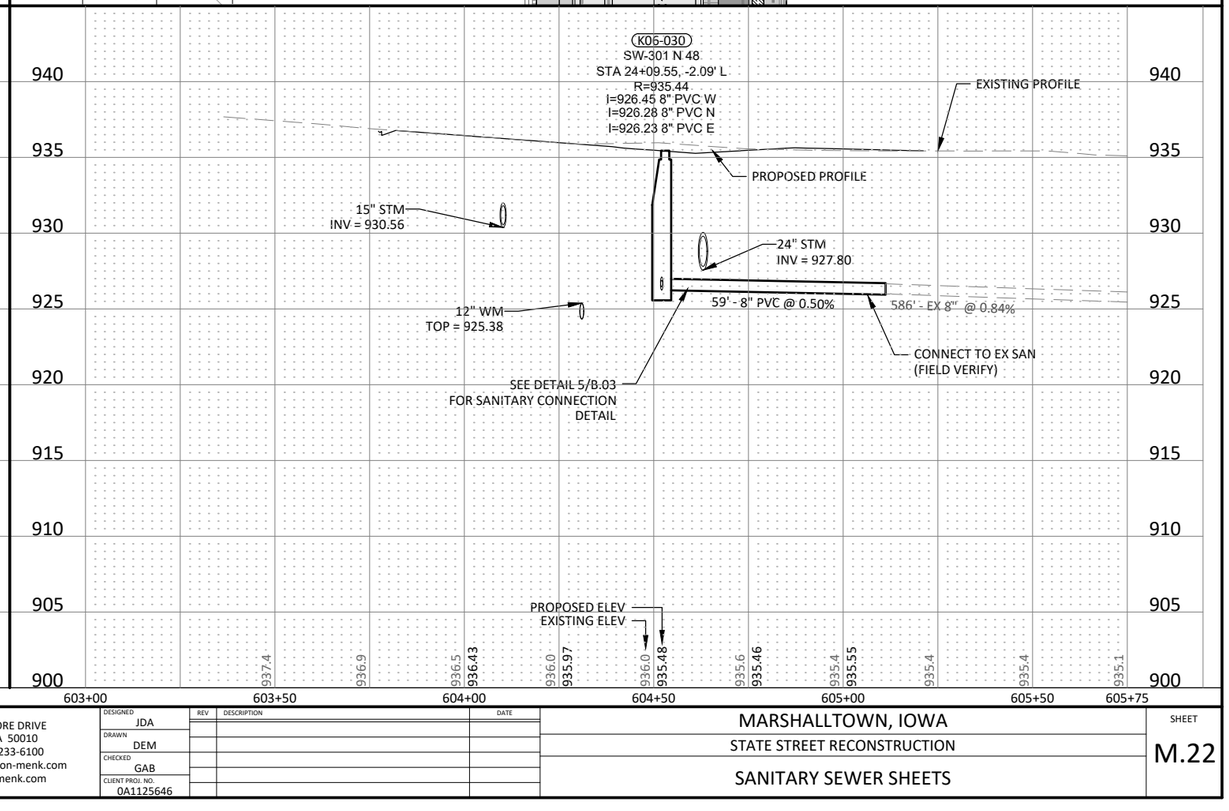
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
SANITARY SEWER SHEETS

SHEET
M.21







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SHEET M.22

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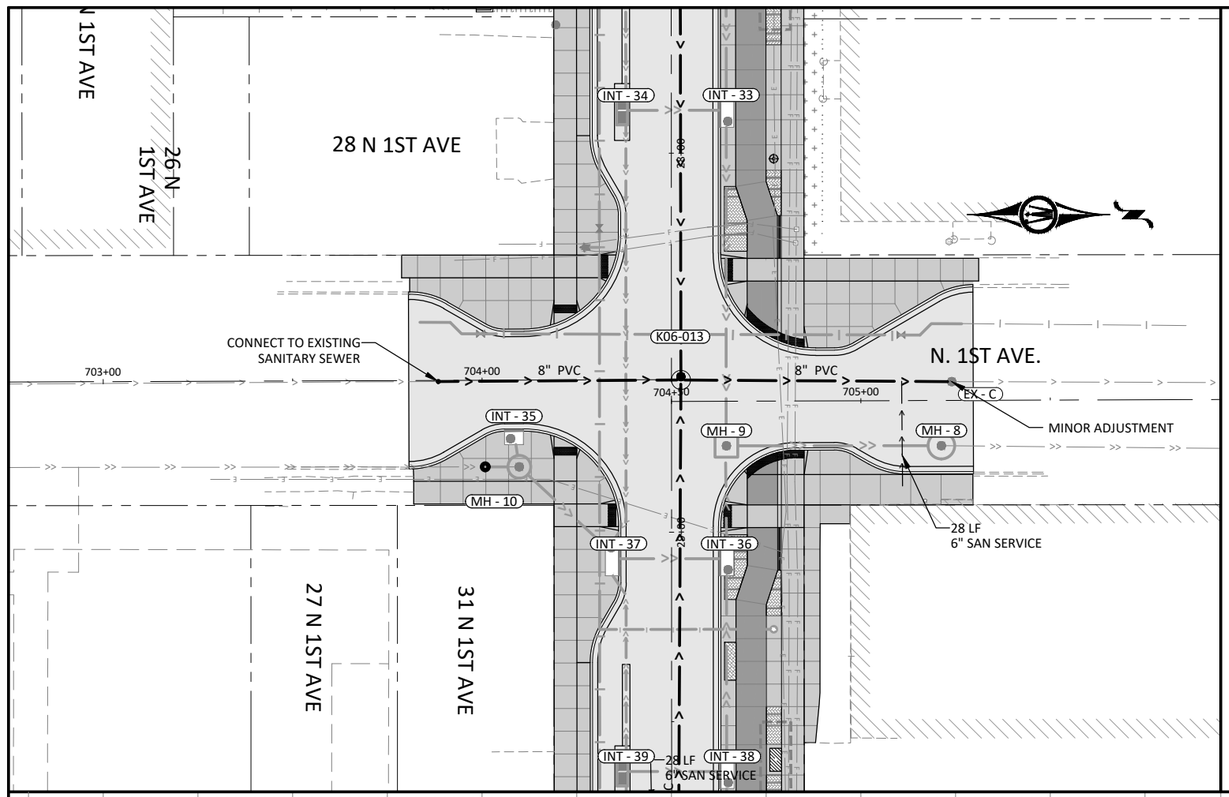

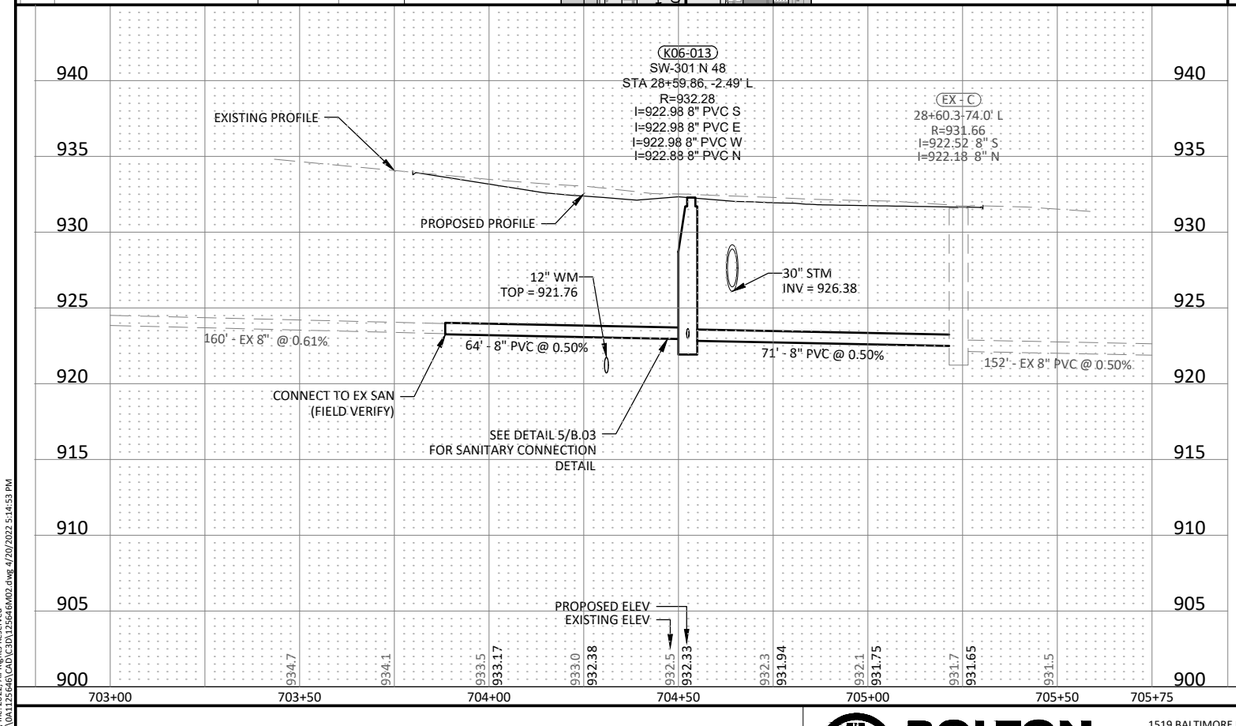

HORZ. SCALE 0 20 40 FEET

VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
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SHEET M.23

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SEE SHEET M.32 FOR
STATE STREET CONNECTIONS
6" CONNECTION AT 3RD STREET.

301 W STATE ST

N. 3RD ST.

211 W STATE ST

ALLEY 3 WEST

201 W STATE ST

N. 2ND ST.

111 W STATE ST

STA:10+90.08
38.87' L
INSTALL HYDRANT
FG = 931.60

STA:10+75.37
11.83' L
INSTALL 6"X6" TEE

STA:10+41.59
14.62' L
INSTALL 6" 45° BEND

STA:10+98.08
18.04' L
CAP 4" WM

STA:10+36.59
14.62'L
CONNECT TO 6" WM

STATE ST.

INSTALL TEMPORARY
BLOWOFF HYDRANT

24 LF
6" FIRE SERVICE
6" G.V. & BOX

24 LF
WATER SERVICE
SIZE UNKNOWN

STA:13+32.73
9.00' R
INSTALL 12"X6" TEE

36 LF
6" FIRE SERVICE
6" G.V. & BOX

45 LF 6" WM

40 LF 6" WM

60 LF 6" WM

54 LF 6" WM

450 LF 12" WM

67 LF 12" WM

53 LF 12" WM

STA:14+78.42
19.68' R
CAP 12" WM

STA:15+25.34
9.00' R
INSTALL 12" CROSS

STA:11+07.36
9.00' R
INSTALL 12" VALVE

STA:10+44.32
11.89' L
INSTALL 6" 45° BEND

STA:15+30.34
9.00' R
INSTALL 12" VALVE

STA:15+81.95
9.00' R
INSTALL 12"X6" TE

INSTALL TEMPORARY
BLOWOFF HYDRANT

STA:10+75.40
9.00' R
INSTALL 6"X6" TEE
INSTALL 12" TO 6" REDUCER

14 LF
WATER SERVICE
SIZE UNKNOWN

14 LF
WATER SERVICE
SIZE UNKNOWN

STA:13+45.64
9.00' R
INSTALL 12"X6" TEE

14 LF
6" FIRE SERVICE
6" G.V. & BOX

14 LF
WATER SERVICE
SIZE UNKNOWN

TURN VALVE AND CAP 12"
WATER MAIN

STA:15+40.55
33.00' R
INSTALL HYDRANT
FG = 933.03

PROTECT EXISTING
16" WATERMAIN
DURING
CONSTRUCTION

MH - 1
MH - 2
MH - 3

INT - 1
INT - 2
INT - 3
INT - 4
INT - 5
INT - 6
INT - 7
INT - 8
INT - 9
INT - 10
INT - 11
INT - 12

J06-028
J06-033
J06-034
J06-080

8 N 3RD ST

212 W STATE ST

210 W STATE ST

208 W STATE ST

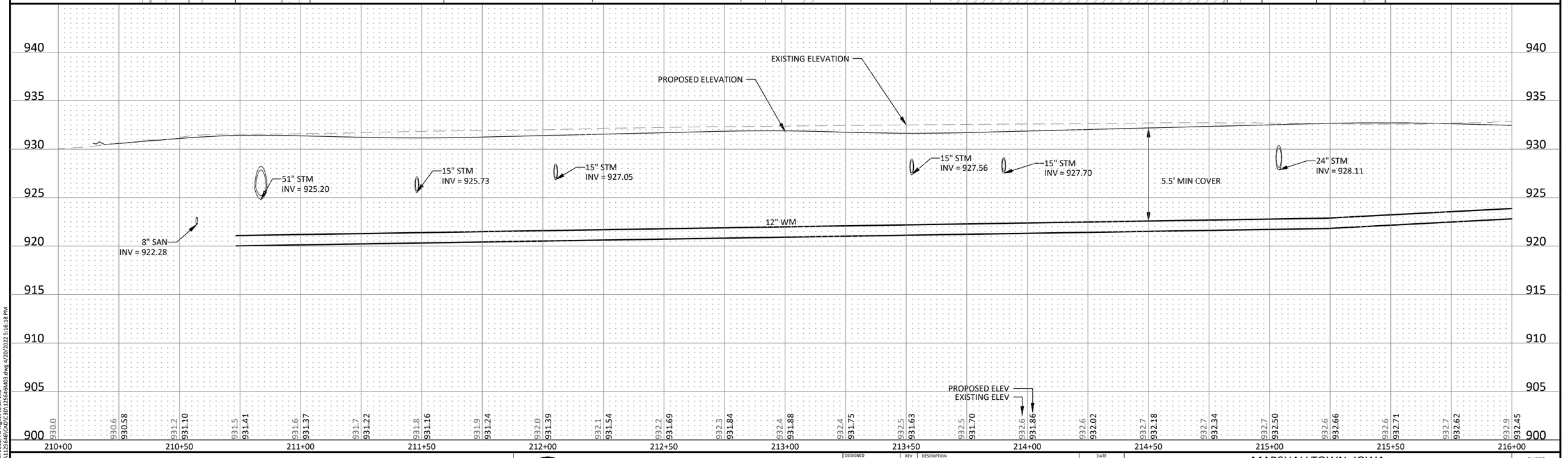
204 W STATE ST

202 W STATE ST

NOTE:
UNKNOWN WATER SERVICE SIZES SHALL BE FIELD VERIFIED PRIOR TO INSTALLATION AND PAID BY THE ESTABLISHED UNIT PRICE PER THE SIZE VERIFIED IN THE FIELD.

SEE SHEET M.29 FOR
3RD STREET CONNECTIONS

SEE SHEET M.29 FOR
2ND STREET CONNECTIONS



HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
WATERMAIN SHEETS

SHEET M.24

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111 W STATE ST
105 W STATE ST
103 W STATE ST
102 N 1ST ST
N. 1ST ST.
35 W STATE ST
19 W STATE ST
ALLEY 1 WEST
15 W STATE ST
101 W STATE ST
STATE ST.
110 W STATE ST
ALLEY 2 WEST
104 W STATE
35 N 1ST ST
20 W STATE ST

36 LF 6" FIRE SERVICE 6" G.V. & BOX
36 LF 3/4" WATER SERVICE
24 LF 3" WATER SERVICE 3" G.V. & BOX
PROTECT EXISTING 16" WM DURING CONSTRUCTION
12 LF 4" WM
29 LF 6" WM
59 LF 6" WM
11 LF 3/4" WATER SERVICE
STA:19+81.23 40.00' L INSTALL HYDRANT FG = 933.62
34 LF 3/4" WATER SERVICE
34 LF 6" FIRE SERVICE 6" G.V. & BOX
INSTALL TEMPORARY BLOWOFF HYDRANTS
34 LF 6" FIRE SERVICE 6" G.V. & BOX

INT - 14 INT - 15 INT - 16 MH - 4 INT - 18 INT - 19 MH - 5 INT - 22 INT - 23 INT - 17 INT - 20 INT - 21

16+00 17+00 18+00 19+00 20+00 21+00 22+00
216+00 217+00 218+00 219+00 220+00 221+00 222+00

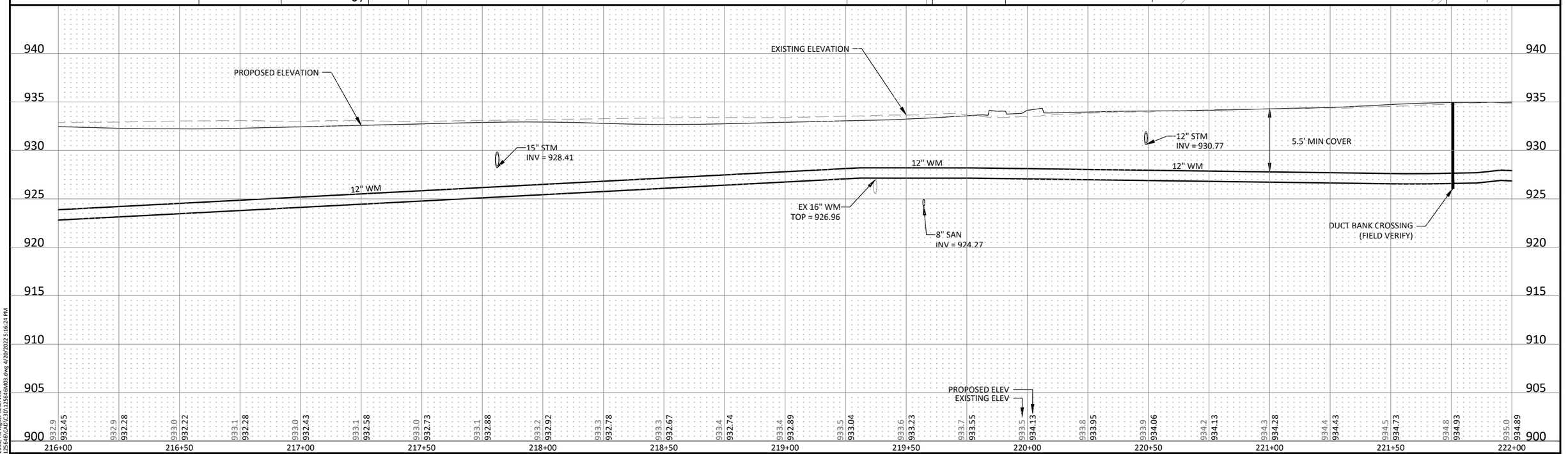
J06-081 J06-082 J06-006T J06-062 J06-008

STA:17+34.33 5.20' R INSTALL 4" TO 3" REDUCER
408 LF 12" WM
STA:17+34.33 9.00' R INSTALL 12"X12"X4" TEE
46 LF 12" WM
447 LF 12" WM
STA:20+37.39 19.00' R INSTALL 12"X6" TEE
STA:20+75.00 19.00' R INSTALL 12" VALVE
STA:21+66.29 19.00' R INSTALL 12"X6" TEE
STA:15+81.95 9.00' R INSTALL 12"X6" TEE

PROTECT EXISTING 16" WATERMAIN DURING CONSTRUCTION
14 LF 3/4" WATER SERVICE
14 LF 3/4" WATER SERVICE
14 LF 1" WATER SERVICE
PROTECT EXISTING 16" WM DURING CONSTRUCTION
STA:19+33.10 9.00' R INSTALL 12"X6" TEE
STA:19+47.53 9.00' R INSTALL 12" 22.5° BEND
STA:19+71.67 19.00' R INSTALL 12" 22.5° BEND
STA:19+80.67 19.00' R INSTALL 12" VALVE
STA:19+76.67 19.00' R INSTALL 12"X6" TEE
STA:20+70.00 24.00' R INSTALL TEMPORARY BLOWOFF HYDRANT
4 LF WATER SERVICE SIZE UNKNOWN
4 LF WATER SERVICE SIZE UNKNOWN

NOTE:
UNKNOWN WATER SERVICE SIZES SHALL BE FIELD VERIFIED PRIOR TO INSTALLATION AND PAID BY THE ESTABLISHED UNIT PRICE PER THE SIZE VERIFIED IN THE FIELD.

SEE SHEET M.30 FOR 1ST STREET CONNECTIONS



HORZ. 0 20 40 SCALE FEET
VERT. 0 5 10 SCALE FEET

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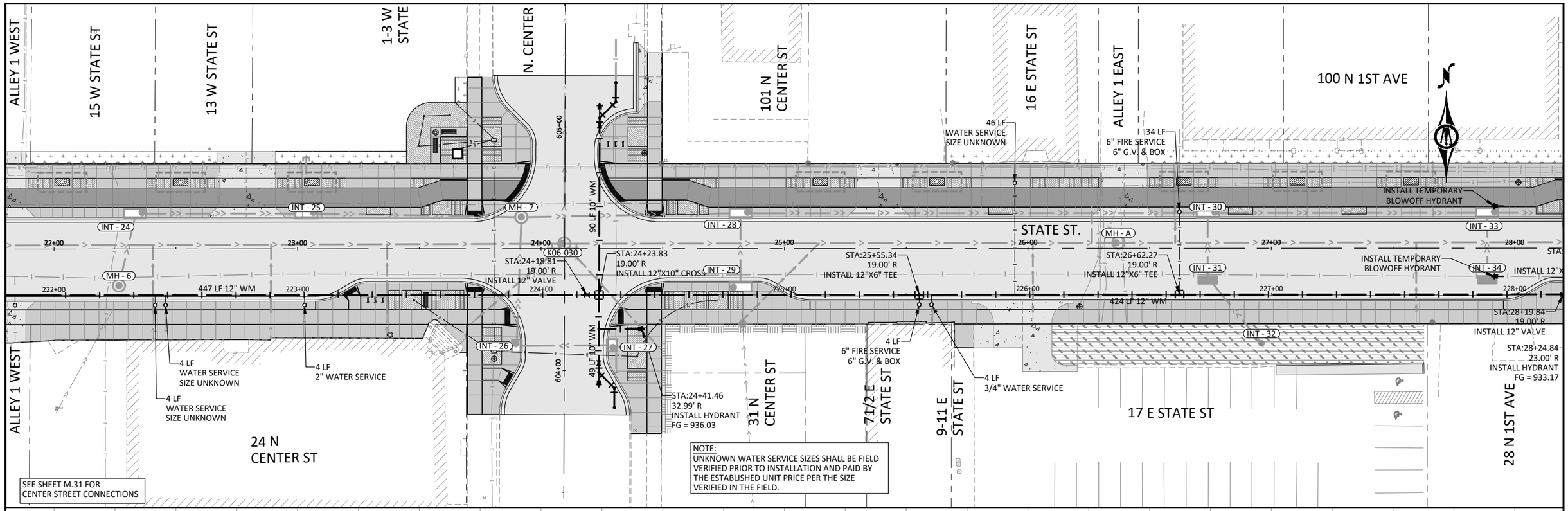
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
WATERMAIN SHEETS

SHEET M.25



HORZ. SCALE 0 20 40 FEET
VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
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WATERMAIN SHEETS

SHEET M.26

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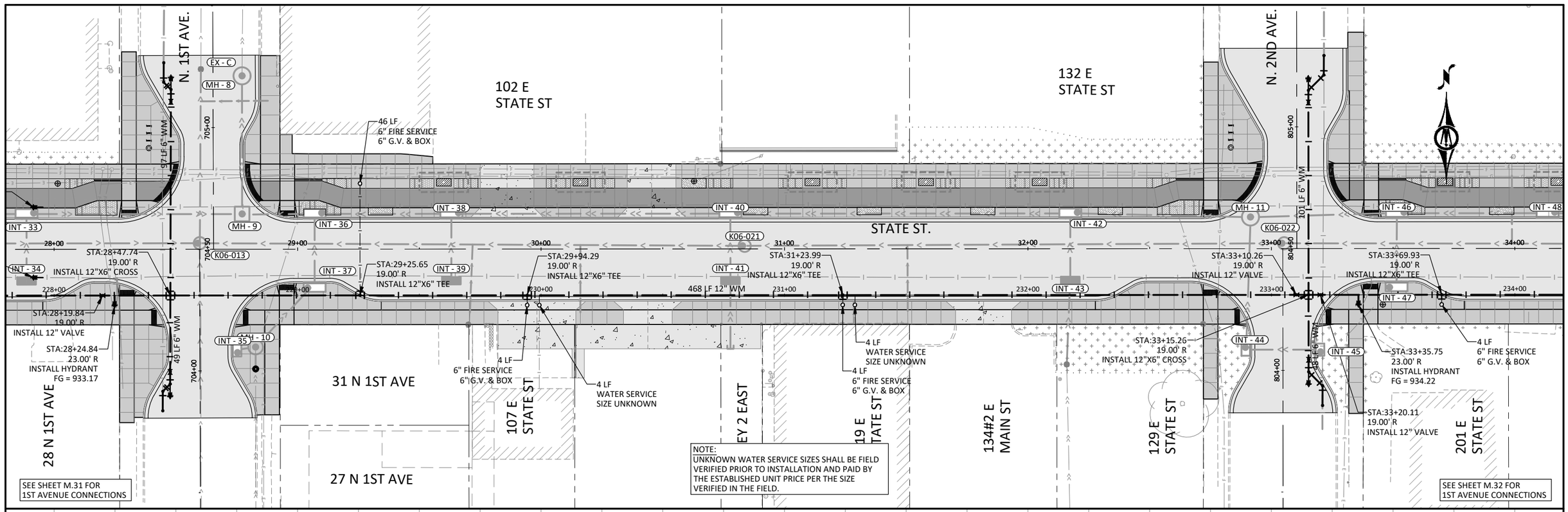

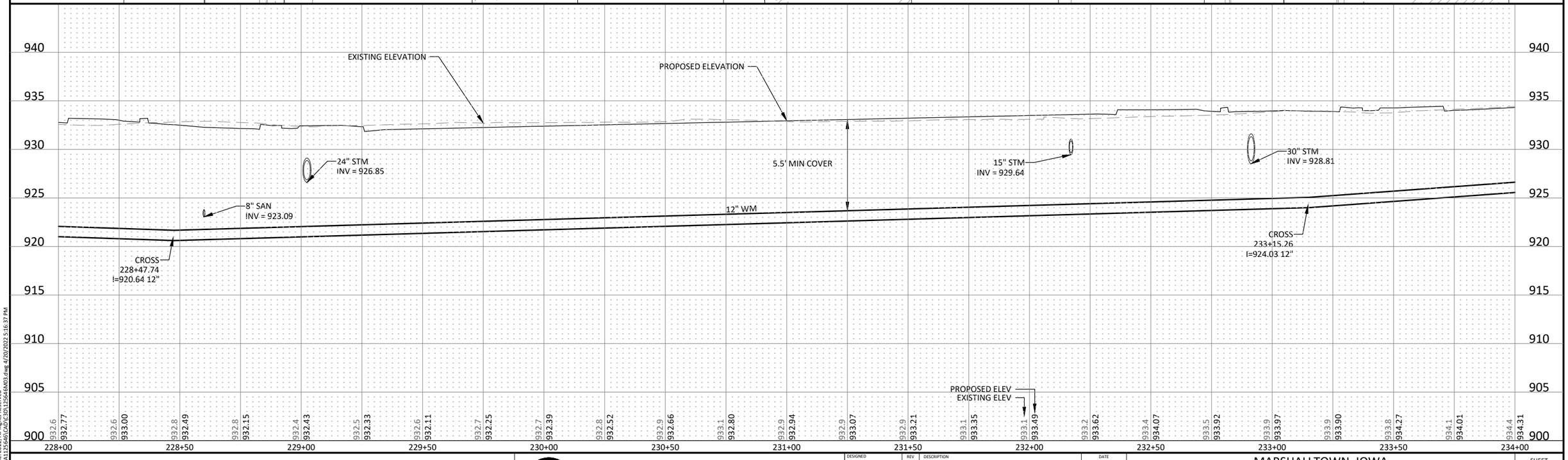

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MARSHALLTOWN, IOWA
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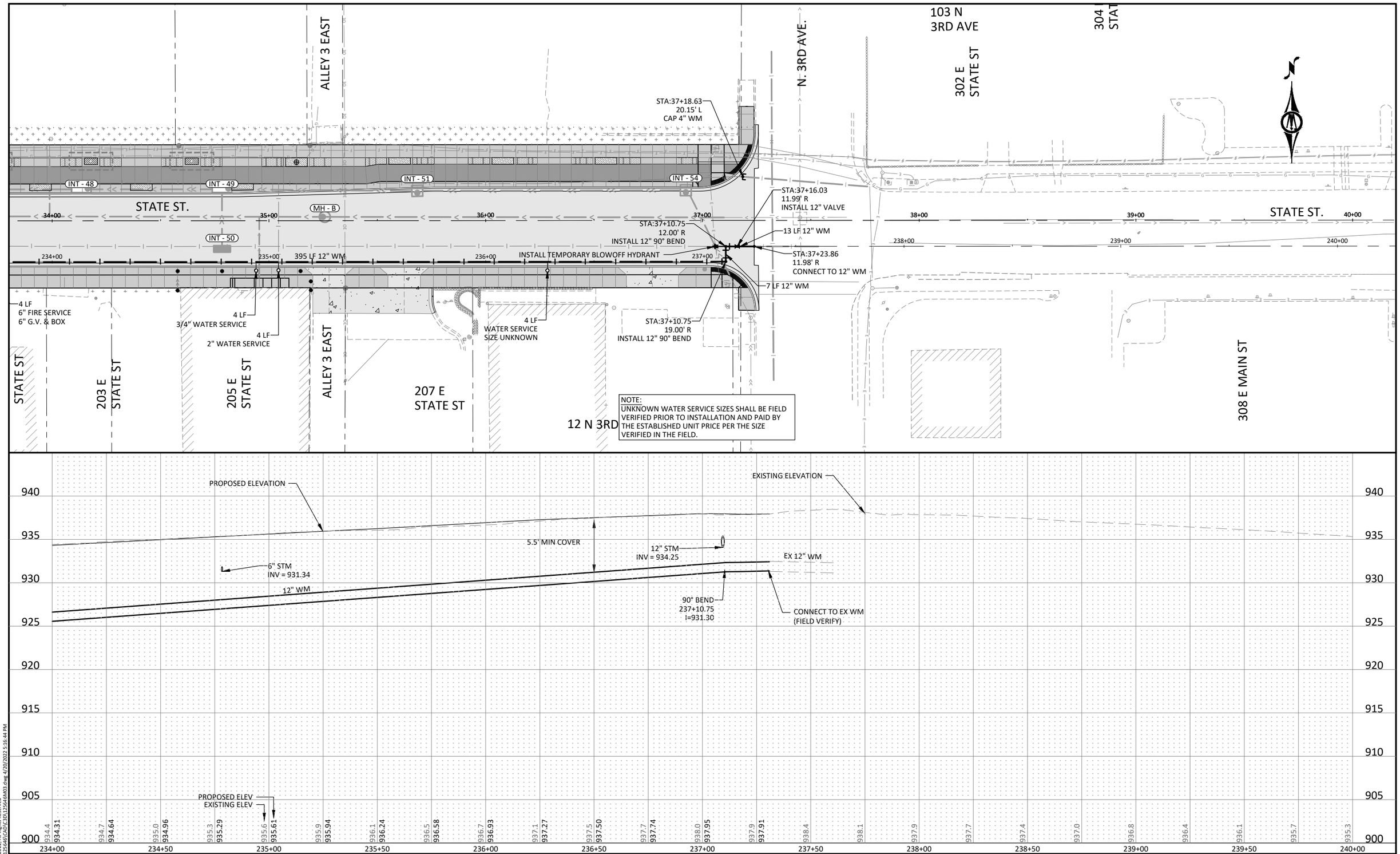
WATERMAIN SHEETS

SHEET M.27



HORZ. 0 20 40 SCALE FEET

VERT. 0 5 10 SCALE FEET

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MARSHALLTOWN, IOWA
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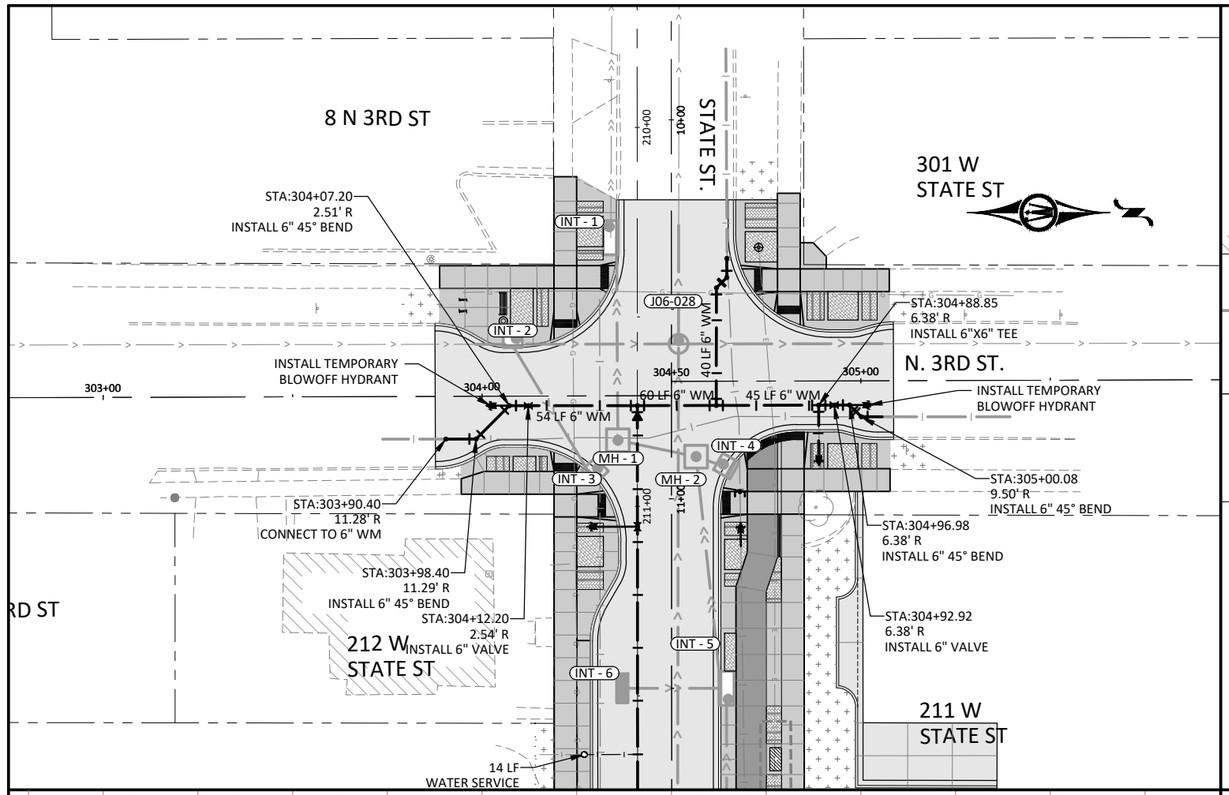
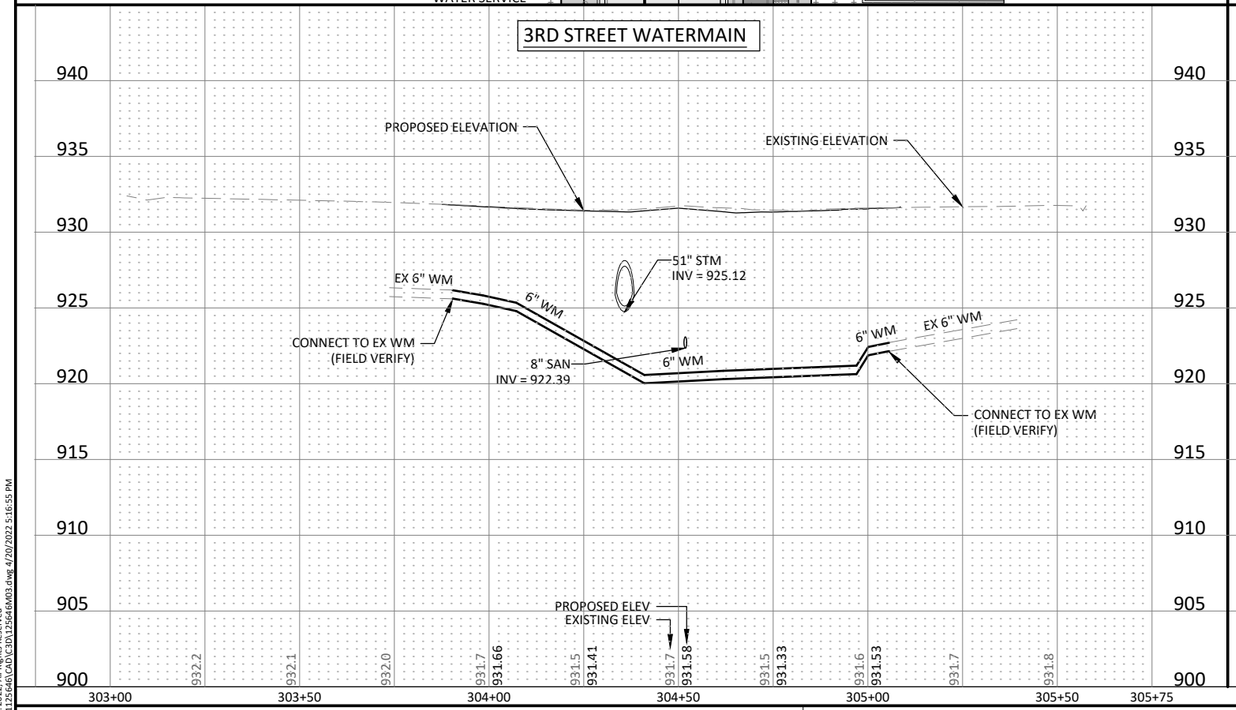
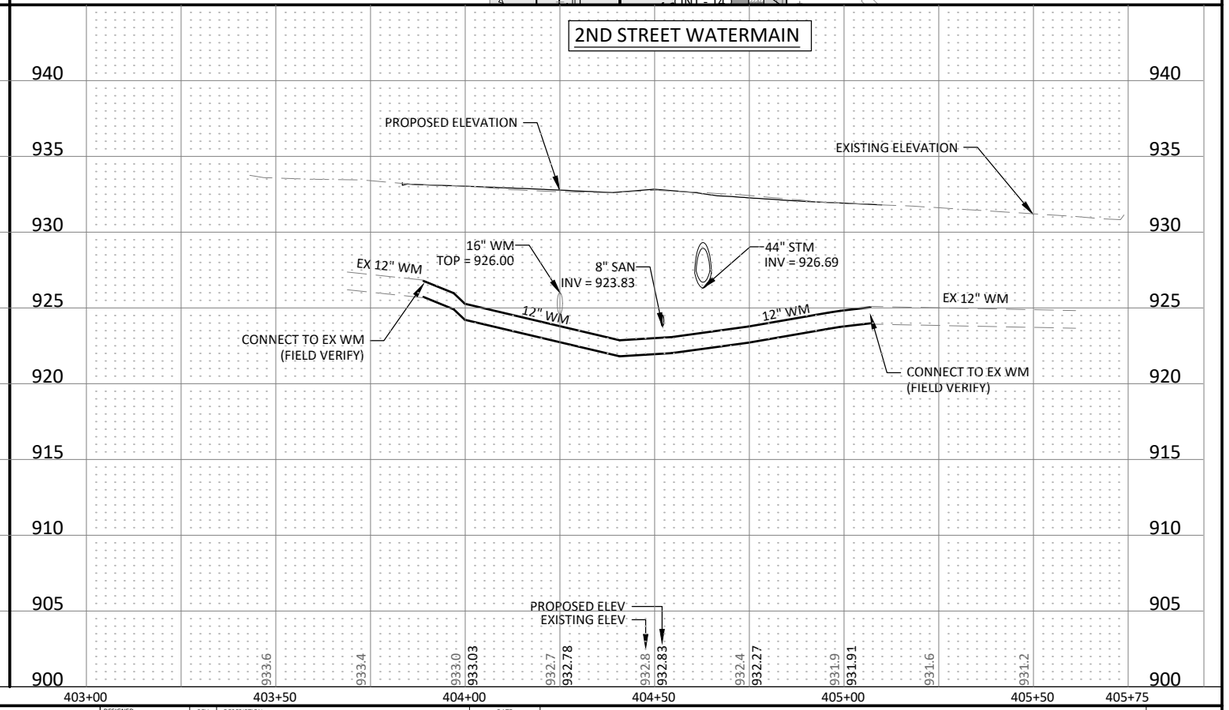
WATERMAIN SHEETS

SHEET M.28







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VERT. SCALE 0 5 10 FEET

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SHEET M.29

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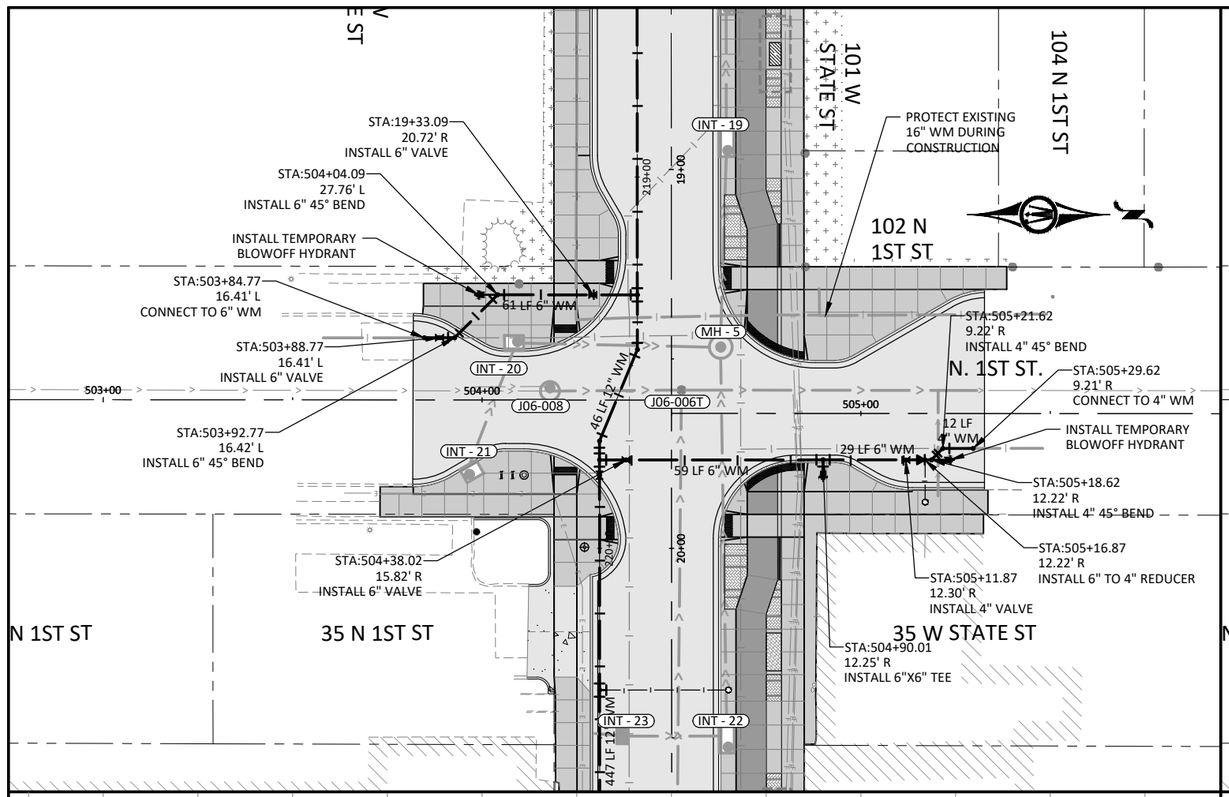

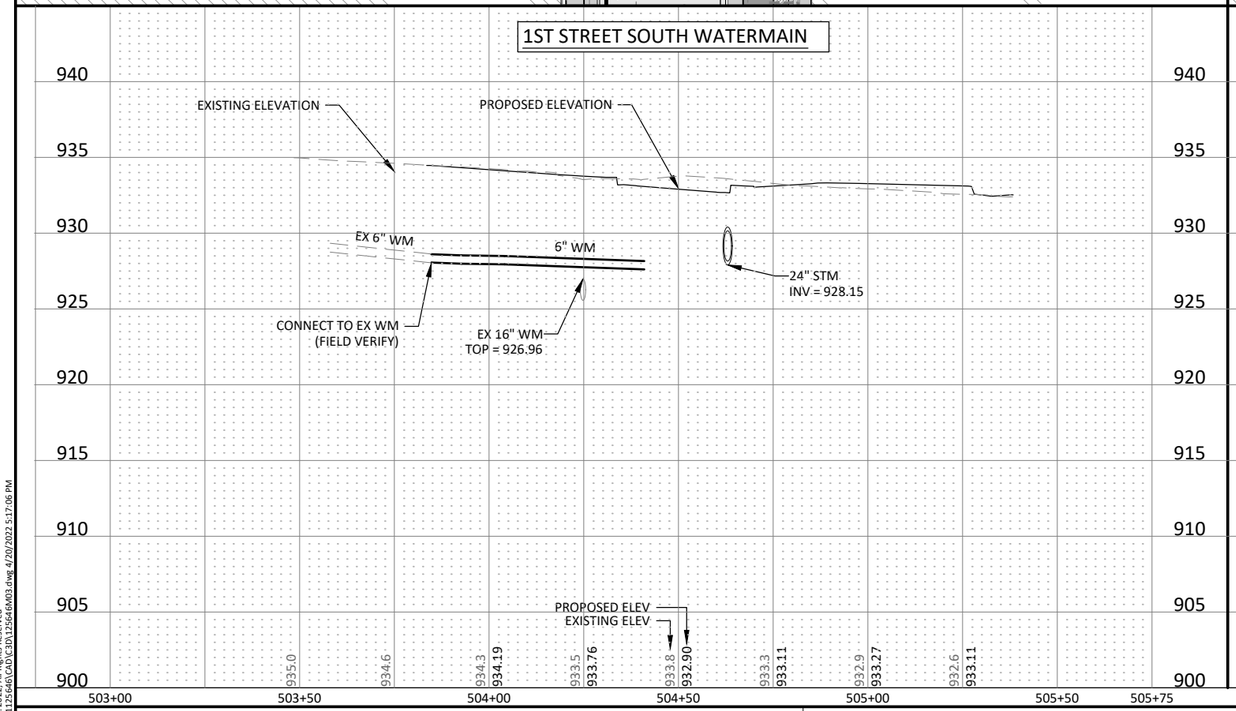

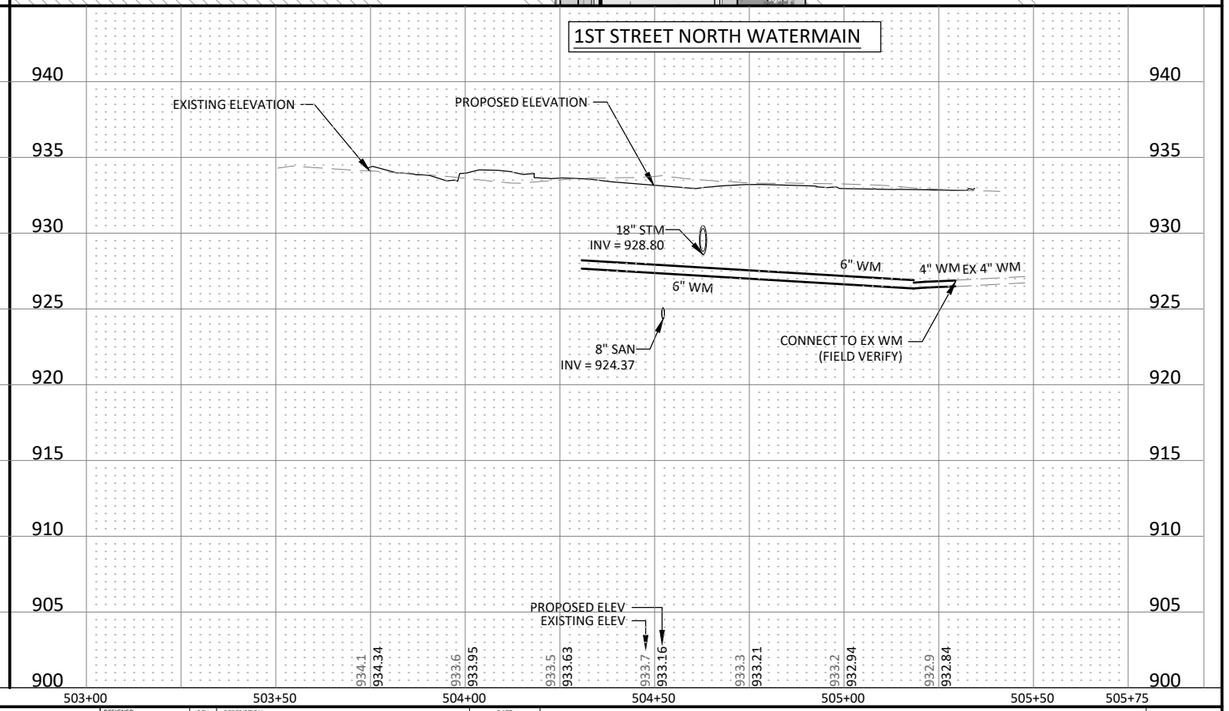

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SHEET
M.30

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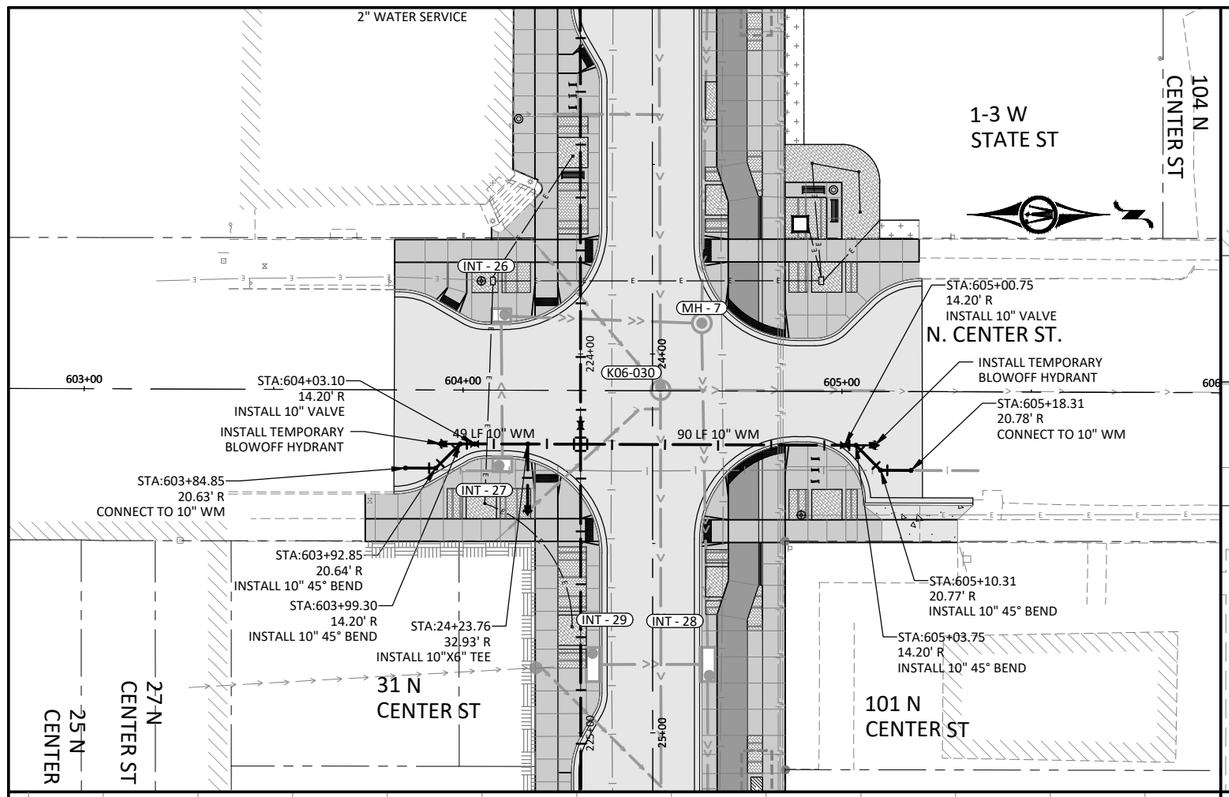
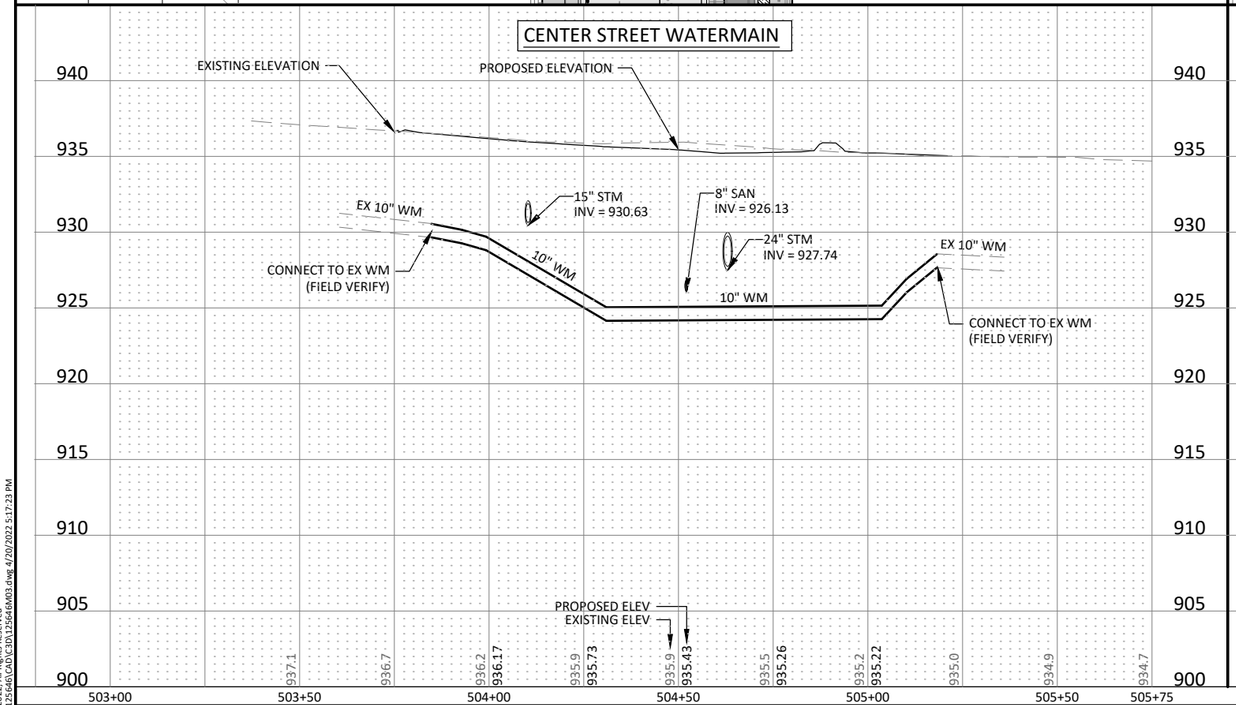
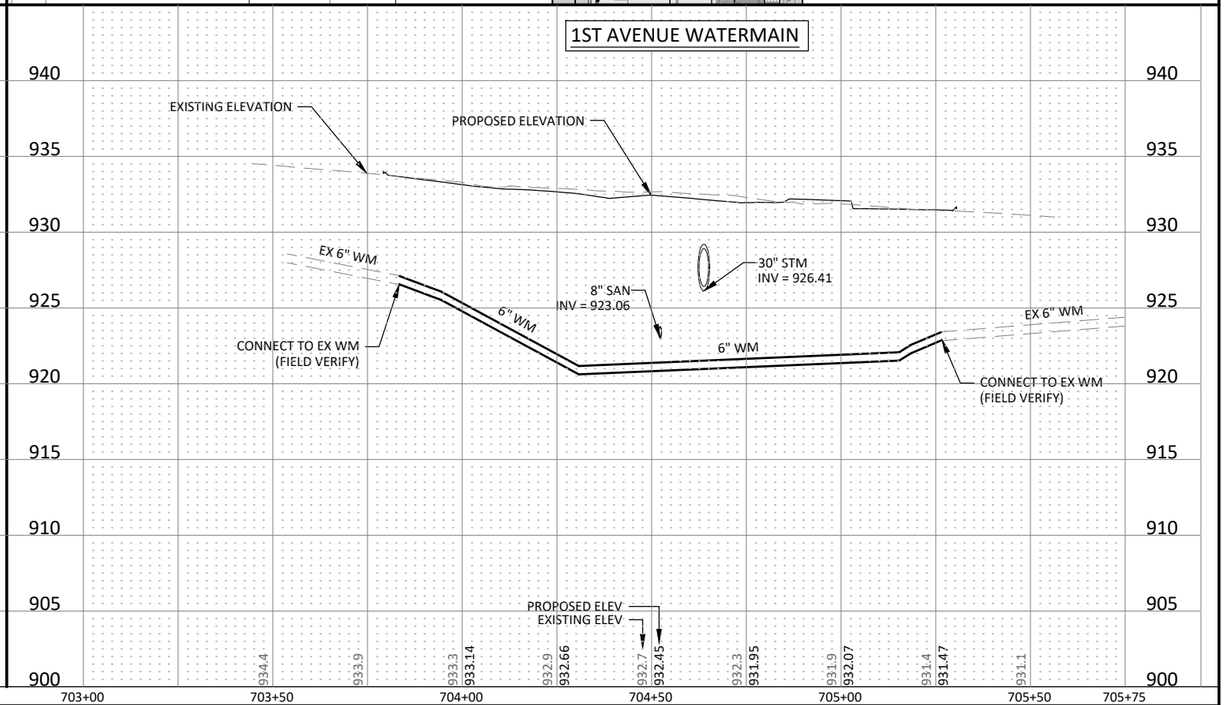


CENTER STREET WATERMAIN



1ST AVENUE WATERMAIN



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
WATERMAIN SHEETS

SHEET
M.31

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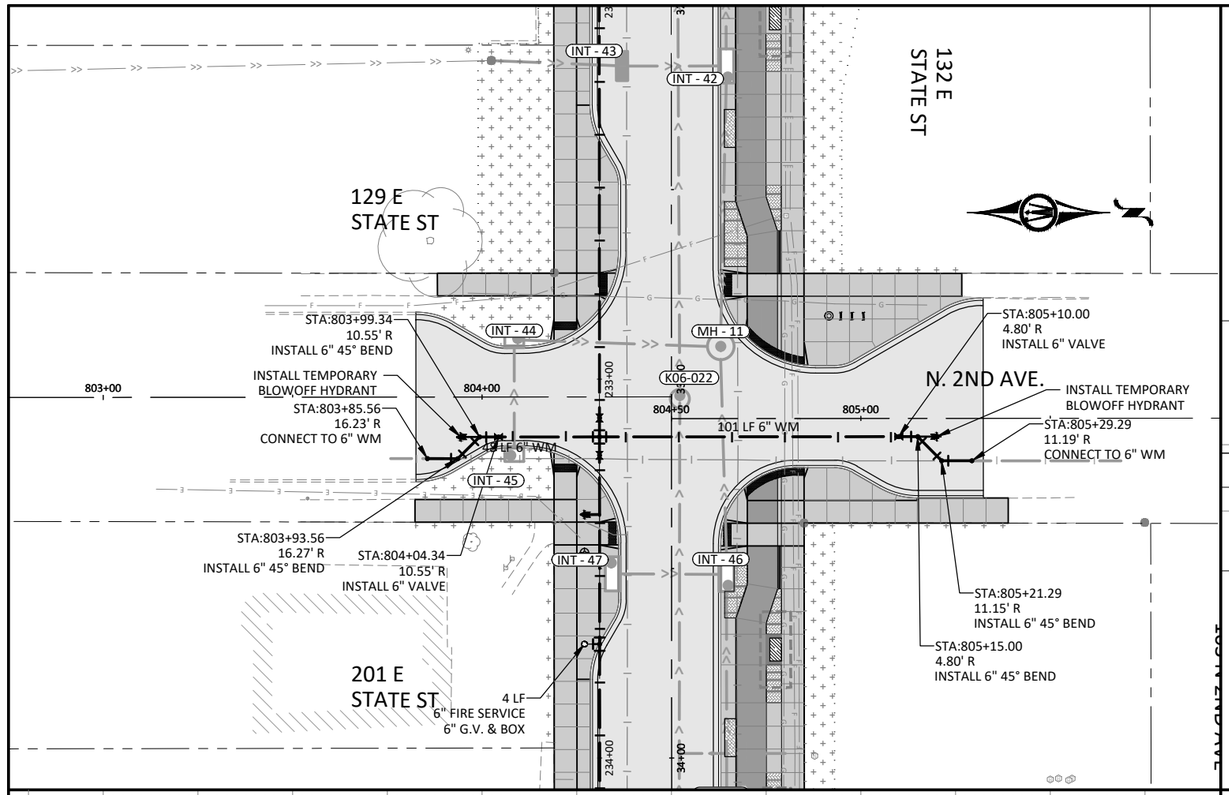

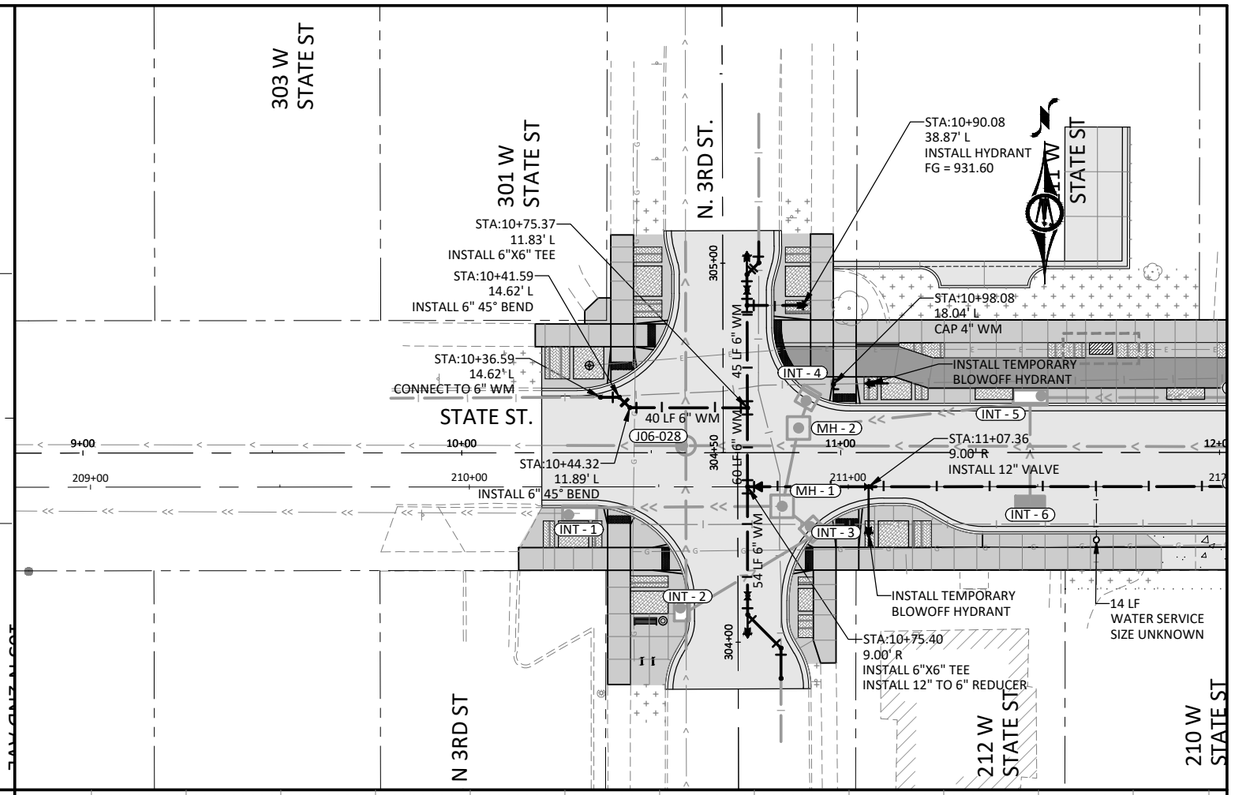

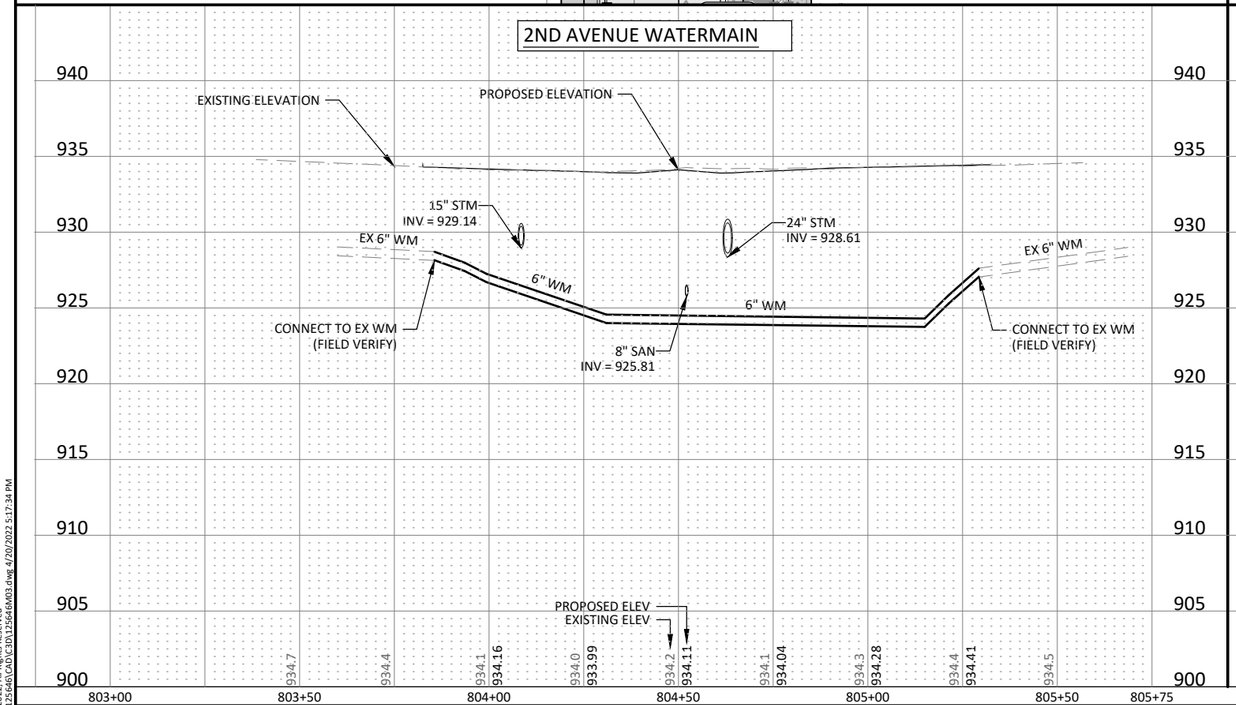

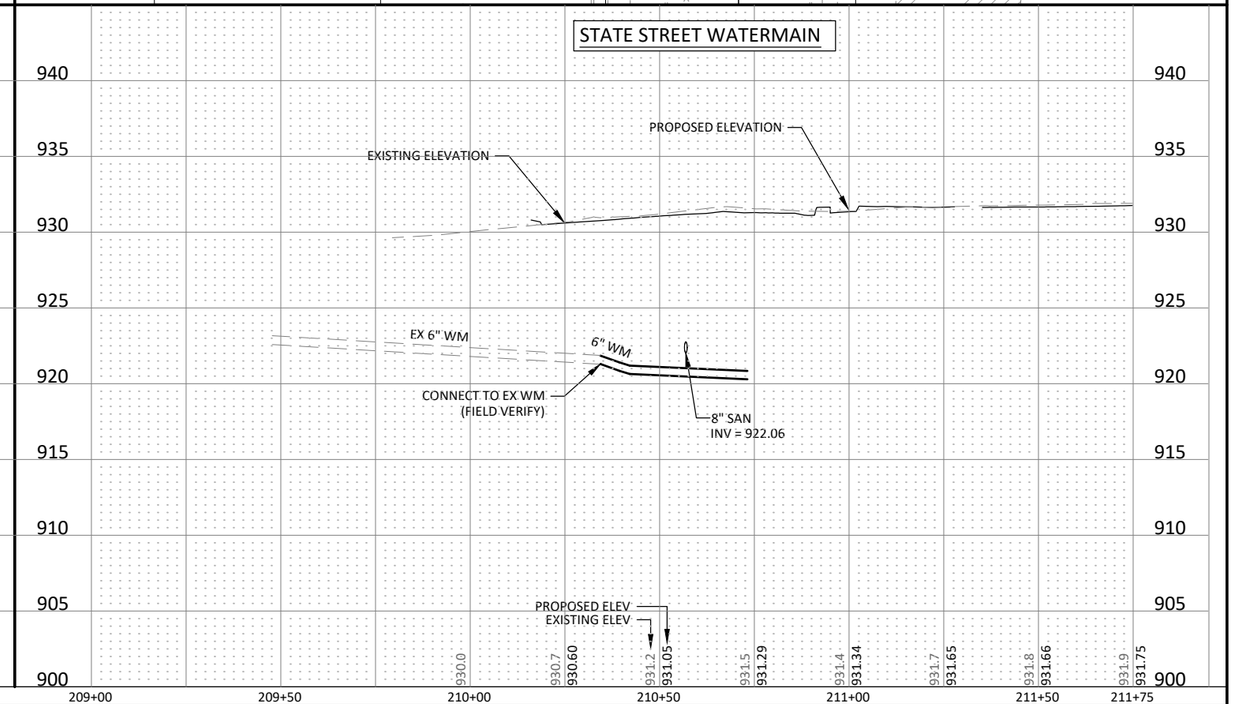

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VERT. SCALE 0 5 10 FEET

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
WATERMAIN SHEETS

SHEET M.32

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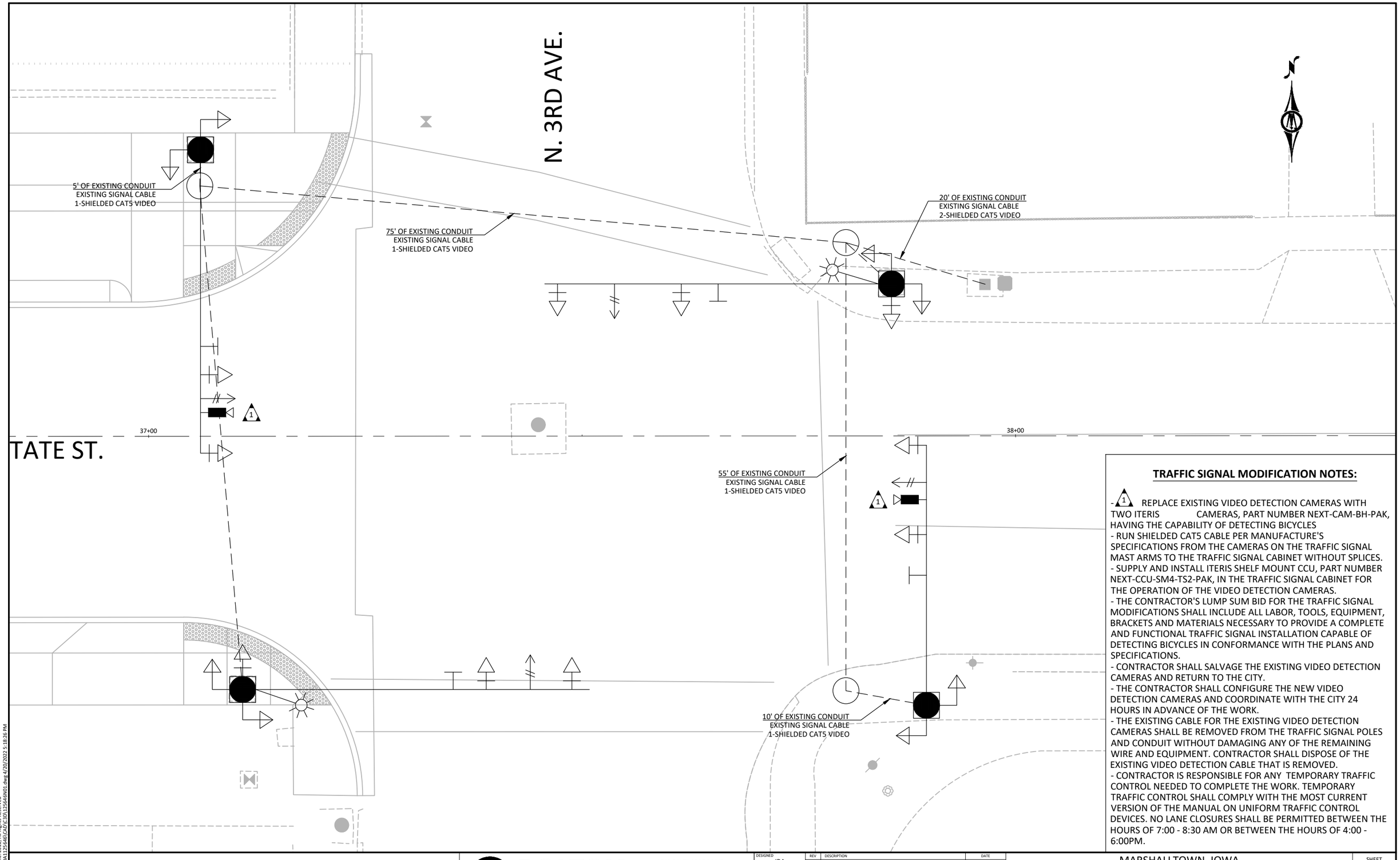

TRAFFIC SIGNAL MODIFICATION NOTES:

- 1 REPLACE EXISTING VIDEO DETECTION CAMERAS WITH TWO ITERIS CAMERAS, PART NUMBER NEXT-CAM-BH-PAK, HAVING THE CAPABILITY OF DETECTING BICYCLES
- RUN SHIELDED CAT5 CABLE PER MANUFACTURE'S SPECIFICATIONS FROM THE CAMERAS ON THE TRAFFIC SIGNAL MAST ARMS TO THE TRAFFIC SIGNAL CABINET WITHOUT SPLICES.
- SUPPLY AND INSTALL ITERIS SHELF MOUNT CCU, PART NUMBER NEXT-CCU-SM4-TS2-PAK, IN THE TRAFFIC SIGNAL CABINET FOR THE OPERATION OF THE VIDEO DETECTION CAMERAS.
- THE CONTRACTOR'S LUMP SUM BID FOR THE TRAFFIC SIGNAL MODIFICATIONS SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, BRACKETS AND MATERIALS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL TRAFFIC SIGNAL INSTALLATION CAPABLE OF DETECTING BICYCLES IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL SALVAGE THE EXISTING VIDEO DETECTION CAMERAS AND RETURN TO THE CITY.
- THE CONTRACTOR SHALL CONFIGURE THE NEW VIDEO DETECTION CAMERAS AND COORDINATE WITH THE CITY 24 HOURS IN ADVANCE OF THE WORK.
- THE EXISTING CABLE FOR THE EXISTING VIDEO DETECTION CAMERAS SHALL BE REMOVED FROM THE TRAFFIC SIGNAL POLES AND CONDUIT WITHOUT DAMAGING ANY OF THE REMAINING WIRE AND EQUIPMENT. CONTRACTOR SHALL DISPOSE OF THE EXISTING VIDEO DETECTION CABLE THAT IS REMOVED.
- CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY TRAFFIC CONTROL NEEDED TO COMPLETE THE WORK. TEMPORARY TRAFFIC CONTROL SHALL COMPLY WITH THE MOST CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. NO LANE CLOSURES SHALL BE PERMITTED BETWEEN THE HOURS OF 7:00 - 8:30 AM OR BETWEEN THE HOURS OF 4:00 - 6:00PM.

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
TRAFFIC SIGNAL SHEETS

SHEET N.01

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STATE STREET

10+00

11+00

304+50

N 3RD STREET

04+00

5" PCC SWLK

6" PCC SWLK

6" PCC CYCLE TRACK

5" PCC CYCLE TRACK

EL: 931.50'

EL: 931.41'

EL: 931.07'

EL: 930.98'

EL: 931.32'

EL: 930.87'

EL: 930.78'

EL: 930.87'

EL: 931.53'

EL: 931.62'

EL: 931.71'

EL: 931.78'

EL: 931.28'

EL: 931.44'

EL: 931.53'

EL: 931.62'

EL: 931.69'

EL: 931.24'

EL: 931.23'

EL: 931.42'

EL: 931.51'

EL: 931.60'

EL: 931.66'

EL: 931.30'

EL: 931.39'

EL: 931.48'

EL: 931.71'

EL: 931.17'

EL: 931.53'

EL: 931.58'

EL: 931.59'

EL: 931.26'

EL: 931.33'

EL: 930.67'

EL: 930.73'

EL: 930.79'

EL: 930.98'

EL: 930.87'

EL: 931.07'

EL: 931.07'

EL: 930.96'

EL: 930.94'

EL: 931.16'

EL: 931.18'

EL: 931.22'

EL: 931.27'

EL: 931.62'

EL: 931.31'

EL: 931.40'

EL: 931.23'

EL: 931.49'

EL: 931.36'

EL: 931.40'

EL: 931.42'

EL: 931.49'

EL: 931.58'

930.46

930.38

931.16

S=1.5% L=6.0'

S=3.9% L=5.8'

S=5.9% L=5.8'

S=6.8% L=6.1'

S=7.5% L=6.1'

S=2.6% L=9.6'

S=2.2% L=9.2'

S=2.7% L=4.8'

S=2.1% L=7.0'

S=3.4% L=8.4'

S=3.0% L=8.4'

S=1.1% L=10.3'

S=3.6% L=7.6'

S=3.0% L=7.6'

S=0.8% L=5.1'

S=1.6% L=8.1'

S=2.1% L=6.5'

LEGEND

- PROPOSED SIDEWALK
- PROPOSED TURNING SPACE
- PROPOSED CURB RAMP
- PROPOSED TRUNCATED DOMES

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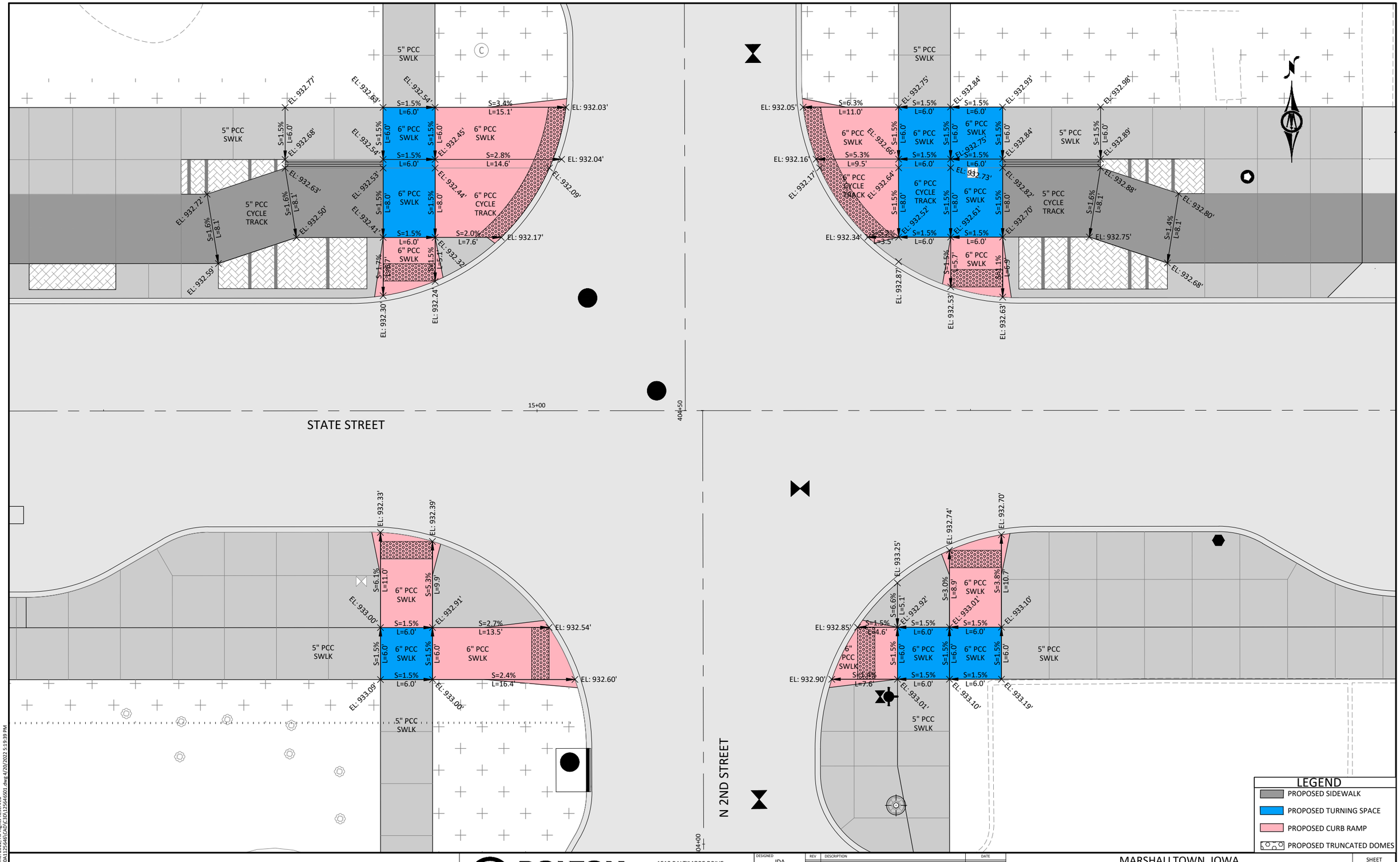
SIDEWALK SHEETS - STATE ST

SHEET S.01



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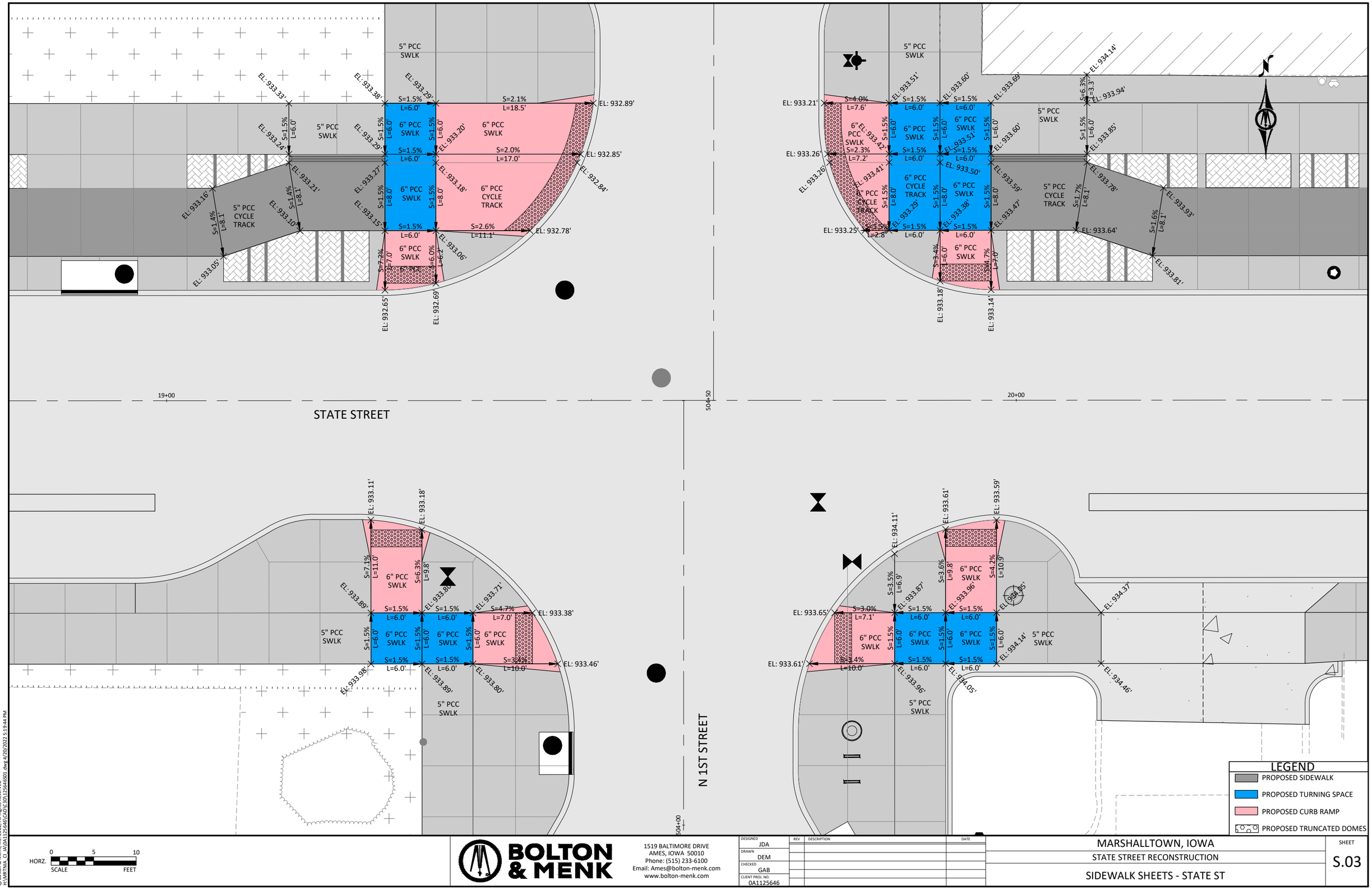
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
SIDEWALK SHEETS - STATE ST

SHEET S.02



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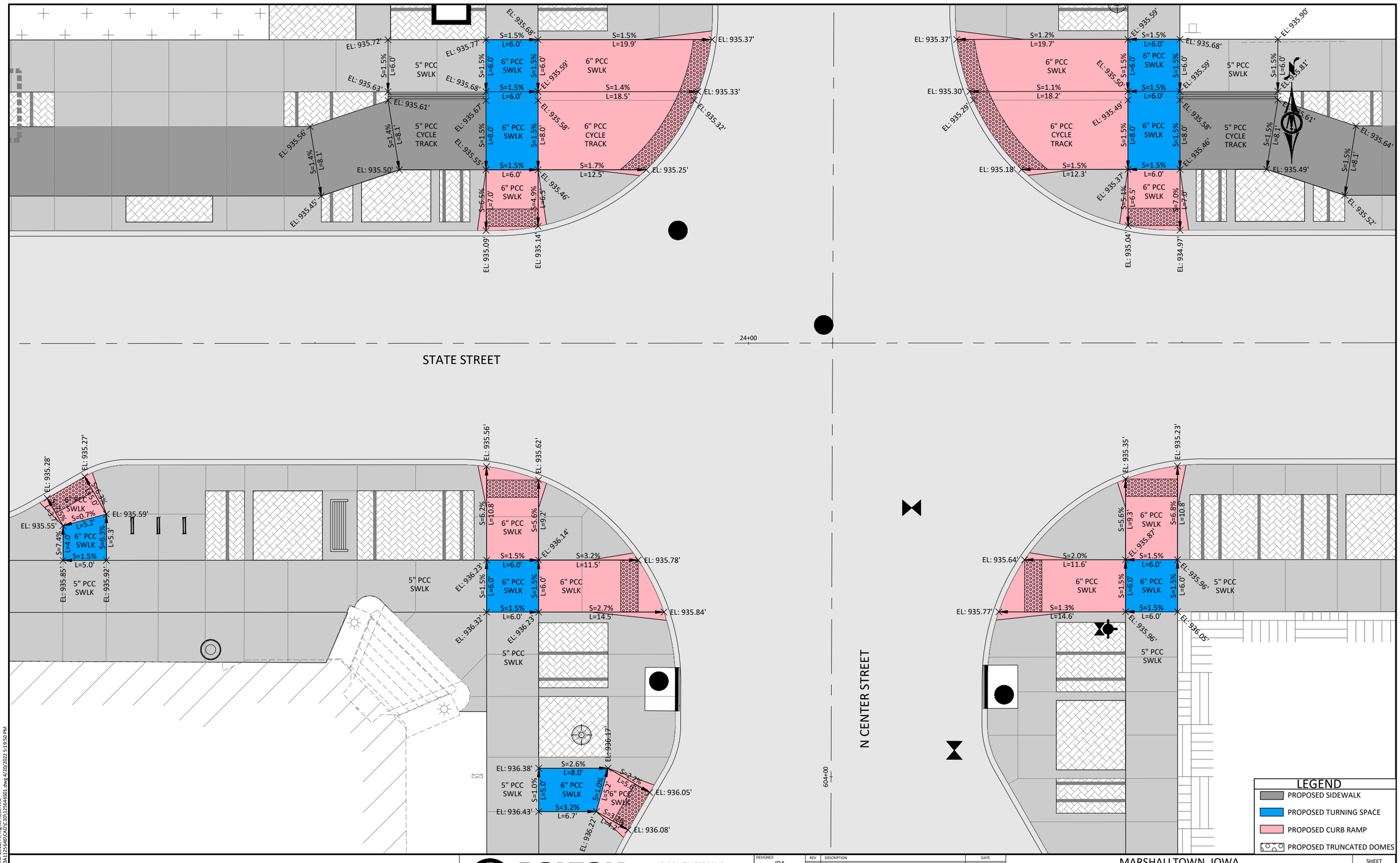
SIDEWALK SHEETS - STATE ST

SHEET S.03



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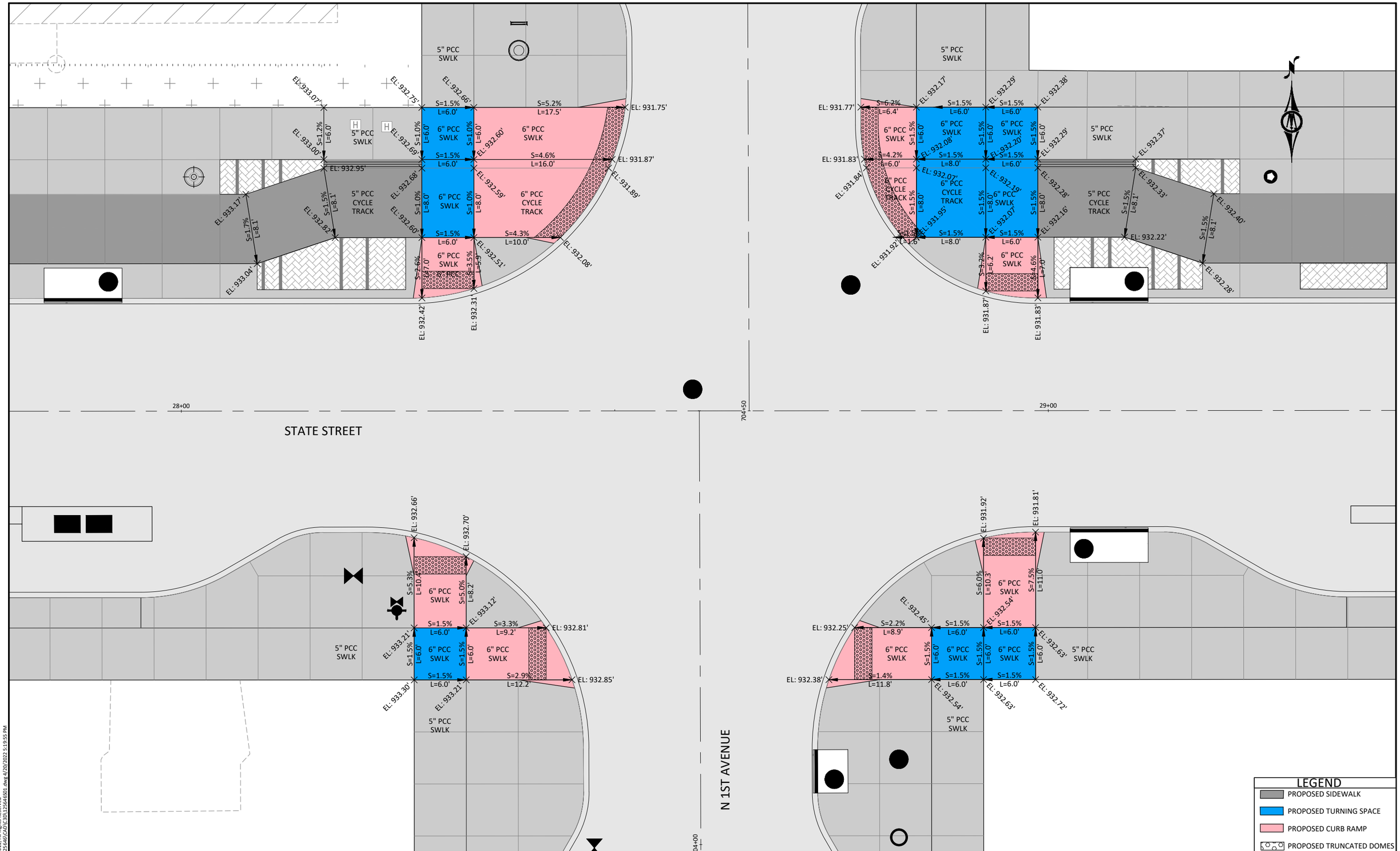
SIDEWALK SHEETS - STATE ST

SHEET
S.04



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SIDEWALK SHEETS - STATE ST

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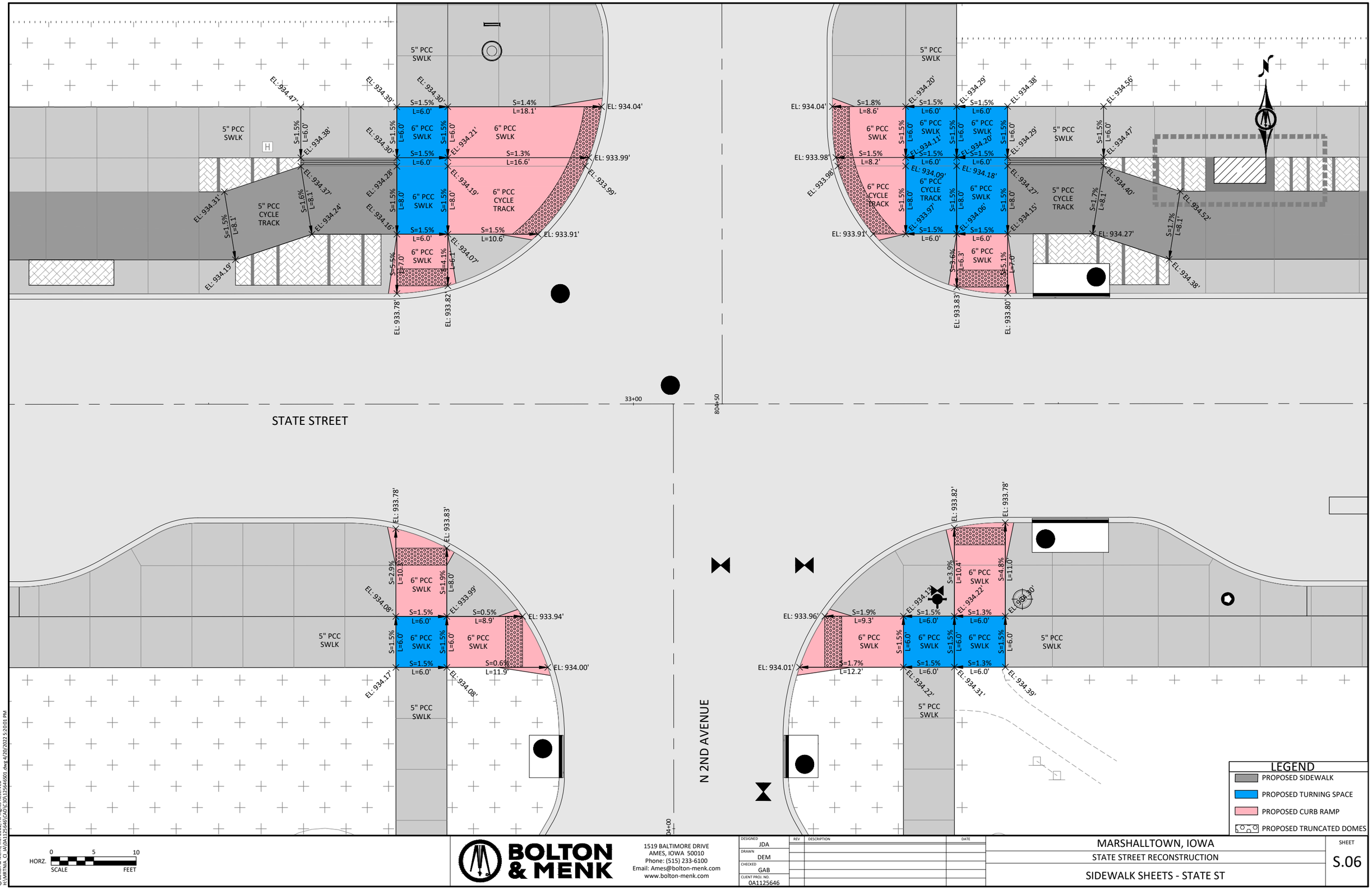

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SHEET S.06

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
SIDEWALK SHEETS - STATE ST

SHEET
S.07

GENERAL NOTES:

1. UNDERGROUND UTILITIES: FIELD LOCATE UNDERGROUND UTILITIES PRIOR TO EXCAVATION FOR INSTALLATION OF SITE IMPROVEMENTS. IF A CONFLICT EXISTS BETWEEN PROPOSED SITE IMPROVEMENTS AND EXISTING OR PROPOSED UTILITIES, IMMEDIATELY ADVISE THE OWNERS REPRESENTATIVE.

2. SPOT ELEVATIONS WHERE SHOWN ON THESE DRAWINGS ARE TO THE TOP OF FINISH SURFACES.

3. DIMENSIONS: DIMENSIONS ARE FROM BACK OF CURB UNLESS NOTED OR SHOWN OTHERWISE ON THE DRAWINGS.

4. HORIZONTAL CONTROL: HORIZONTAL CONTROL FOR THE LAYOUT OF SITE IMPROVEMENTS WILL BE PROVIDED BY THE ENGINEER. STATIONS AND OFFSETS INDICATED ON THE DRAWINGS ARE RELATIVE TO THE ROADWAY STATIONING.

5. ISOLATION JOINTS IN SIDEWALK PAVING: GENERALLY, ISOLATION JOINTS WILL BE LOCATED ALONG THE BACK OF CURB BETWEEN SIDEWALK PAVEMENTS AND PERMANENT STRUCTURES, WALLS AND BUILDINGS. ISOLATION JOINTS WILL ALSO BE LOCATED WHERE THE SIDEWALK PAVEMENT TURNS OR CHANGES DIRECTION, AND AT EVERY 100 FOOT MARK OF LINEAR SIDEWALK.

6. ALL SIDEWALKS AND CONCRETE SURFACES TO HAVE A LIGHT BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL UNLESS OTHERWISE NOTED, TYPICAL.

7. SAWCUTS TO BE MADE AS SHOWN ON PLANS UNLESS DIRECTED OTHERWISE BY OWNERS REP.

8. CONTRACTOR IS TO PRESERVE AND PROTECT EXISTING VEGETATION TO REMAIN AT ALL STAGES OF CONSTRUCTION. DAMAGED PLANT MATERIAL WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

9. CONTRACTOR IS TO PRESERVE AND PROTECT EXISTING BUILDINGS AND FOUNDATIONS AT ALL STAGES OF CONSTRUCTION.

10. CONTRACTOR IS TO VERIFY THAT ALL SLOPES, CROSS SLOPES, LONGITUDINAL SLOPES, DROP CURB SLOPES, ETC. DO NOT EXCEED PROWAG MAXIMUMS. CONTRACTOR IS TO NOTIFY OWNER'S REPRESENTATIVE IF SLOPES EXCEED GUIDELINE RECOMMENDATIONS.

11. HATCH PATTERNS ON PLAN DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION OR SCALING PURPOSES. REFER TO CONSTRUCTION DETAILS FOR PAVER PATTERNS AND FINISHES.

GENERAL LANDSCAPE IMPROVEMENT NOTES:

1. MASTER PLANT SCHEDULE: TREES, SHRUBS AND PERENNIALS ARE LISTED IN THE MASTER PLANT SCHEDULE. IF THERE IS A CONFLICT BETWEEN THE QUANTITIES SHOWN ON THE DRAWING AND THE QUANTITIES SHOWN IN THE PLANT SCHEDULE, THE PLAN QUANTITIES SHALL PREVAIL.

2. PLANTING LAYOUT: LAYOUT A TYPICAL SHRUB AND PERENNIAL BED LAYOUT, AND OBTAIN APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.

3. SHRUB AND PERENNIAL GROUPINGS SHALL BE PLANTED AND MULCHED IN ONE CONTINUOUSLY MULCHED BED.

4. SOD AREAS WHERE INDICATED ON PLANS, ALL OTHER AREAS TO BE SEEDED. SEEDING TYPES ARE AS FOLLOWS:

   TYPE 1 PERMANENT LAWN SEEDING, PER SUDAS

   LOW-GROW FESCUE MIX: SEE PLANS FOR LOW-GROW SEEDING AREAS.
   A. MIX DESIGN:
   15% SIDEOATS GRAMA 20% HARD FINE FESCUE
   15% LITTLE BLUESTEM 20% SHEEP FINE FESCUE
   10% BLUE GRAMA 25% BLUE FINE FESCUE

   B. OR APPROVED EQUAL

   C. MIX, INSTALLATION, AND FERTILIZER PER SEED SUPPLIER STANDARD SPECIFICATIONS

   D. ALL SEEDED AREAS SHALL BE COVERED WITH RECP TYPE 2.C PER SUDAS

PLANT SCHEDULE

Qty	Key	Scientific Name	Common Name	Size	Root Type	Mature Size
			OVERSTORY TREES			
6	AG	Ginkgo biloba 'Autumn Gold'	AUTUMN GOLD MAIDENHAIR TREE	2" CAL	B&B	40-50' H, 20-30' W
5	PS	Ginkgo biloba 'Princeton Sentry'	PRINCETON SENTRY MAIDENHAIR TREE	2" CAL	B&B	40-50' H, 20-30' W
6	SK	Gleditsia triacanthos 'Draves'	STREET KEEPER HONEYLOCUST	2" CAL	B&B	45' H, 20' W
5	GD	Gymnocladus dioicus 'Espresso-JFS'	KENTUCKY COFFEE TREE	2" CAL	B&B	50' H, 35' W
4	TA	Tilia americana 'McKSentry'	AMERICAN SENTRY LINDEN	2" CAL	B&B	45' H, 25-30' W
8	UF	Ulmus x 'Frontier'	FRONTIER ELM	2" CAL	B&B	40-50' H, 25-35' W
2	UA	Ulmus americana 'Princeton'	PRINCETON AMERICAN ELM	2" CAL	B&B	65' H, 30-50' W
36	TOTAL					
			UNDERSTORY TREES			
3	AC	Amelanchier canadensis 'Autumn Brilliance'	AUTUMN BRILLIANCE SERVICEBERRY	6' HT. MULTI-STEM	B&B	25-30' H, 15-20' W
3	SR	Syringa reticulata 'Ivory Silk'	IVORY SILK JAPANESE TREE LILAC	1.5" CAL	B&B	20-30' H, 15-20' W
6	TOTAL					
			GRASSES			
68	CA	Calamagrostis x acutiflora 'Karl Foerster'	FEATHER REED GRASS	1 GAL.	CONT.	3-5' H, 1.5-2.5' W
132	LB	Schizachyrium scoparium 'Standing Ovation'	STANDING OVATION LITTLE BLUESTEM	1 GAL.	CONT.	3-4' H, 1.5' W
132	PV	Panicum virgatum 'Shenandoah'	SHENANDOAH SWITCH GRASS	1 GAL.	CONT.	3-4' H, 2' W
261	SH	Sporobolus heterolepis	PRAIRIE DROPSEED	1 GAL.	CONT.	2-3' H, 2-3' W
593	TOTAL					
			PERENNIALS			
111	HS	Hemerocallis 'Stella de Oro'	STELLA DE ORO DAYLILY	1 GAL.	CONT.	0.75-1' H, 0.75-1' W
120	LS	Liatris spicata 'Kobold'	KOBOLD BLAZINGSTAR	1 GAL.	CONT.	1-2' H, 1-2' W
155	SN	Salvia nemorosa 'Violet Profusion'	VIOLET PROFUSION SAGE	1 GAL.	CONT.	1-2' H, 1-2' W
62	PD	Symphyotrichum novae-angliae 'Purple Dome'	PURPLE DOME NEW ENGLAND ASTER	1 GAL.	CONT.	1.5-2' H, 2-3' W
11	PC	Echinacea pallida	PALE PURPLE CONEFLOWER	1 GAL.	CONT.	2-3' H, 1.5-2' W
459	TOTAL					

CONCRETE UNIT PAVER PRODUCT INFORMATION:
Paver Type 'A': Unilock - Artline, 7 CM thick, Pattern A
Finish: Premier Finish
Color: Bavarian

Or approved equal

Paver Type 'B': Unilock - Hollandstone, 7 CM thick, Running Bond Pattern
Finish: Premier Finish
Color: Charcoal

Or approved equal

Contact: TJ Weinandt (402-630-3884) TJ.Weinandt@unilock.com

HATCH LEGEND:

- SOD
- TYPE 1 SEEDING
- LOW-MOW SEEDING
- SIDEWALK, SEE D SHEETS
- INTEGRAL COLORED CONCRETE, SEE D SHEETS
- PLANTING BED
- TREE GRATE & FRAME
- CONCRETE UNIT PAVERS

SITE ELEMENT LEGEND:

- BENCH
- LITTER RECEPTACLE
- BIKE RACK
- EXISTING ROADWAY LIGHT

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STREETSCAPE SHEETS

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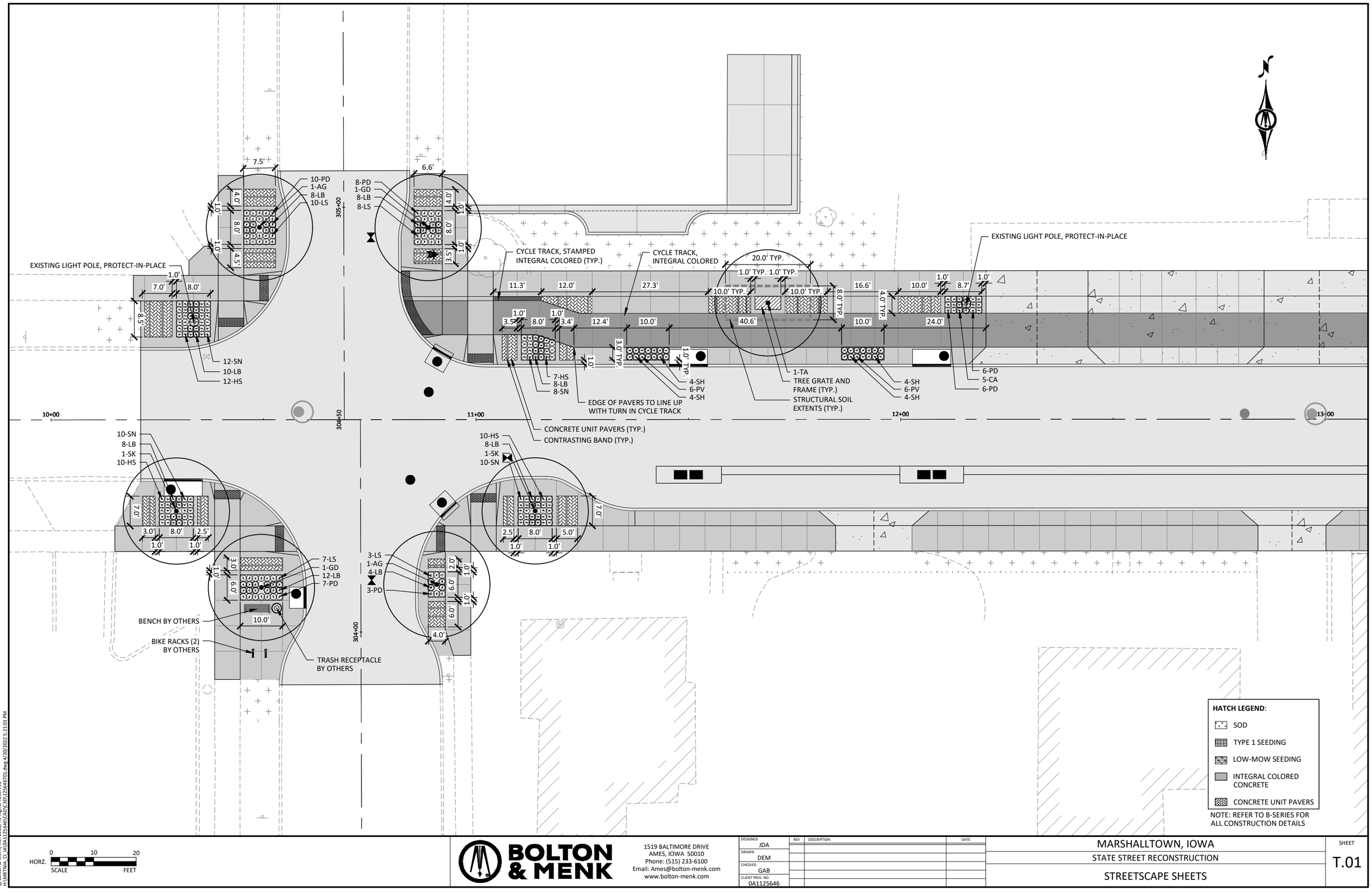

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STREETSCAPE SHEETS

SHEET T.01

TREE GRATE AND FRAME (TYP.)

STRUCTURAL SOIL EXTENTS (TYP.)

CYCLE TRACK, INTEGRAL COLORED

CYCLE TRACK, STAMPED INTEGRAL COLORED (TYP.)

1.0'
1.0' TYP.
1.0' TYP.
10.0' TYP.
10.0' TYP.
4.0' TYP.
18.6'
56.7'
20.0' TYP.
8.0' TYP.
18.6'
10.0'
63.2'
25.1'
12.0'
11.3'
10.0'
11.8'
17.1'
3.0' TYP.
1.0' TYP.
1-SK
1-UF
1-PS
4-SH
6-PV
4-SH
4-SH
6-PV
4-SH
CONTRASTING BAND (TYP.)
CONCRETE UNIT PAVERS (TYP.)
EDGE OF PAVERS TO LINE UP WITH TURN IN CYCLE TRACK
405+00
404+50
404+00
11.3'
12.0'
18.2'
1.0'
17.1'
22.5'
1.0'
EDGE OF PAVERS TO LINE UP WITH TURN IN CYCLE TRACK
EXISTING LIGHT POLE, PROTECT-IN-PLACE
13+00
14+00
15+00
16+00

HATCH LEGEND:

- SOD
- TYPE 1 SEEDING
- LOW-MOW SEEDING
- INTEGRAL COLORED CONCRETE
- CONCRETE UNIT PAVERS

NOTE: REFER TO B-SERIES FOR ALL CONSTRUCTION DETAILS

HORZ. SCALE 0 10 20 FEET

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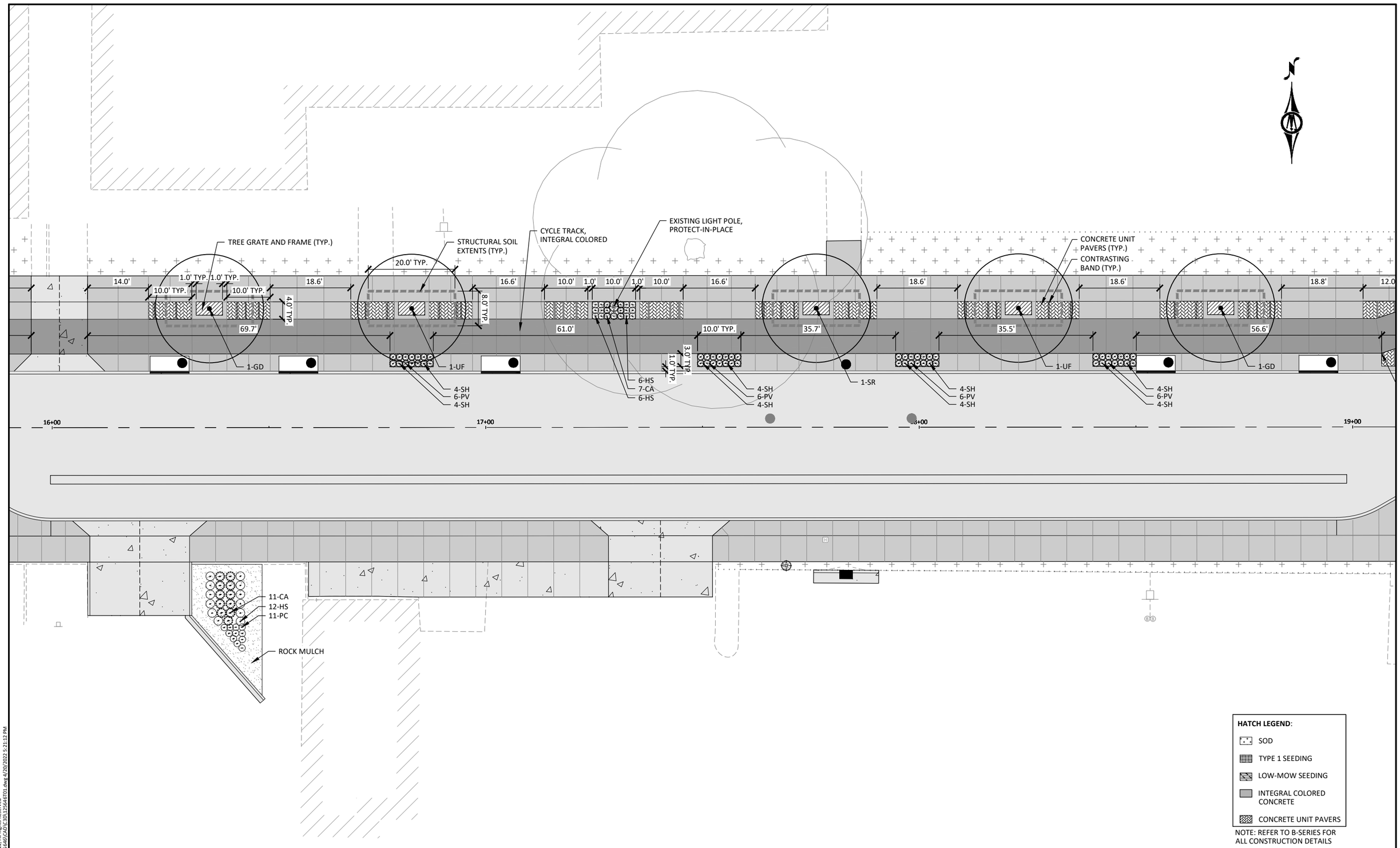
DRAWN	DEM
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET
T.02



HATCH LEGEND:

- SOD
- TYPE 1 SEEDING
- LOW-MOW SEEDING
- INTEGRAL COLORED CONCRETE
- CONCRETE UNIT PAVERS

NOTE: REFER TO B-SERIES FOR ALL CONSTRUCTION DETAILS

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.03

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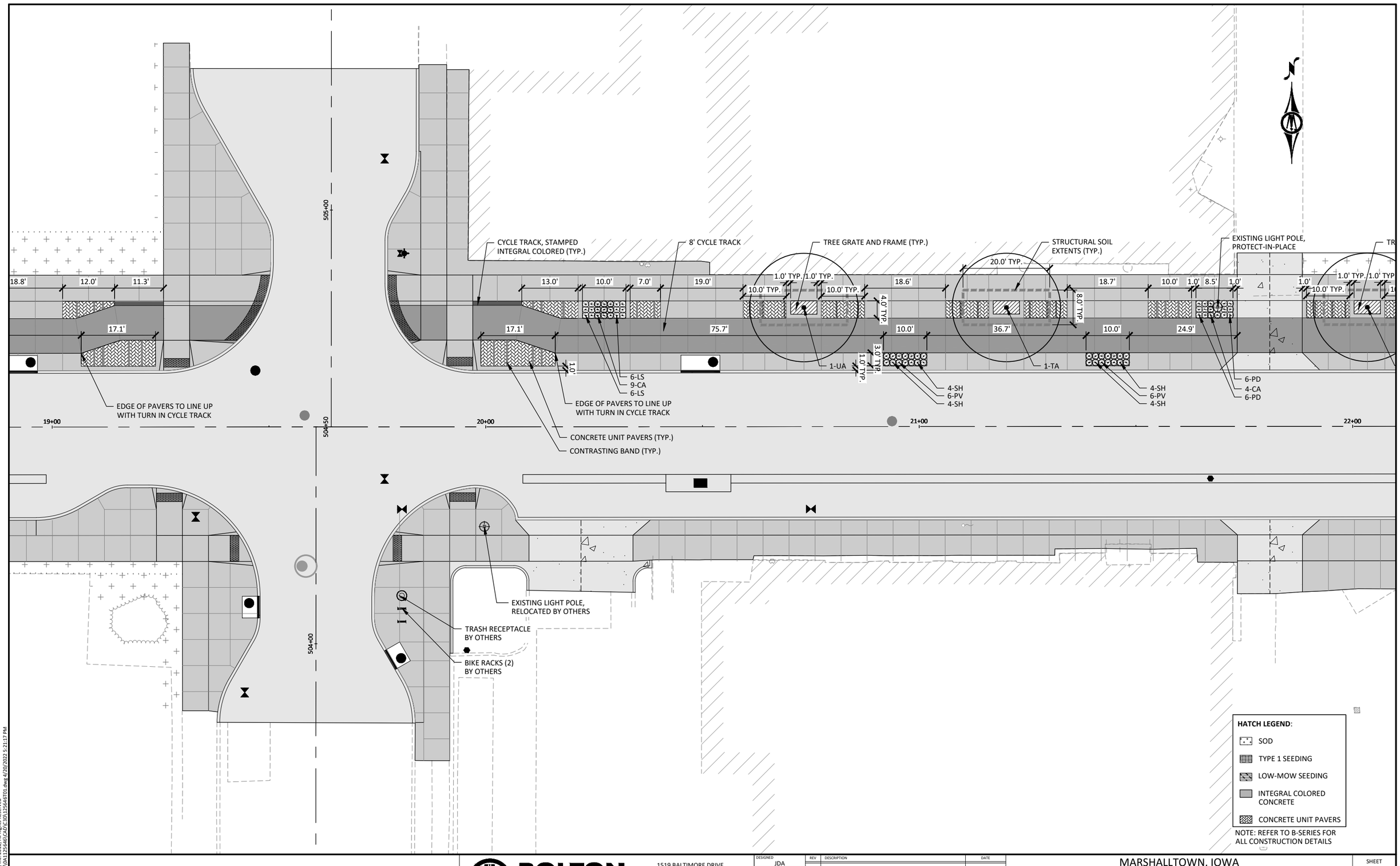

HATCH LEGEND:

- SOD
- TYPE 1 SEEDING
- LOW-MOW SEEDING
- INTEGRAL COLORED CONCRETE
- CONCRETE UNIT PAVERS

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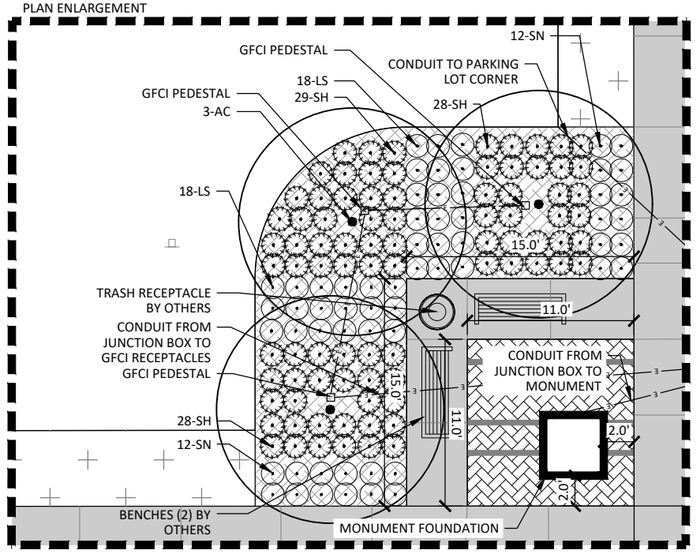
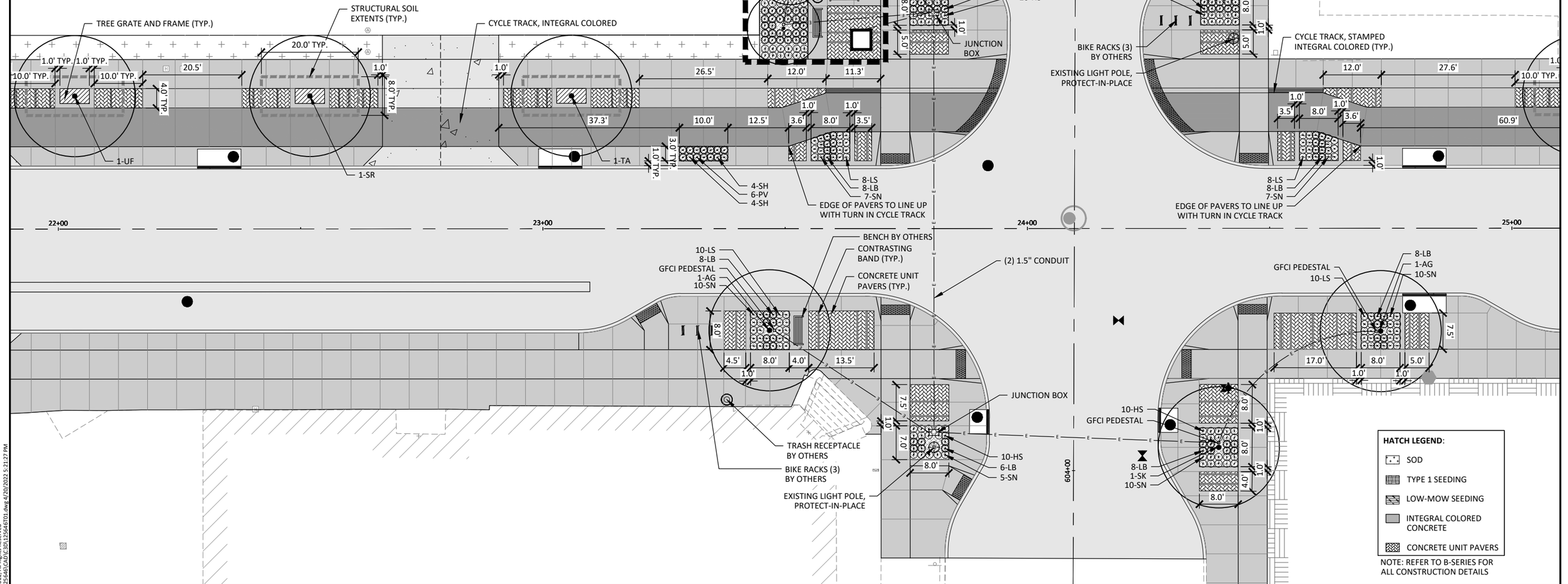
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.04

PLAN ENLARGEMENT





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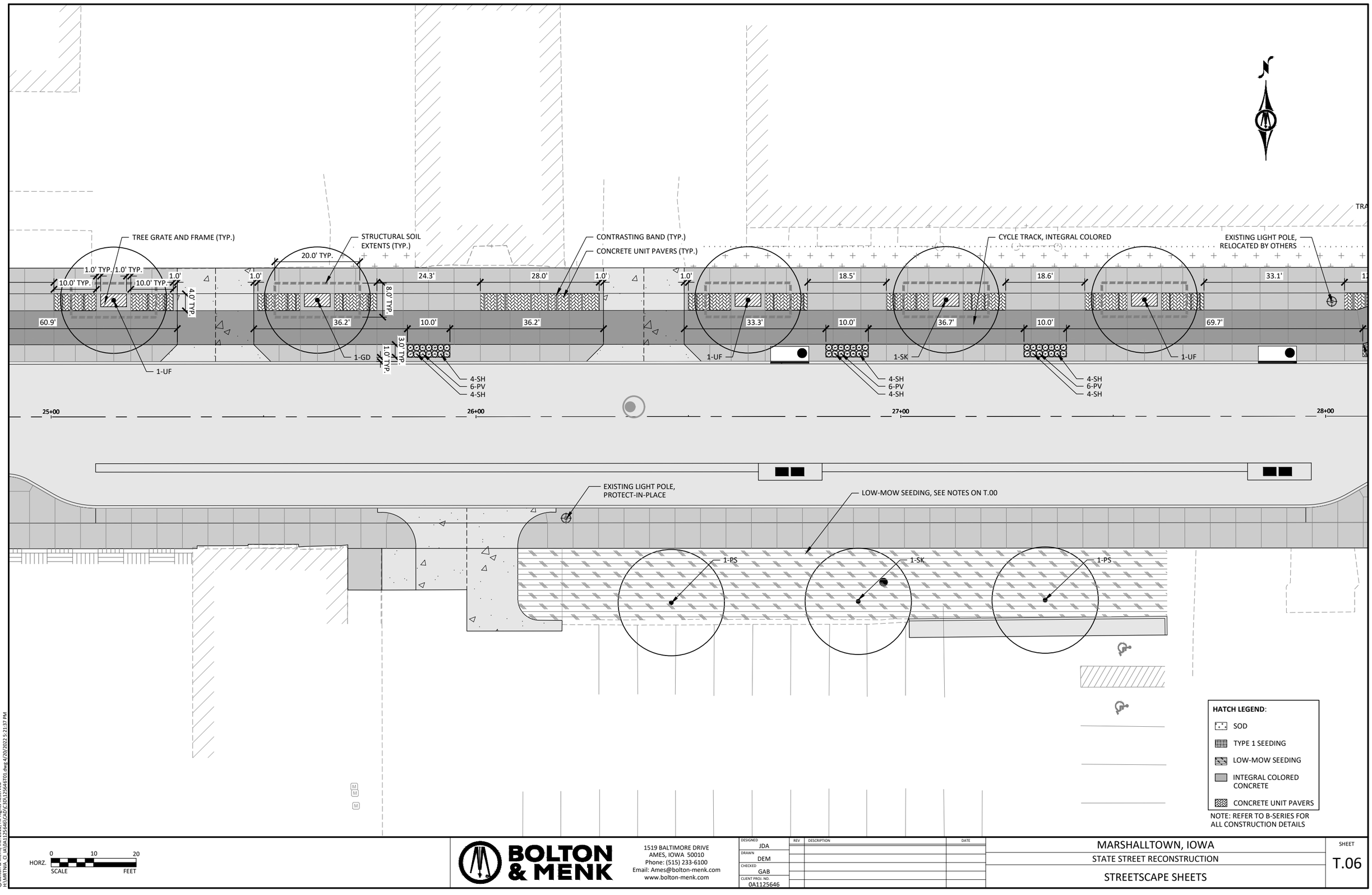
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.05



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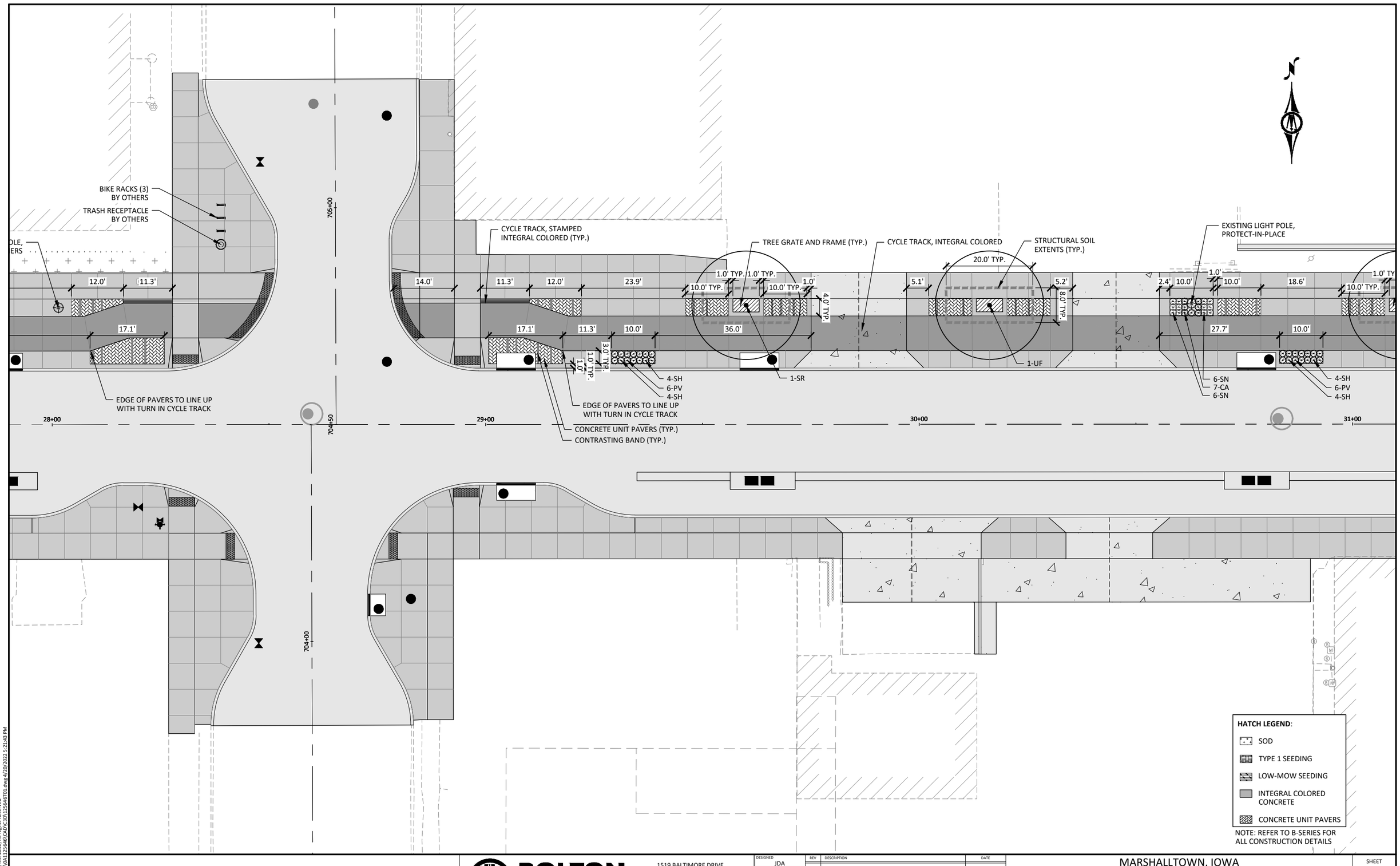
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.06



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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.07

TREE GRATE AND FRAME (TYP.)
STRUCTURAL SOIL EXTENTS (TYP.)
CYCLE TRACK, INTEGRAL COLORED
BIKE RACKS (3) BY OTHERS
TRASH RECEPTACLE BY OTHERS
CYCLE TRACK, STAMPED INTEGRAL COLORED (TYP.)
1.0' TYP.
10.0' TYP.
4.0' TYP.
3.0' TYP.
18.6'
30.0'
12.0'
11.3'
18.4'
36.7'
10.0'
42.4'
14.3'
17.1'
16.0'
26.6'
1-AG
1-UF
1-PS
4-SH
6-PV
CONCRETE UNIT PAVERS (TYP.)
CONTRASTING BAND (TYP.)
EDGE OF PAVERS TO LINE UP WITH TURN IN CYCLE TRACK
31+00
32+00
33+00
34+00
805+00
804+50
804+00
EXISTING LIGHT POLE, RELOCATED BY OTHERS

HATCH LEGEND:
- SOD
- TYPE 1 SEEDING
- LOW-MOW SEEDING
- INTEGRAL COLORED CONCRETE
- CONCRETE UNIT PAVERS

NOTE: REFER TO B-SERIES FOR ALL CONSTRUCTION DETAILS

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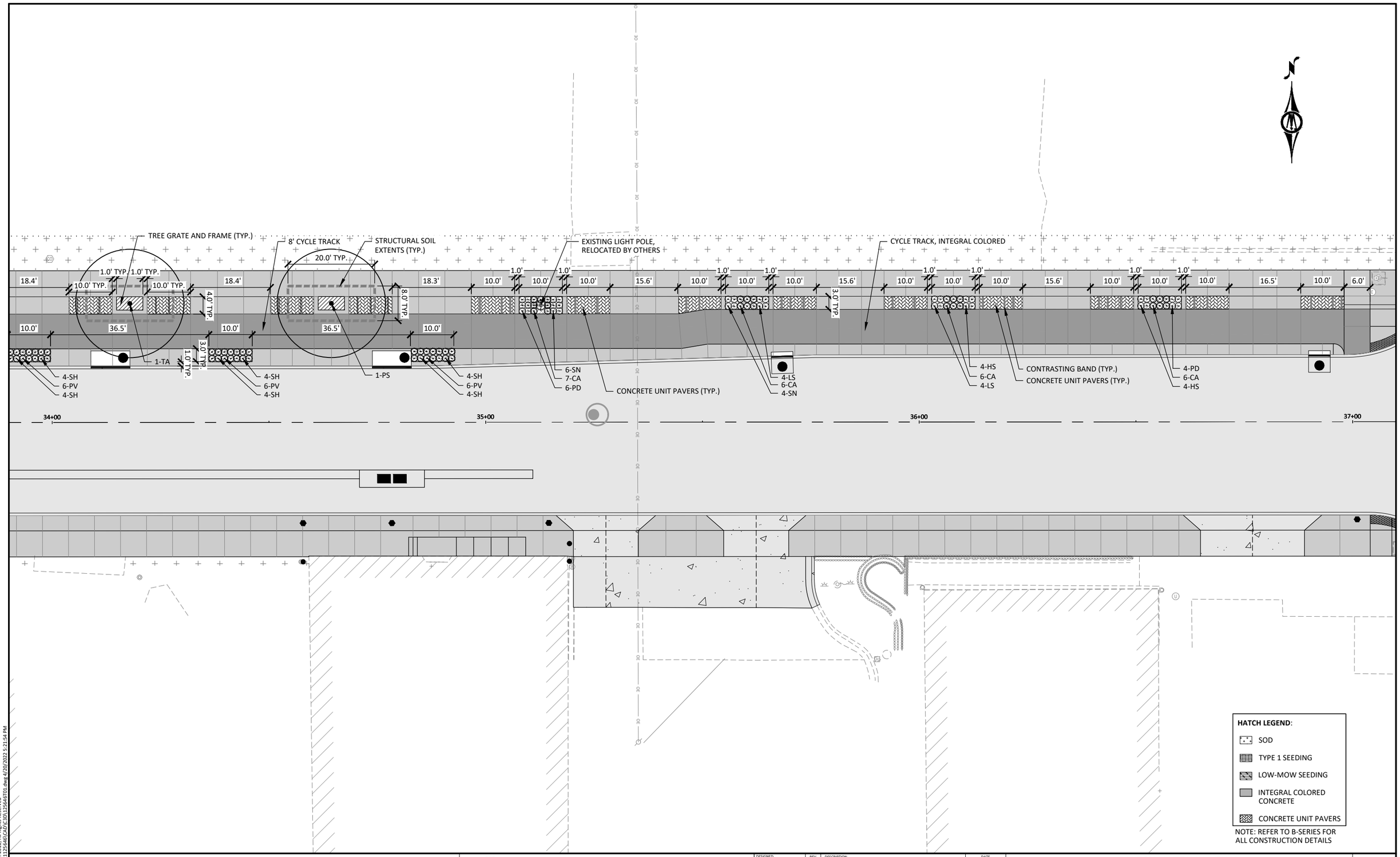
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.08



HATCH LEGEND:

- SOD
- TYPE 1 SEEDING
- LOW-MOW SEEDING
- INTEGRAL COLORED CONCRETE
- CONCRETE UNIT PAVERS

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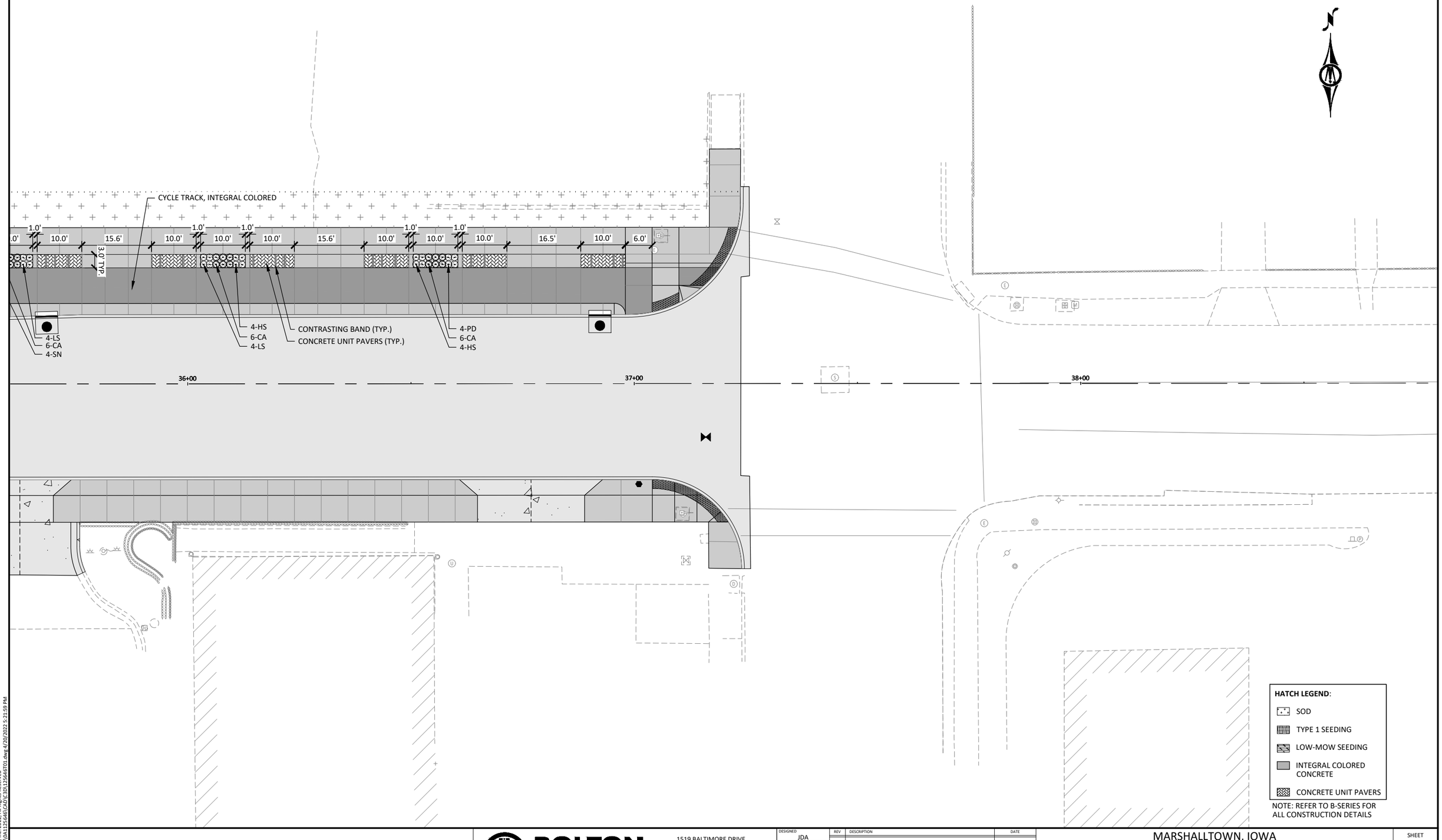
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET
T.09



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STATE STREET RECONSTRUCTION
STREETSCAPE SHEETS

SHEET T.10

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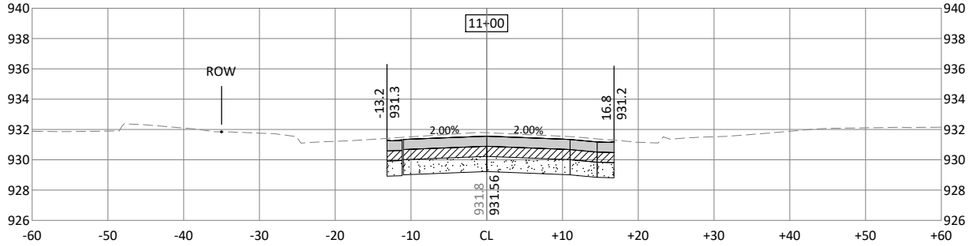

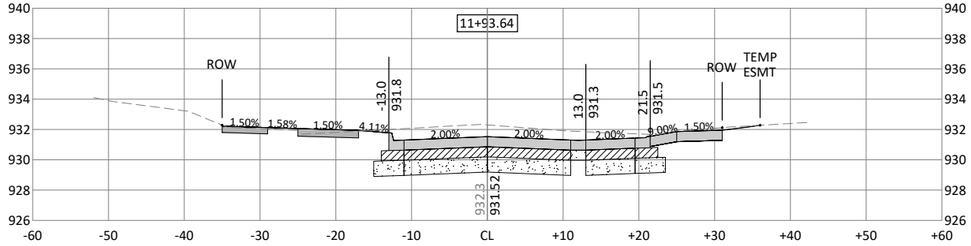

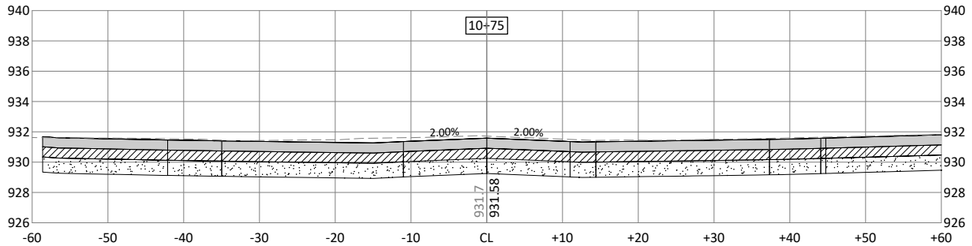

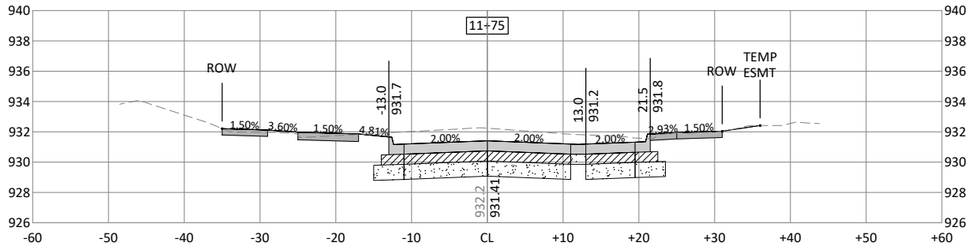

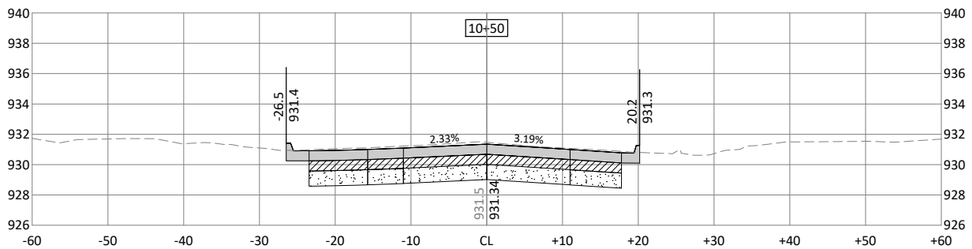

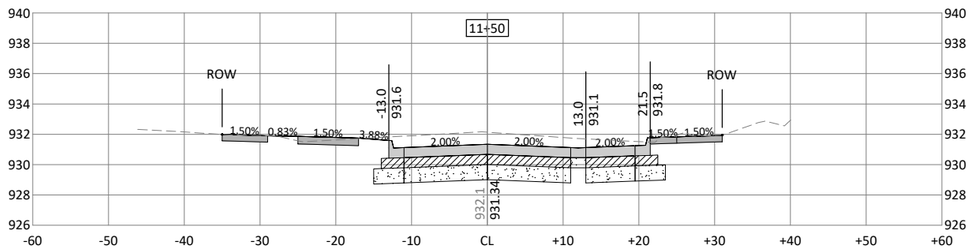

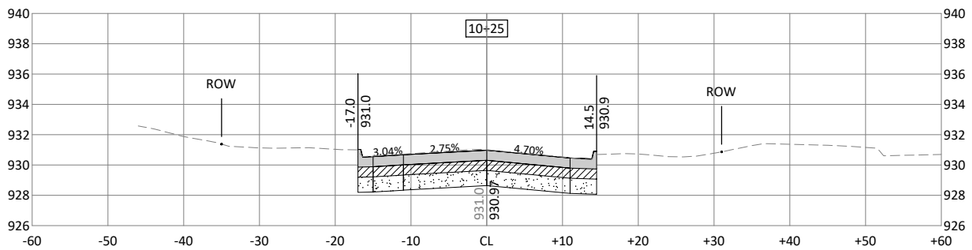

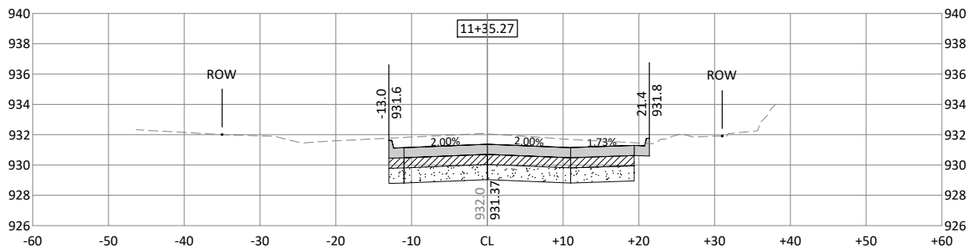

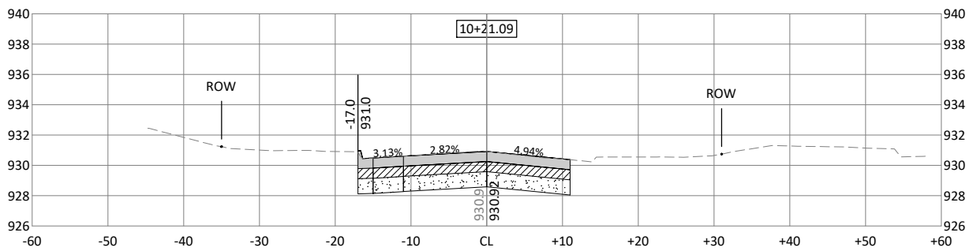

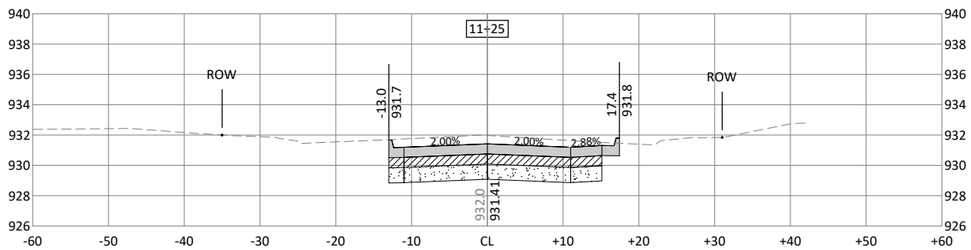

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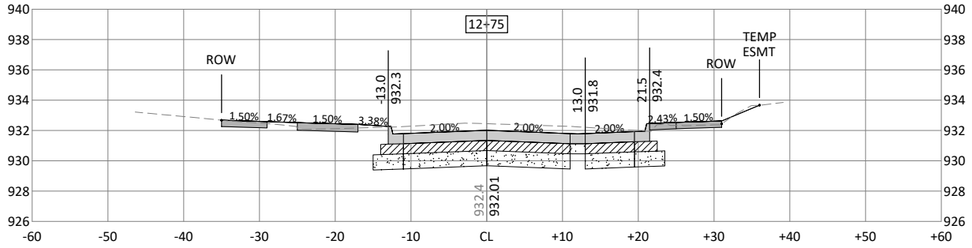
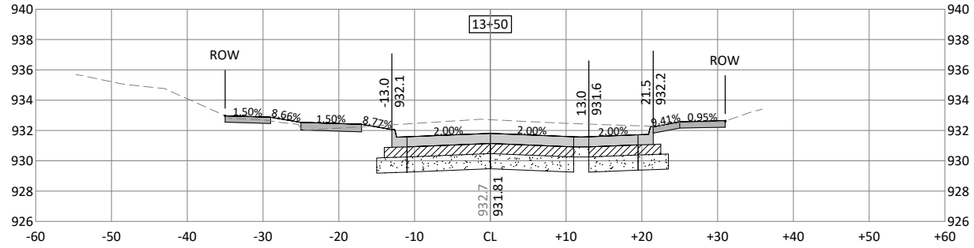
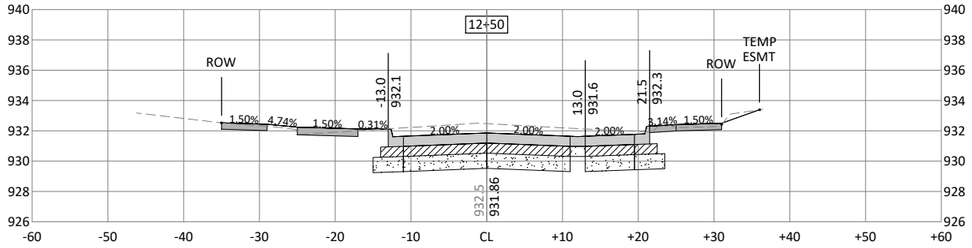
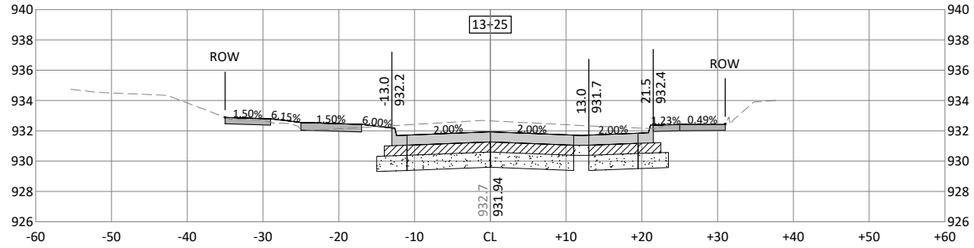
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

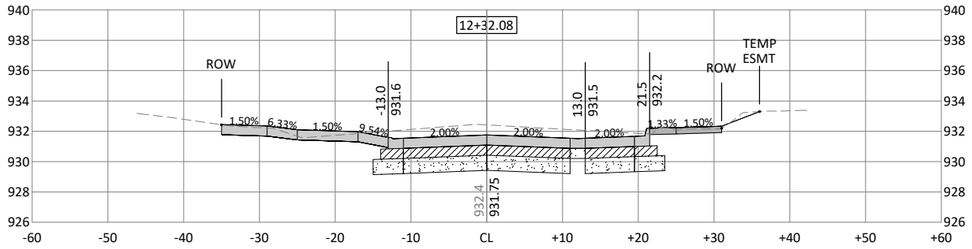
SHEET
W.01

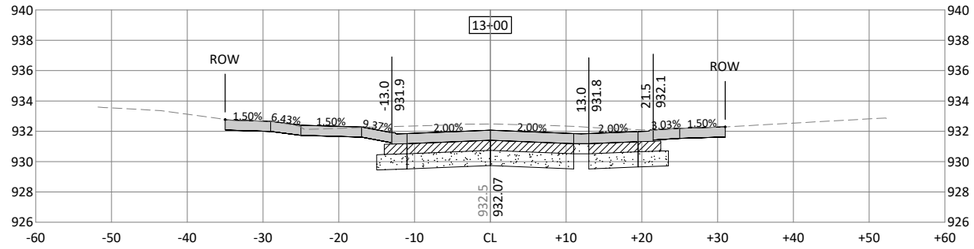


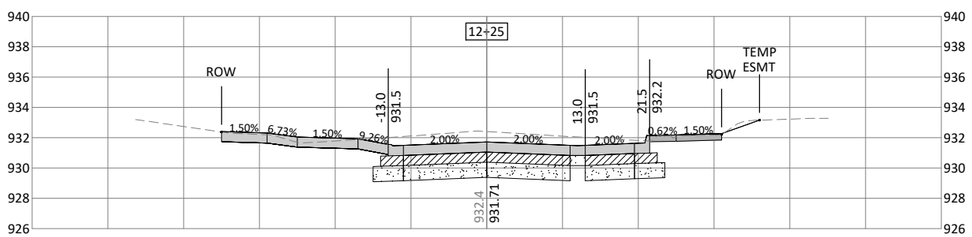


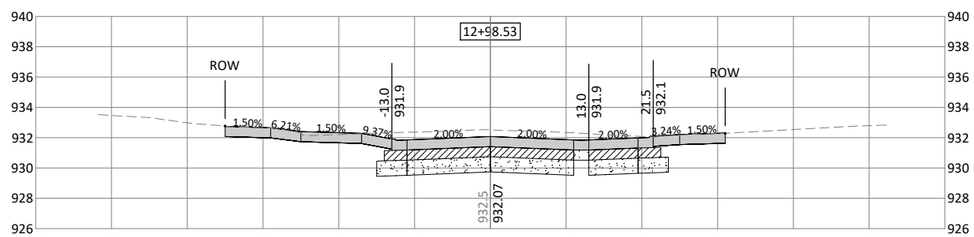


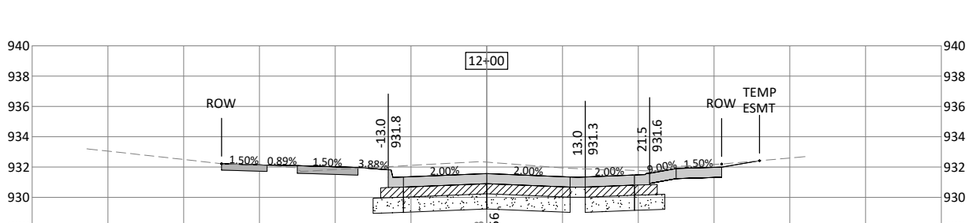


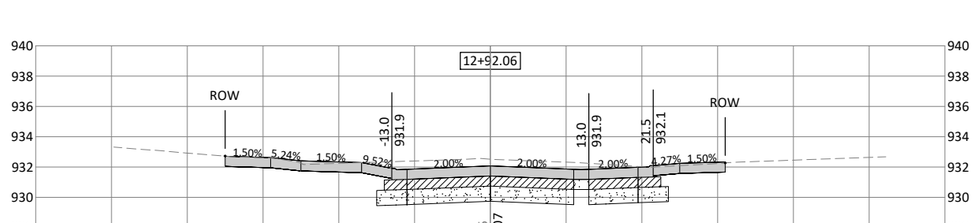












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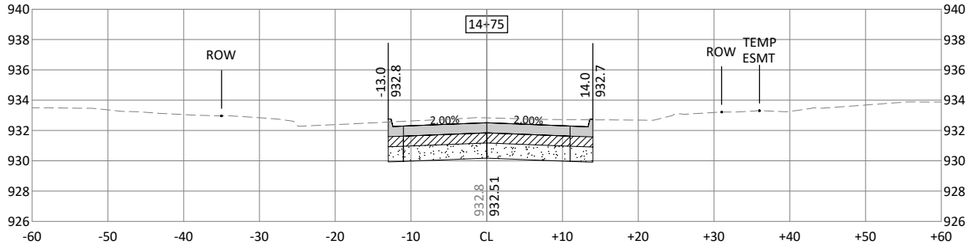
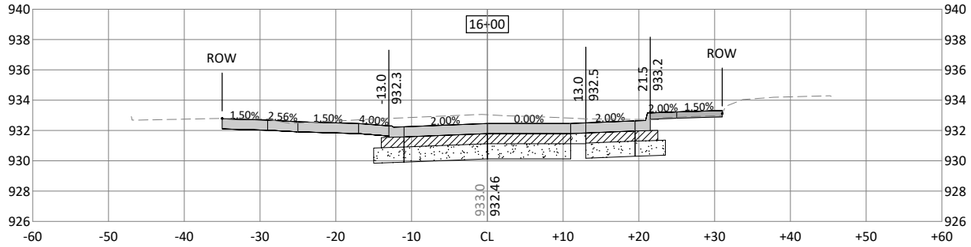
MARSHALLTOWN, IOWA

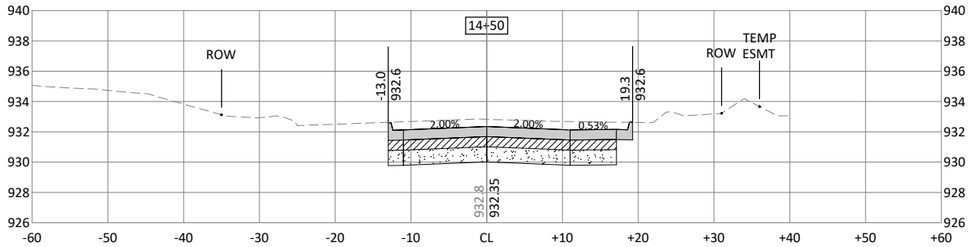
STATE STREET RECONSTRUCTION

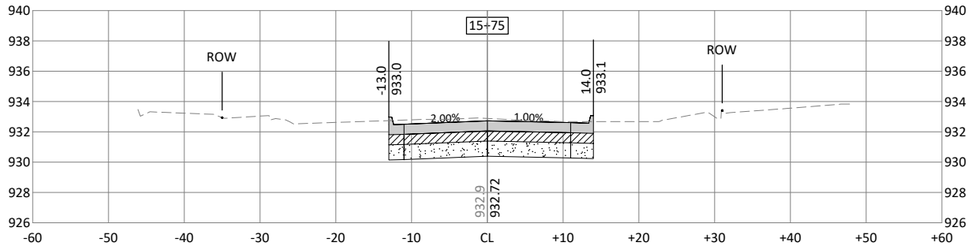
CROSS SECTIONS - STATE STREET

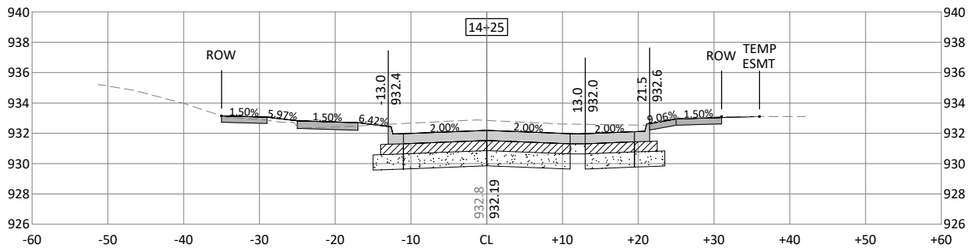
SHEET W.02

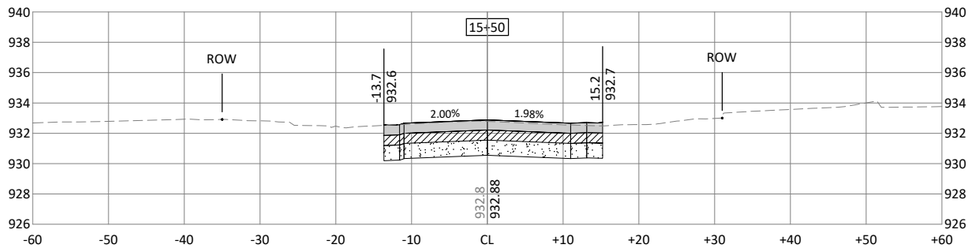


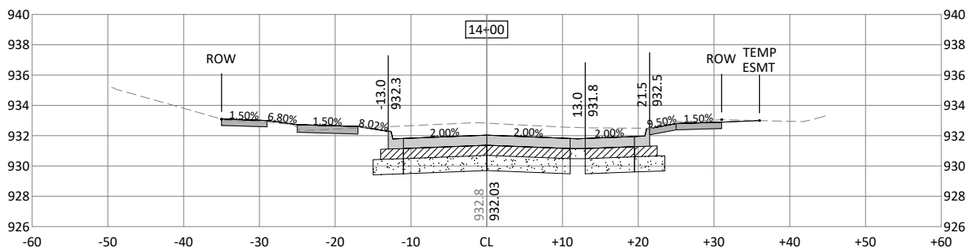


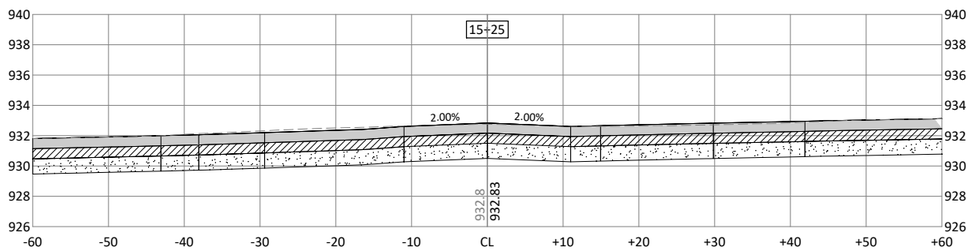


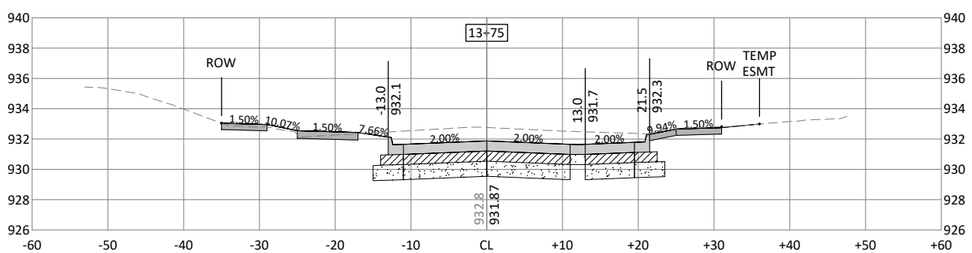


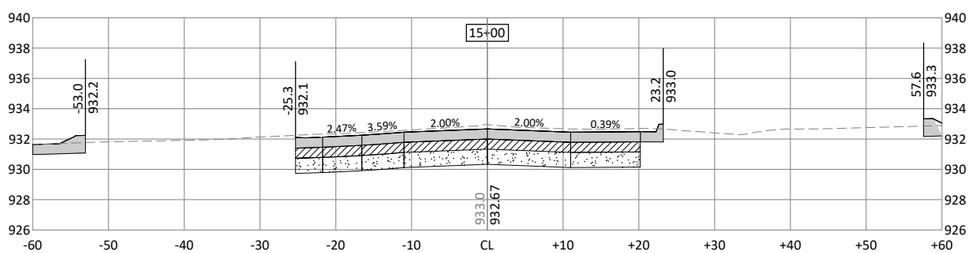












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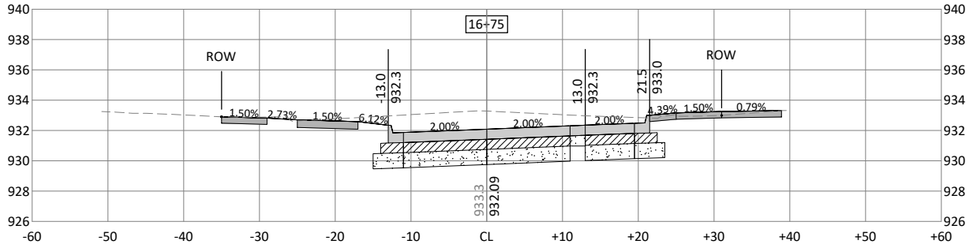
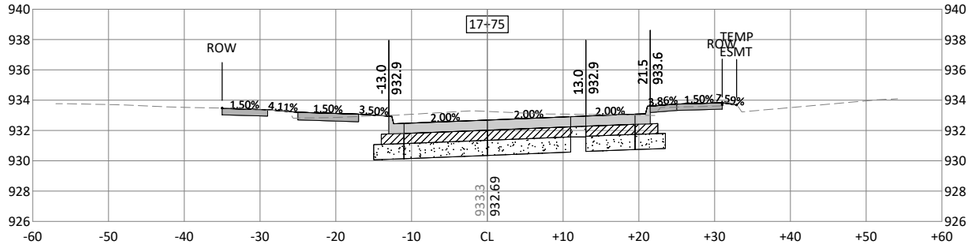
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

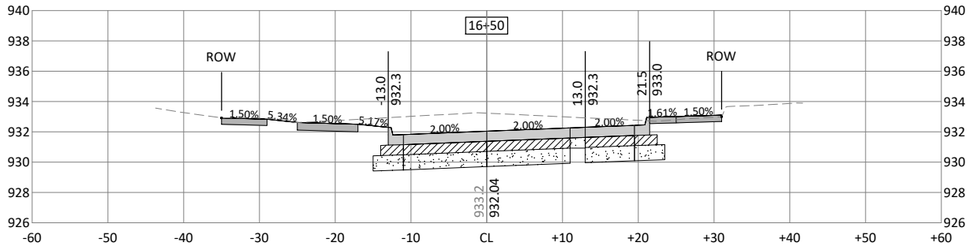
REV	DESCRIPTION	DATE

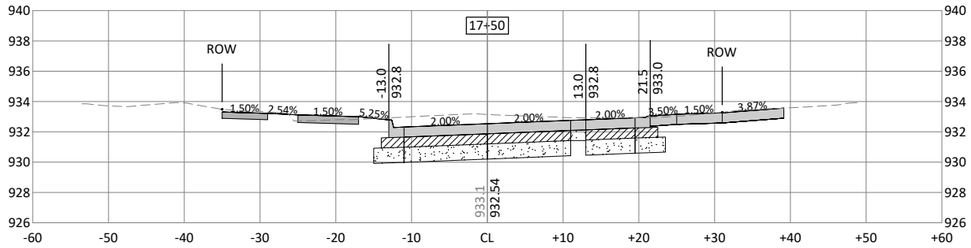
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

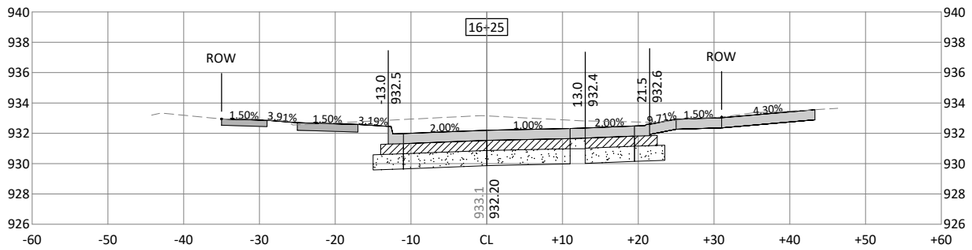
SHEET
W.03

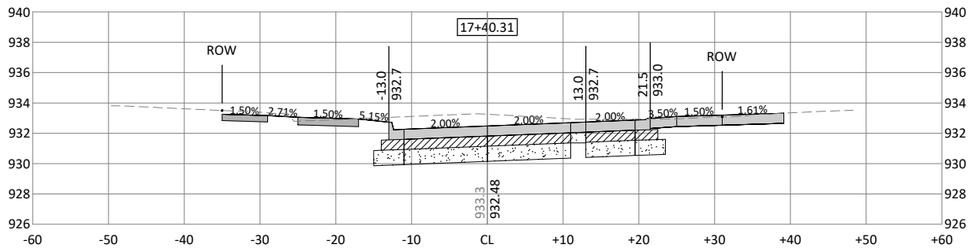


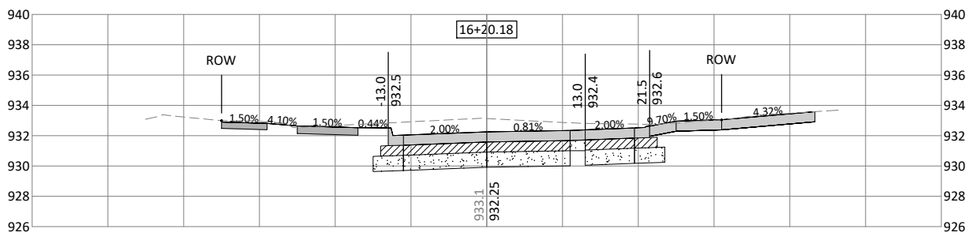


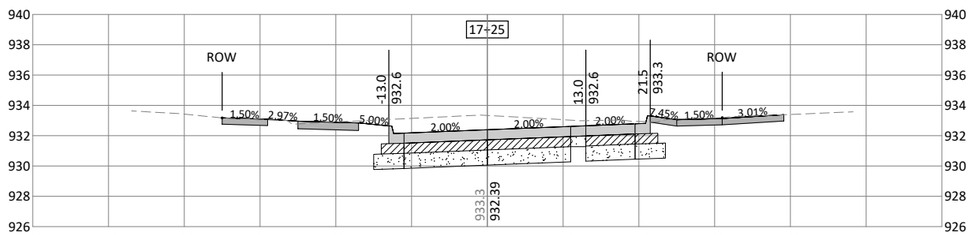


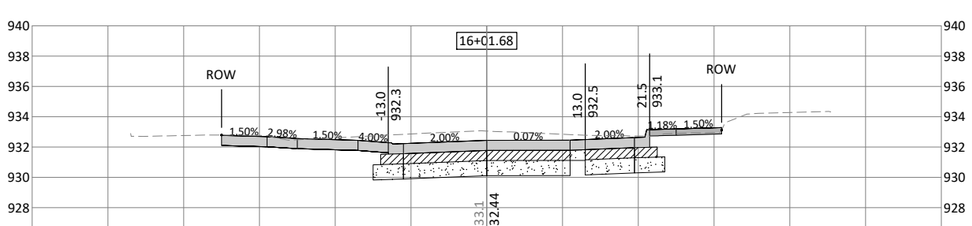


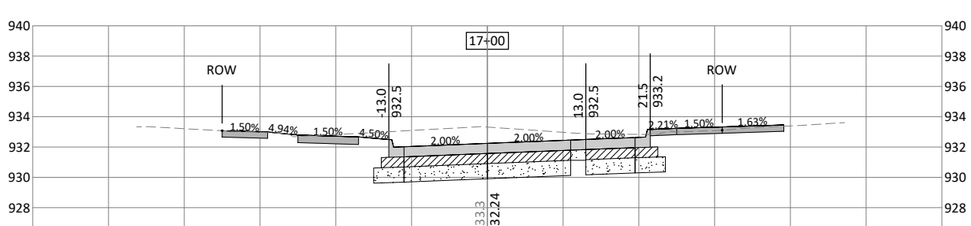












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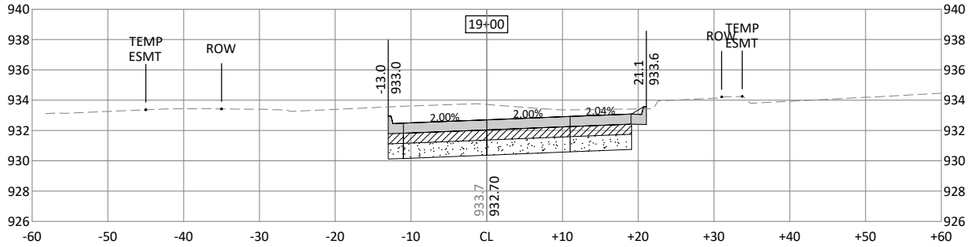
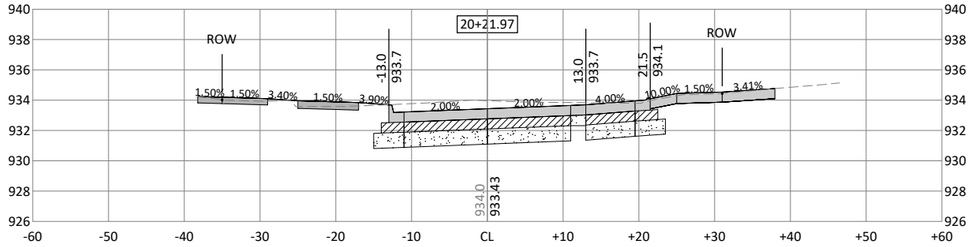
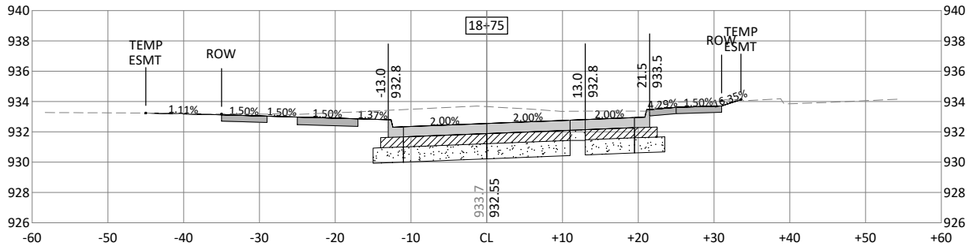
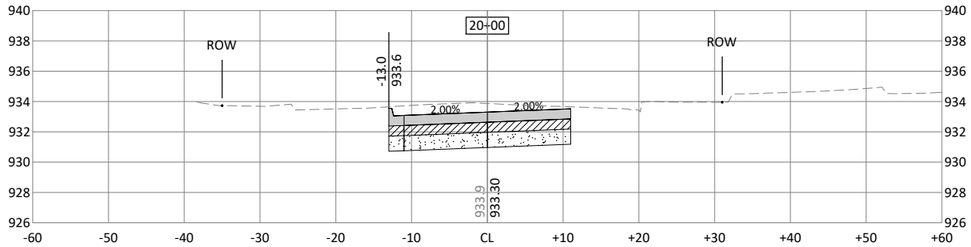
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

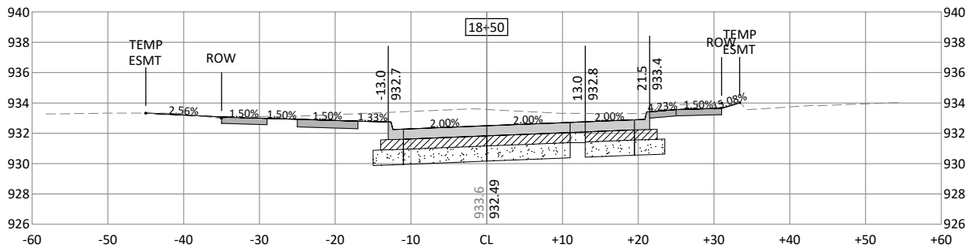
SHEET
W.04

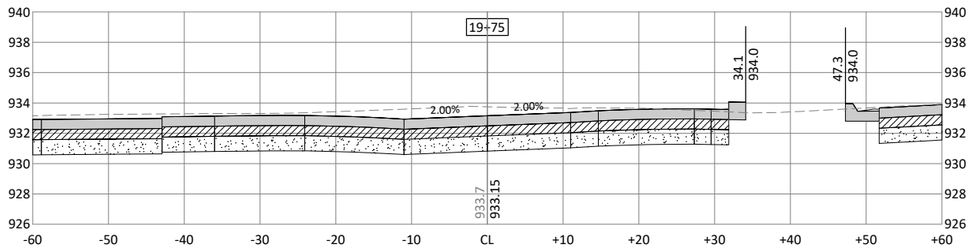


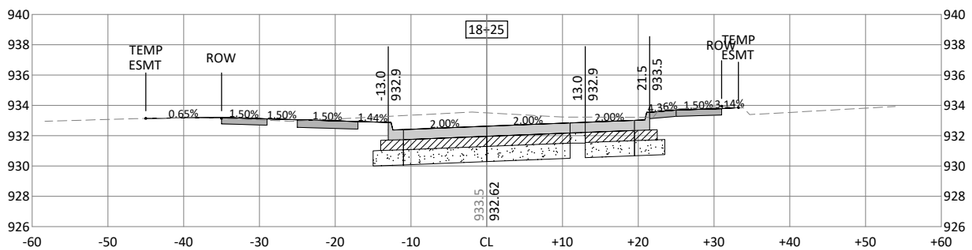


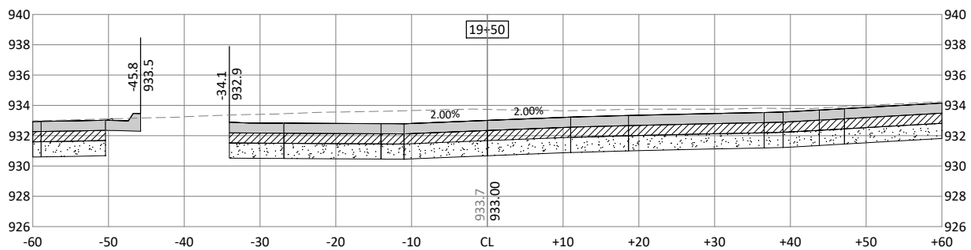


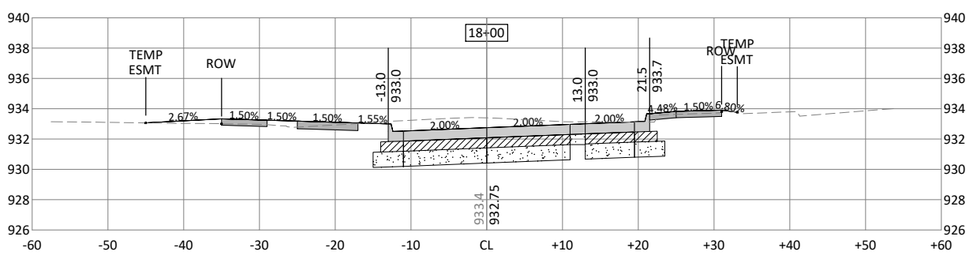


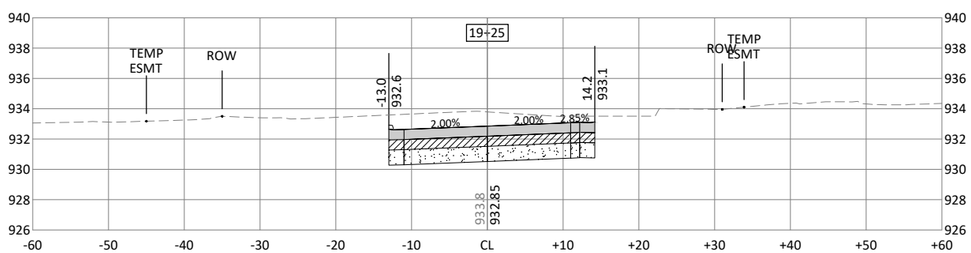












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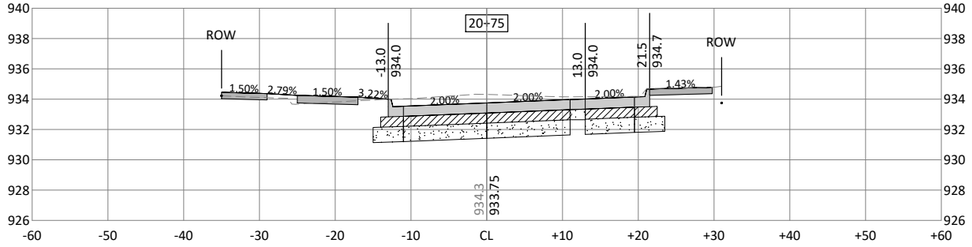
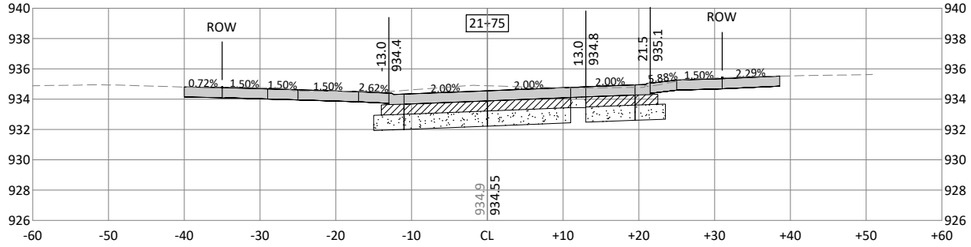
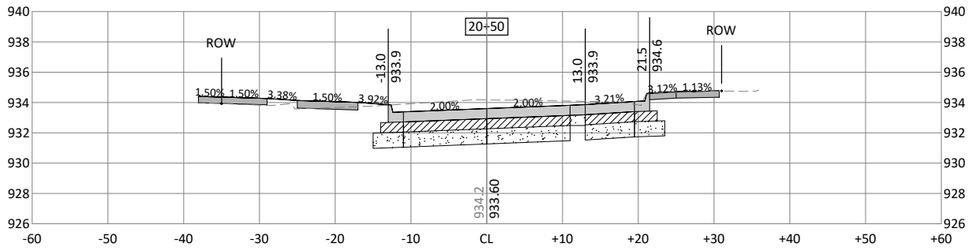
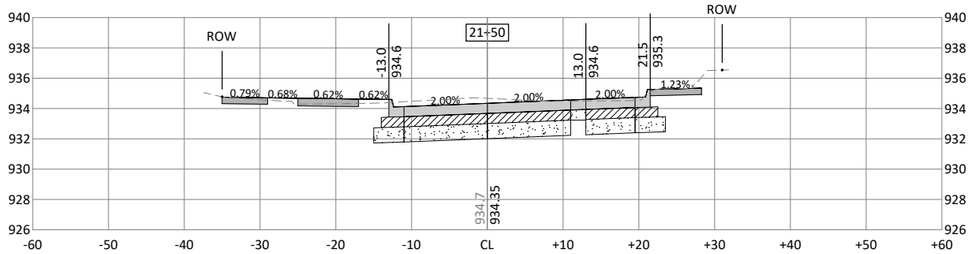
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

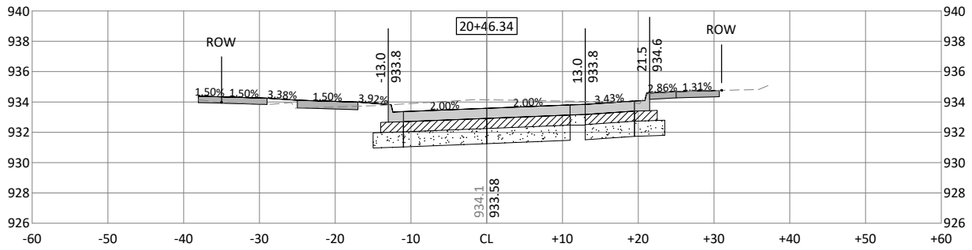
SHEET
W.05

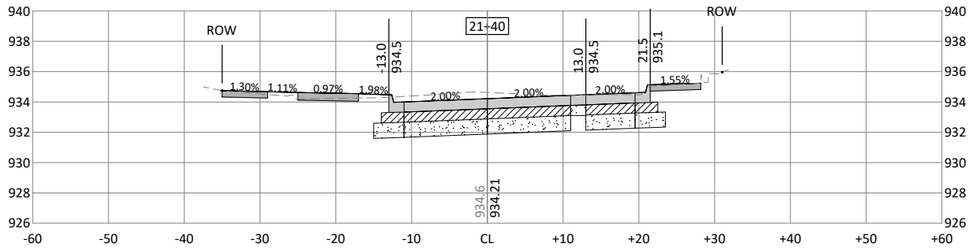


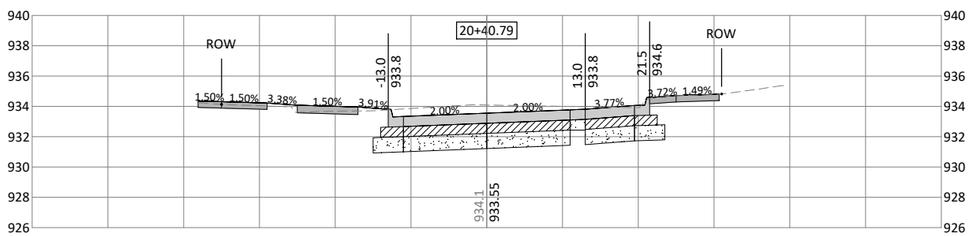


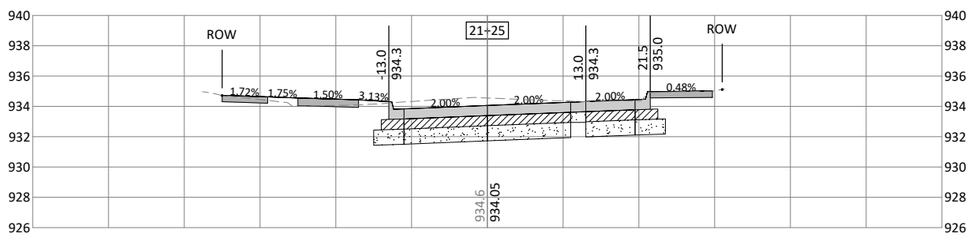


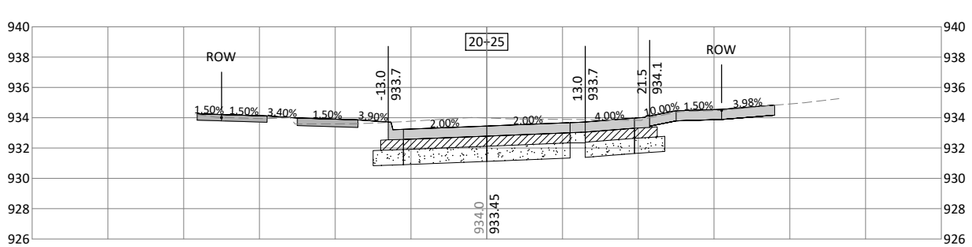


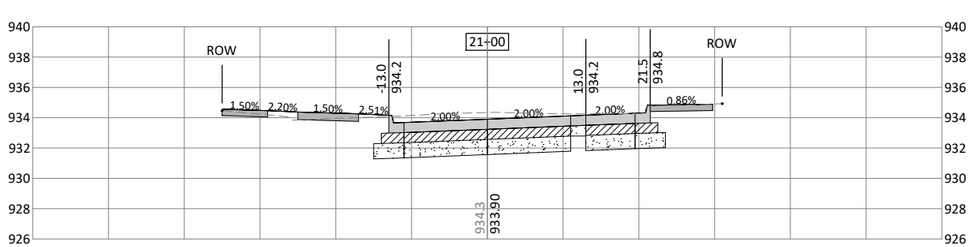












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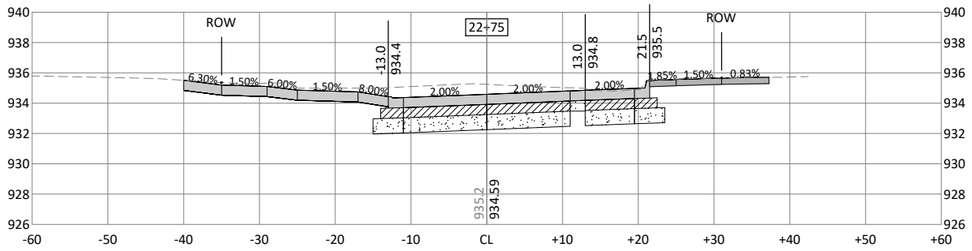
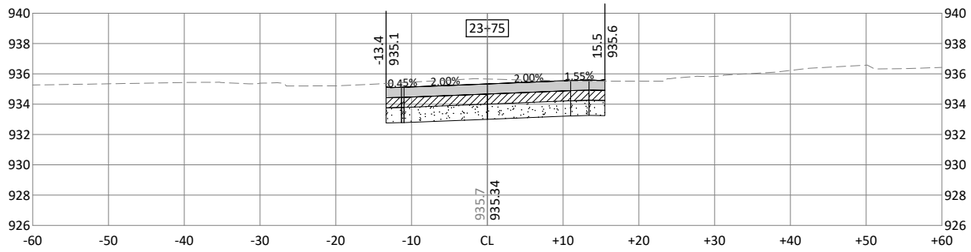
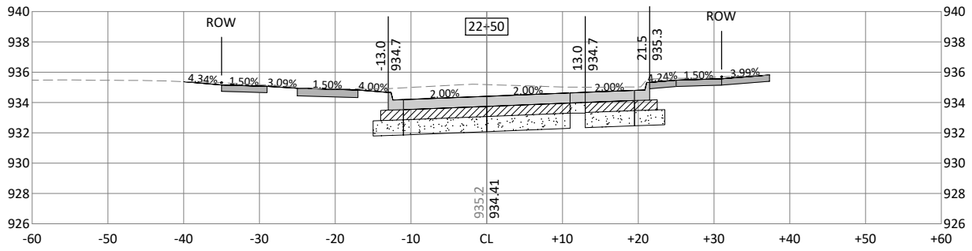
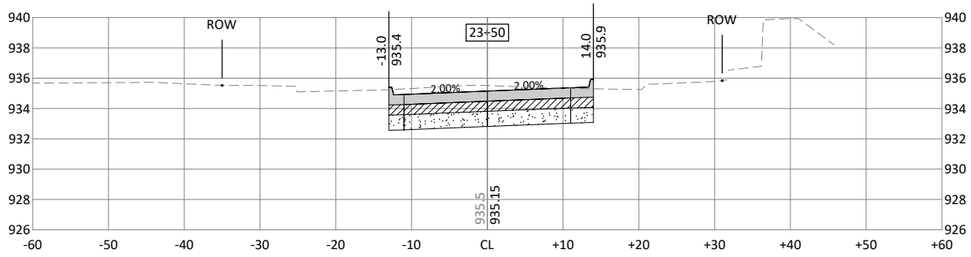
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

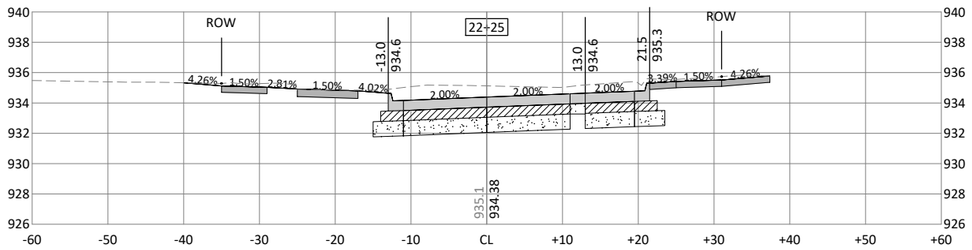
SHEET
W.06

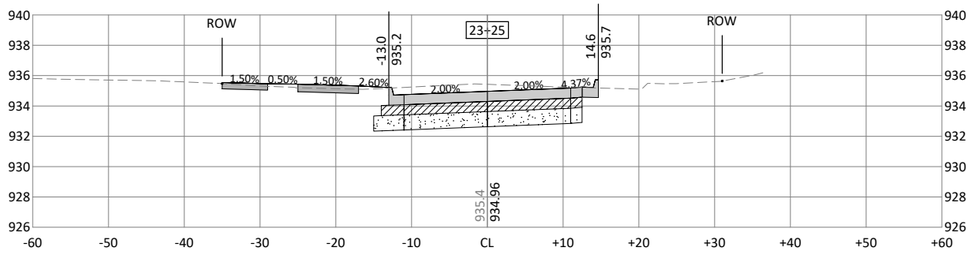


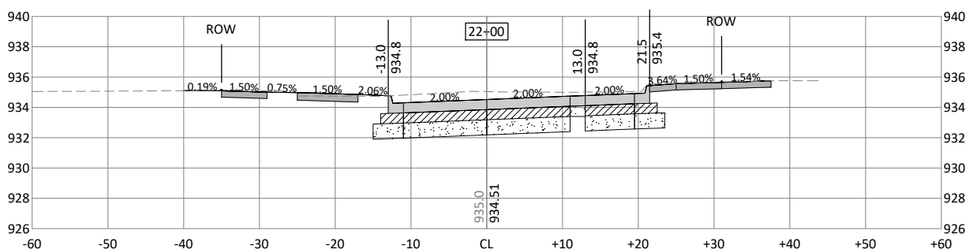


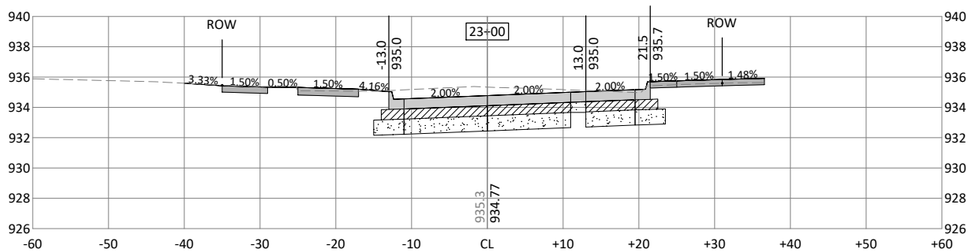


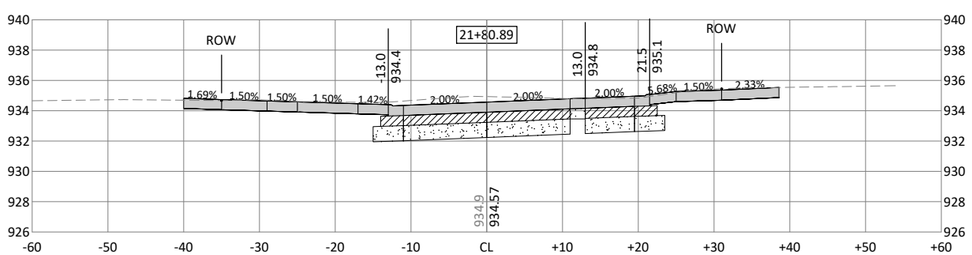


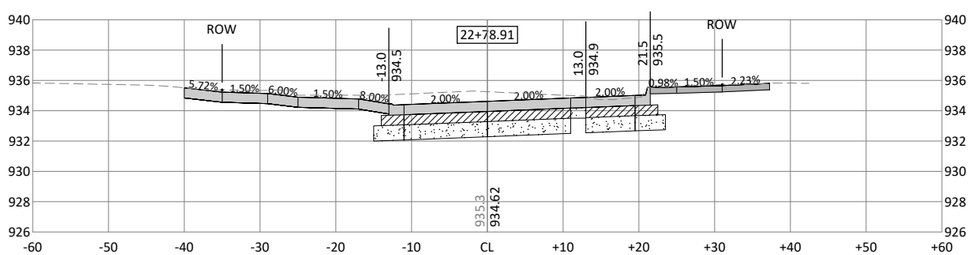












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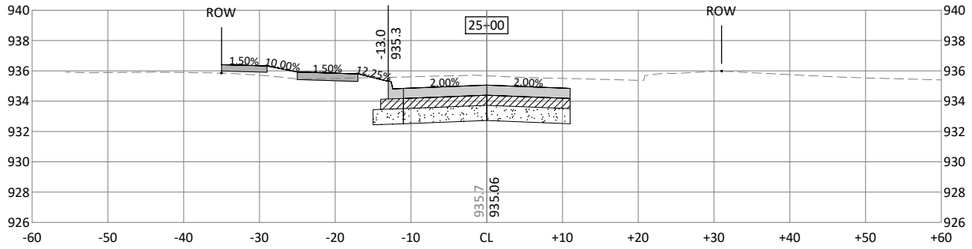
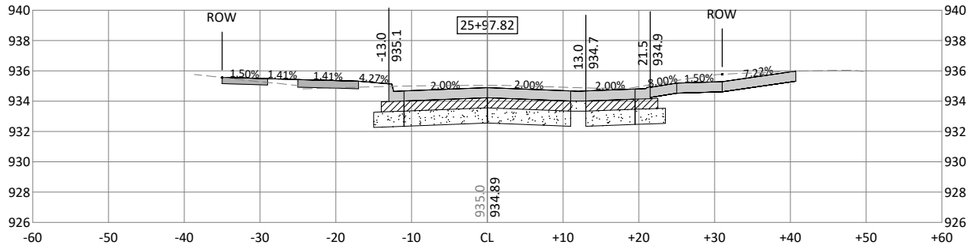
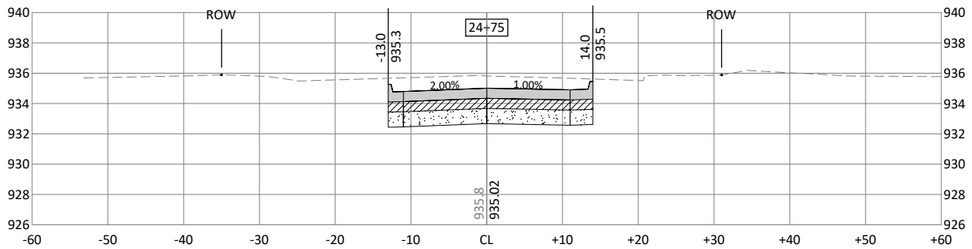
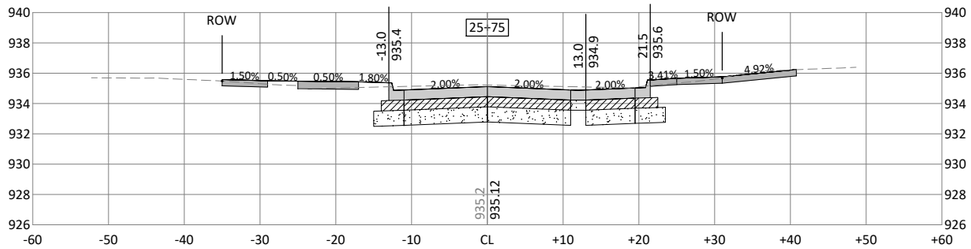
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

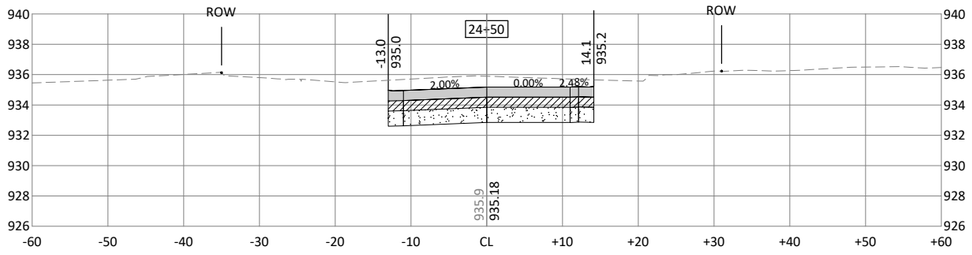
SHEET
W.07

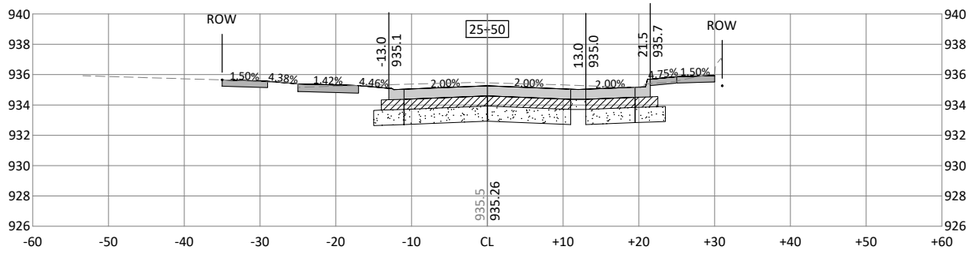


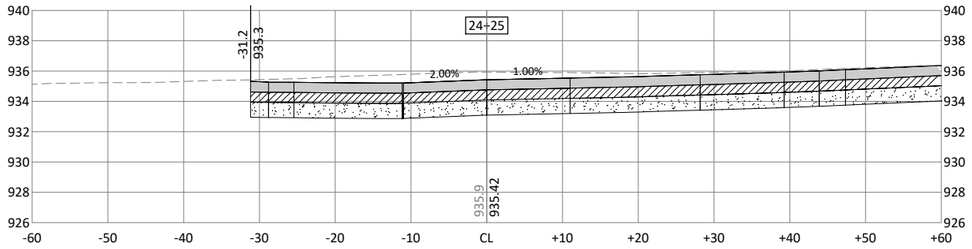


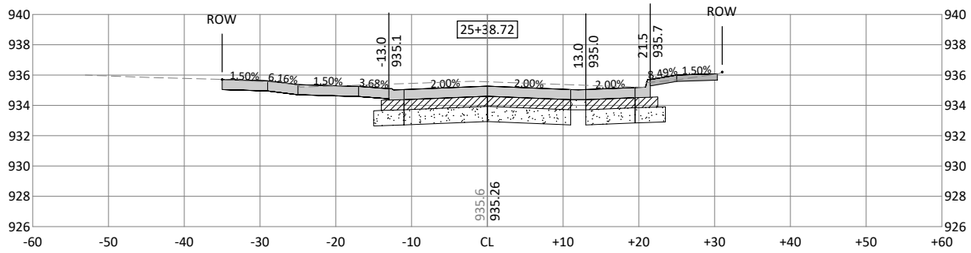


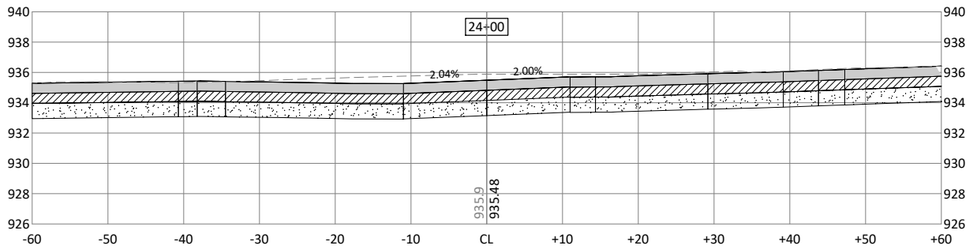


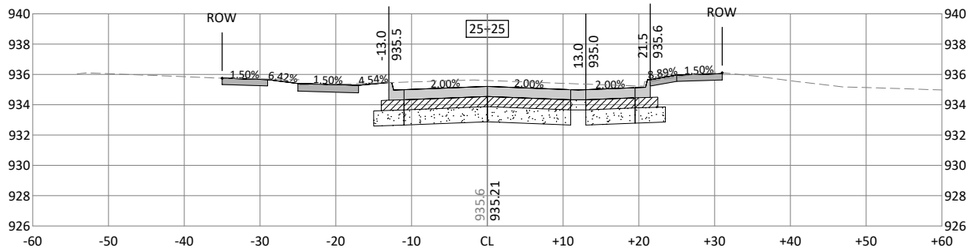












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CLIENT PROJ. NO.	0A1125646

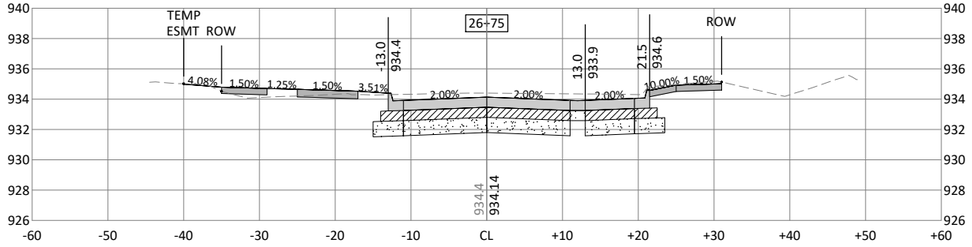
REV	DESCRIPTION	DATE

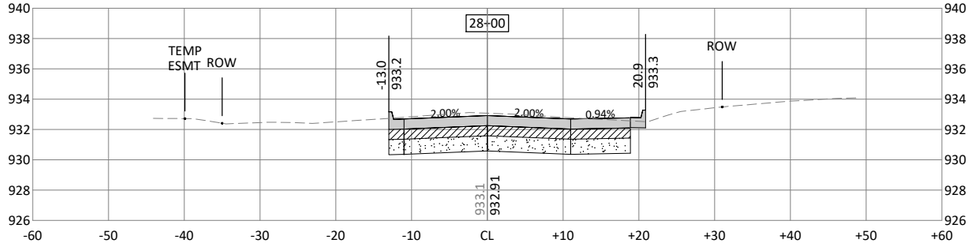
MARSHALLTOWN, IOWA

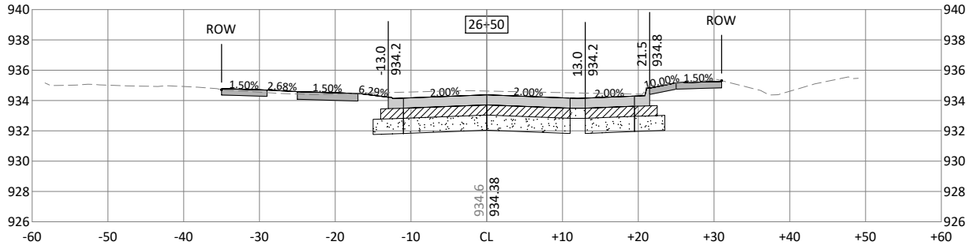
STATE STREET RECONSTRUCTION

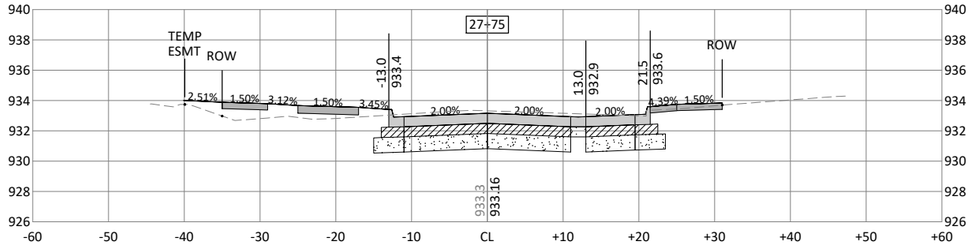
CROSS SECTIONS - STATE STREET

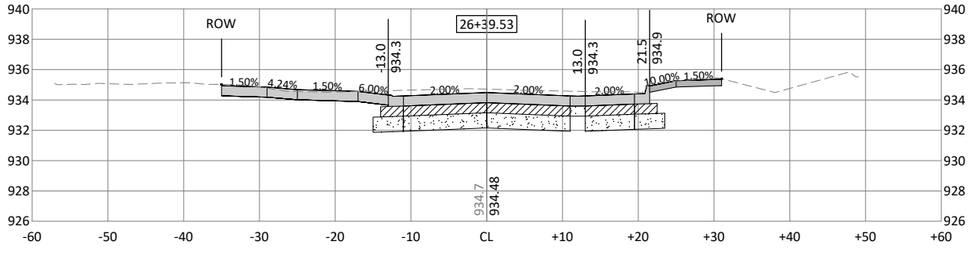
SHEET W.08

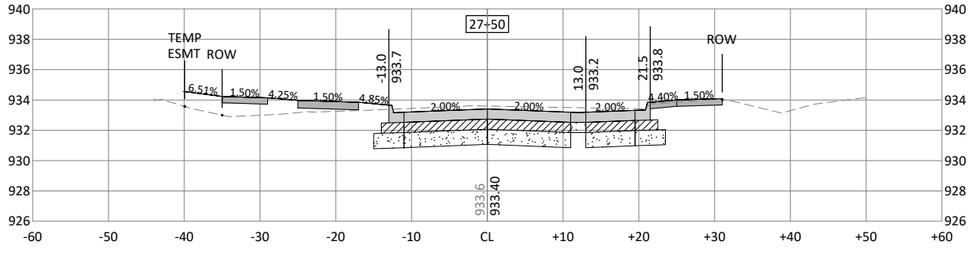


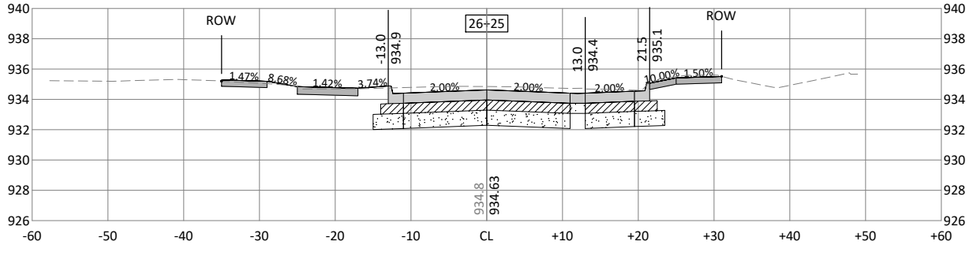


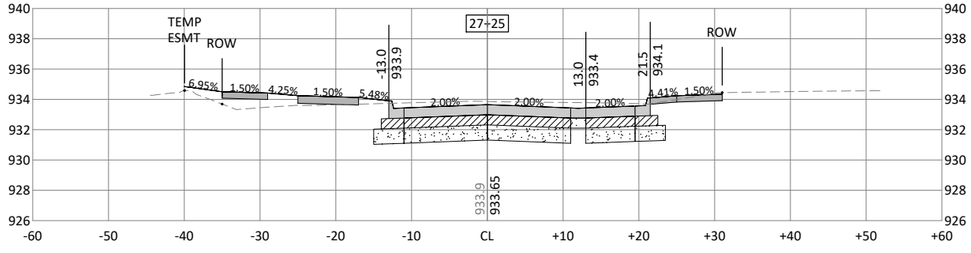


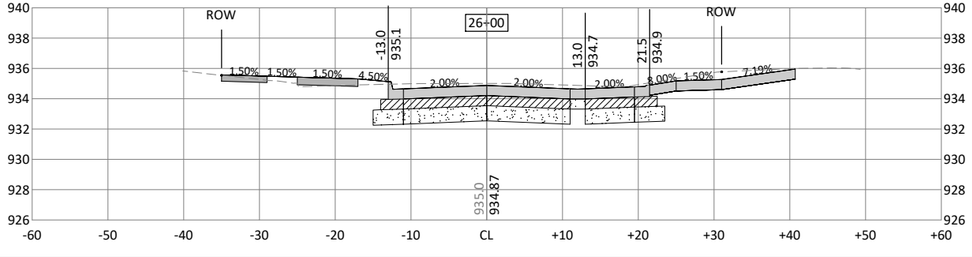


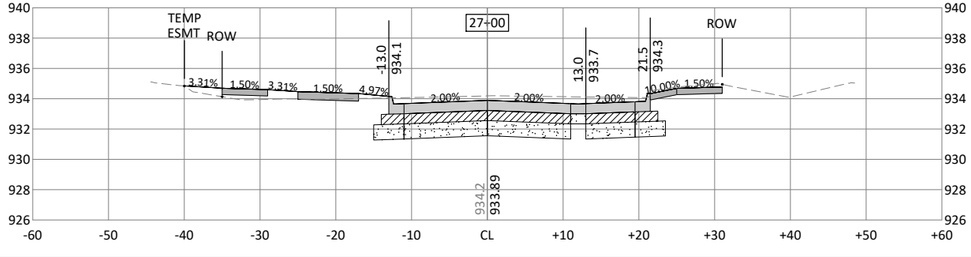












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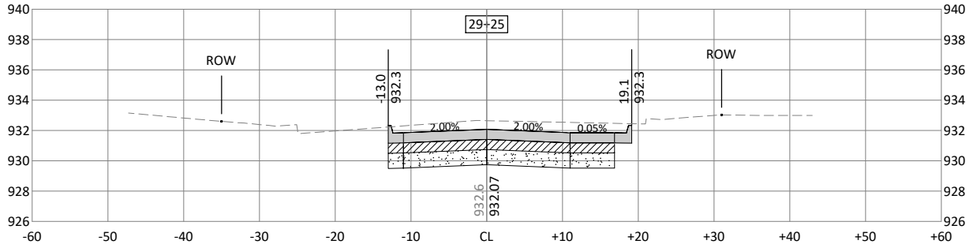
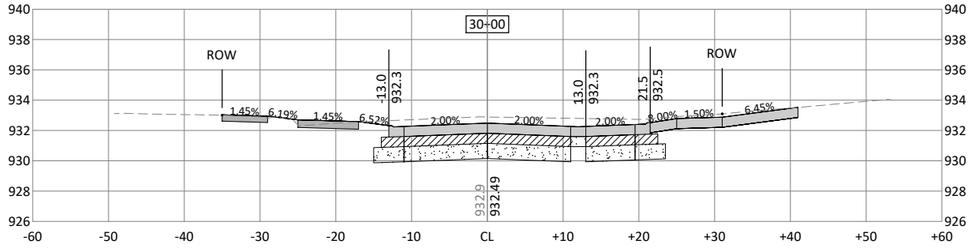
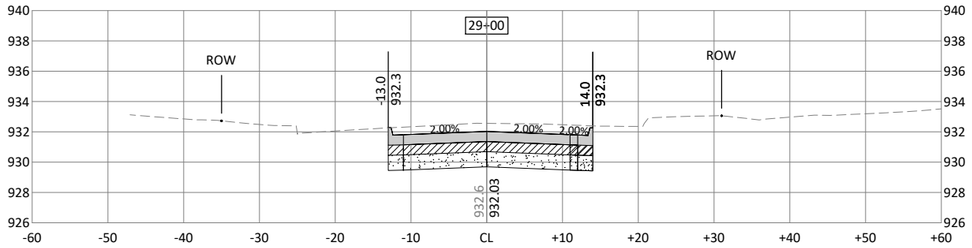
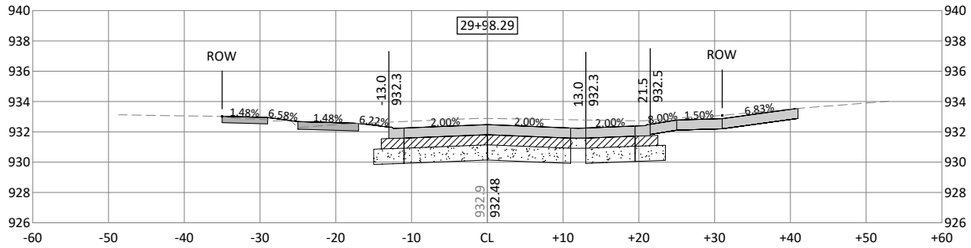
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

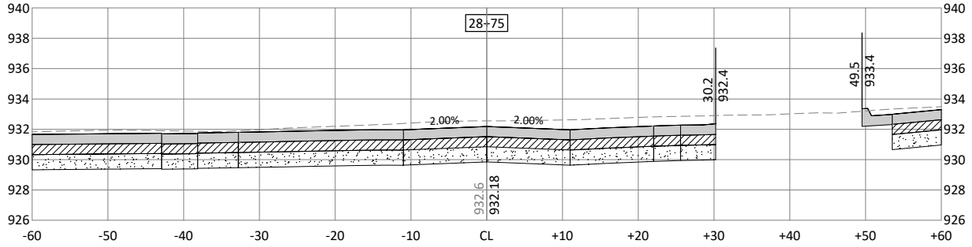
SHEET
W.09

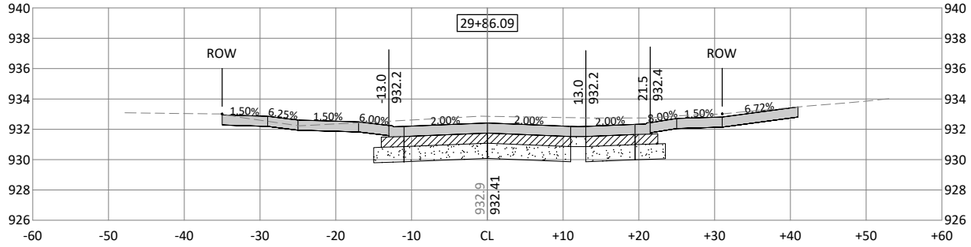


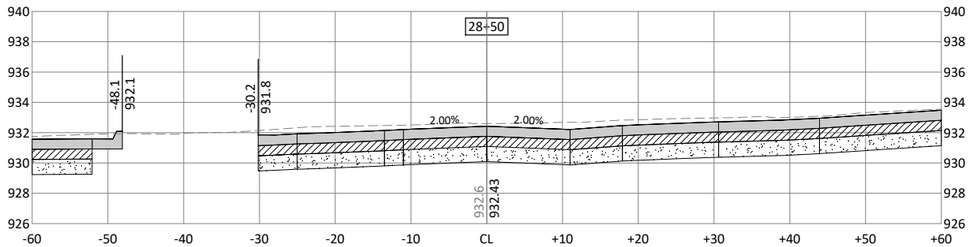


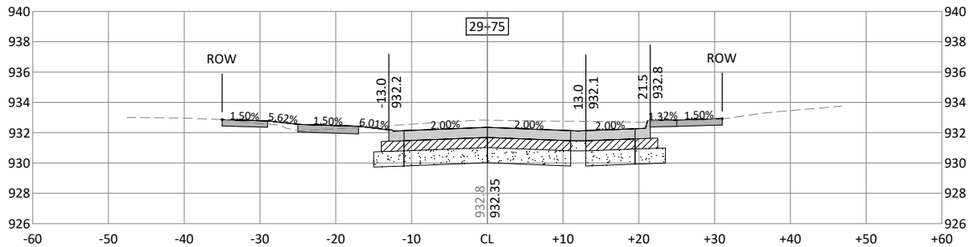


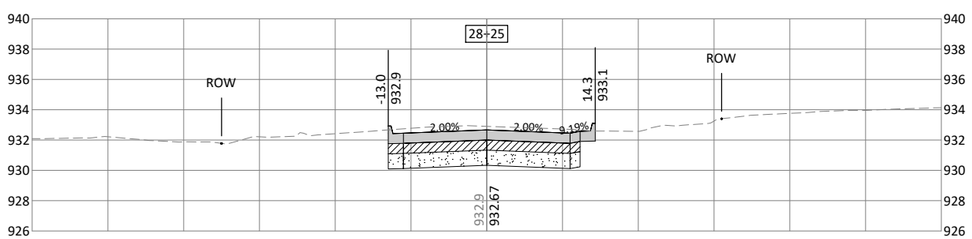


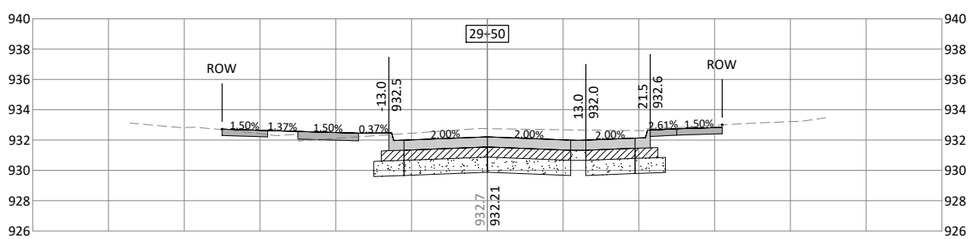












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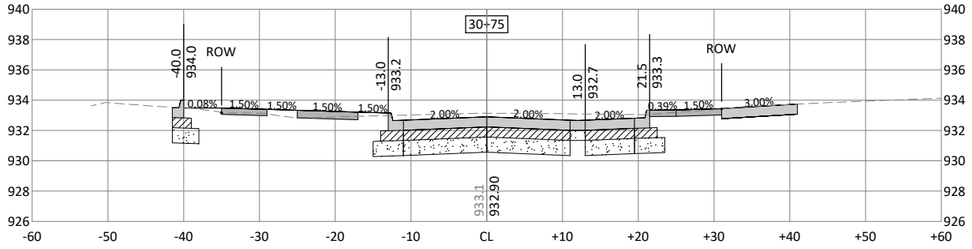
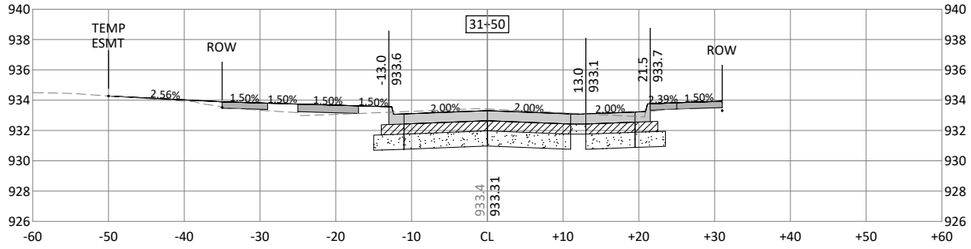
CHECKED	GAB
CLIENT PROJ. NO.	0A1125646

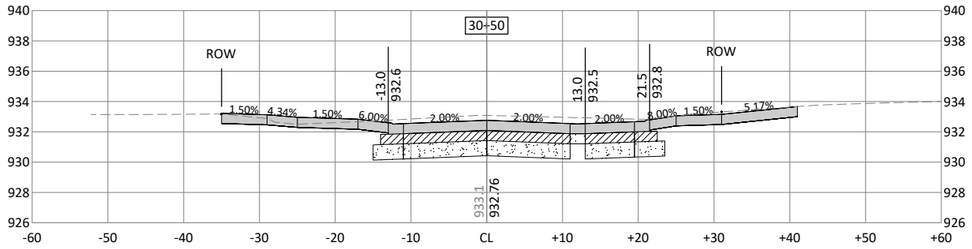
REV	DESCRIPTION	DATE

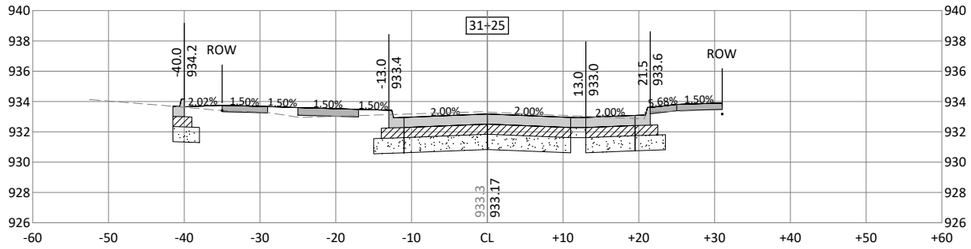
MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

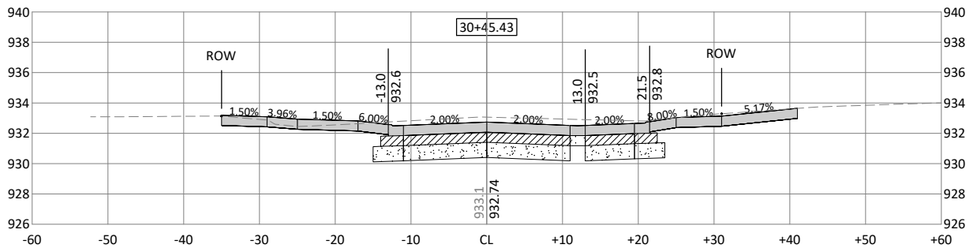
SHEET
W.10

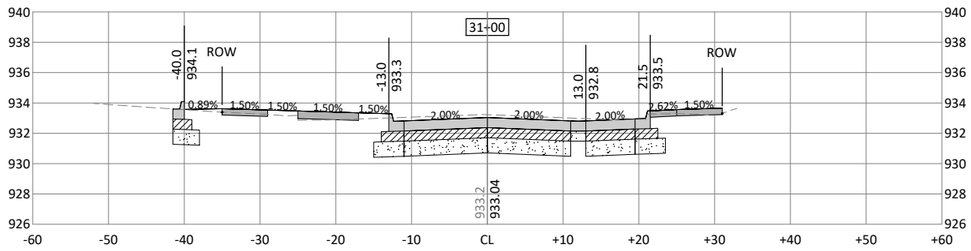


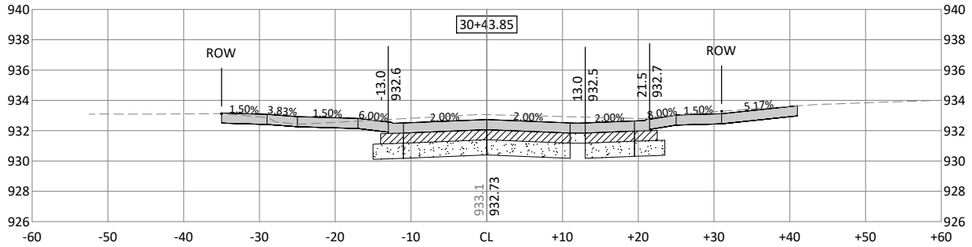


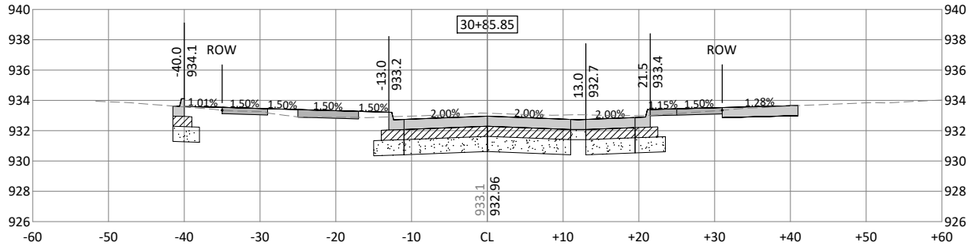


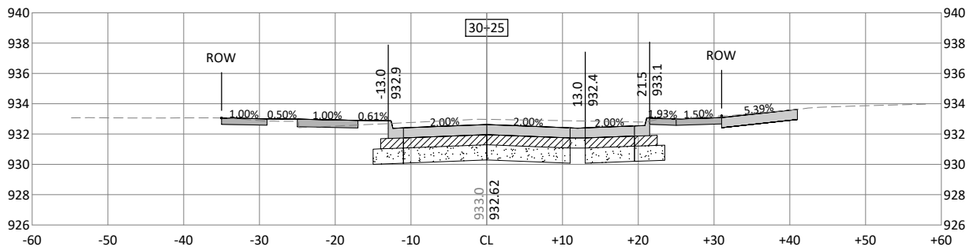


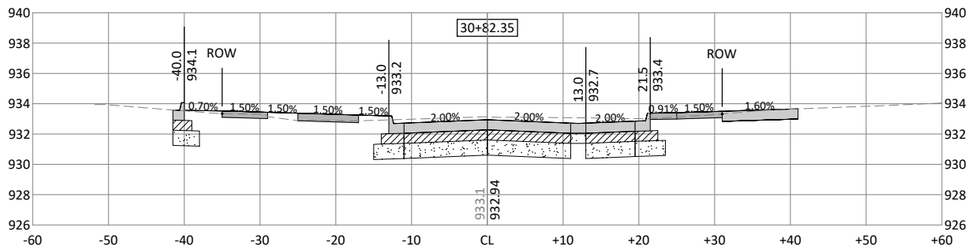












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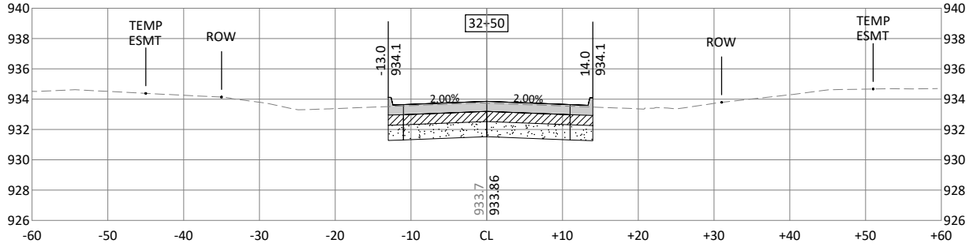
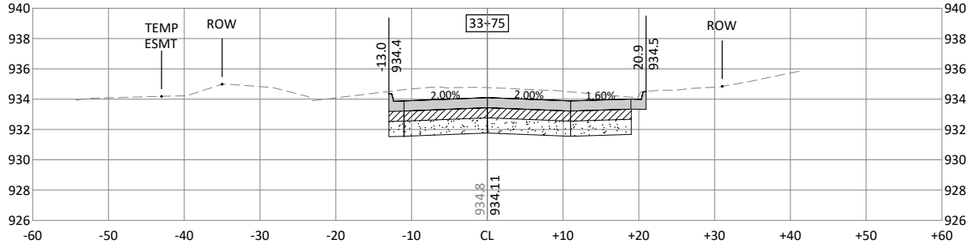
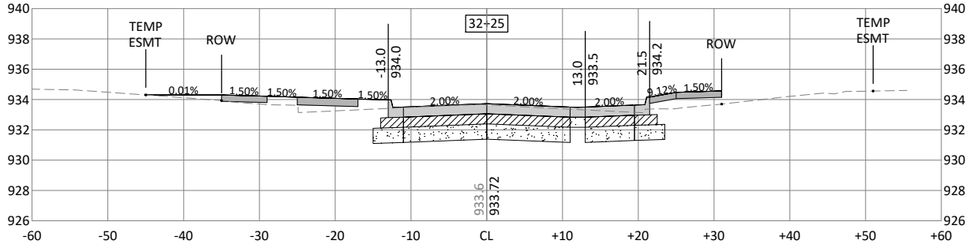
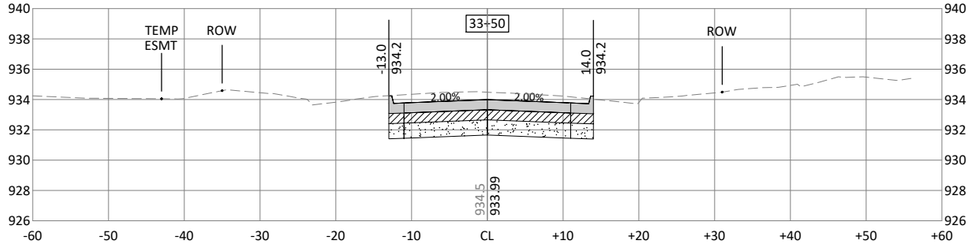
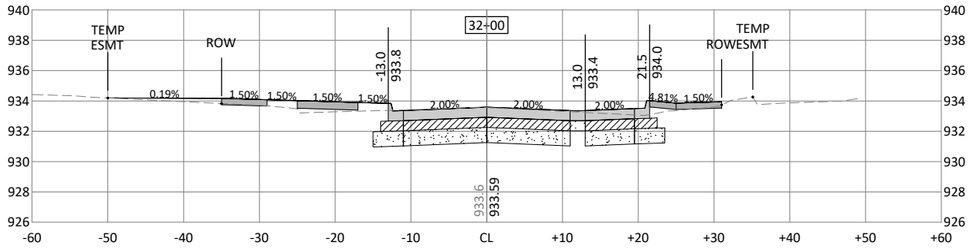
SHEET
W.11

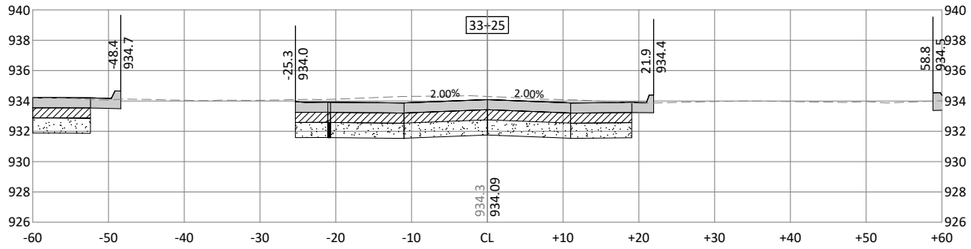


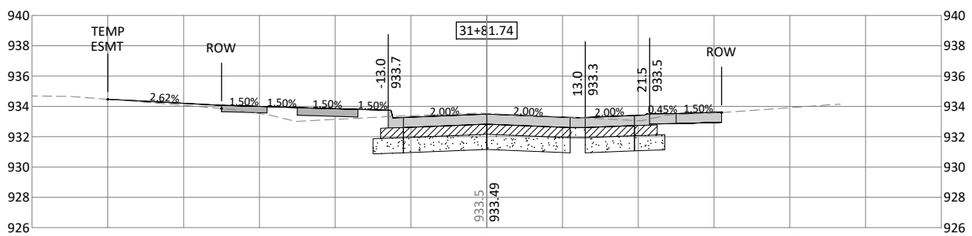


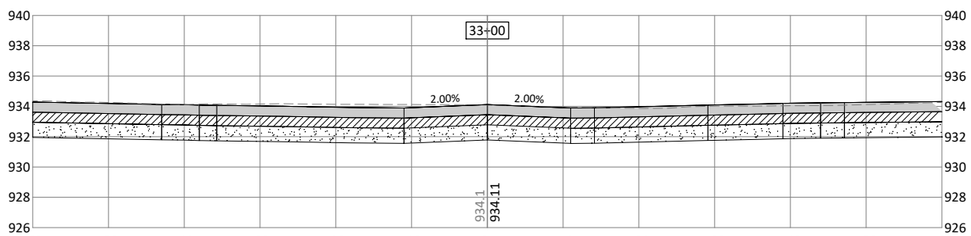


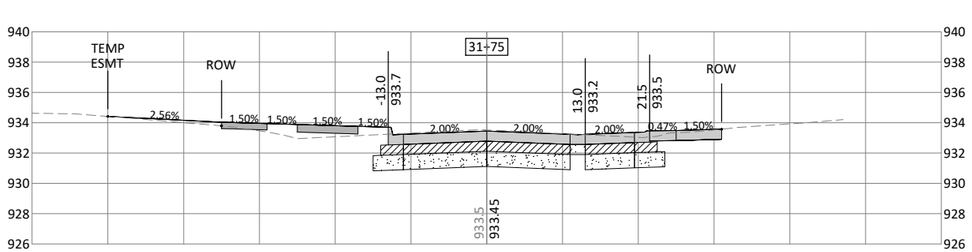


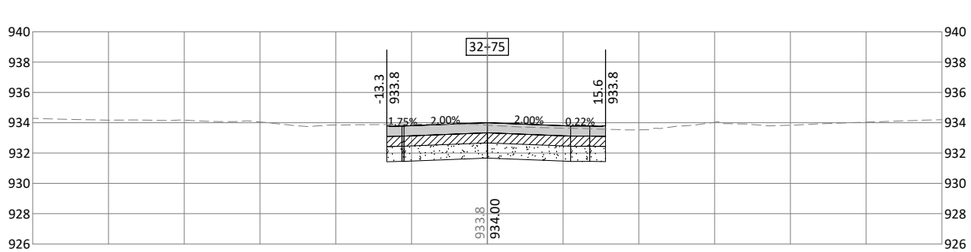












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CLIENT PROJ. NO.			
0A1125646			

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

SHEET
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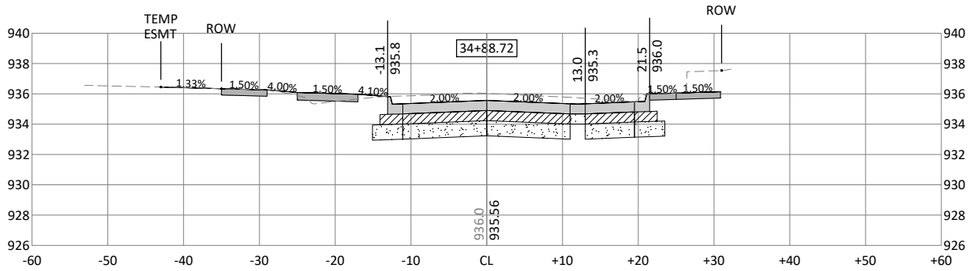

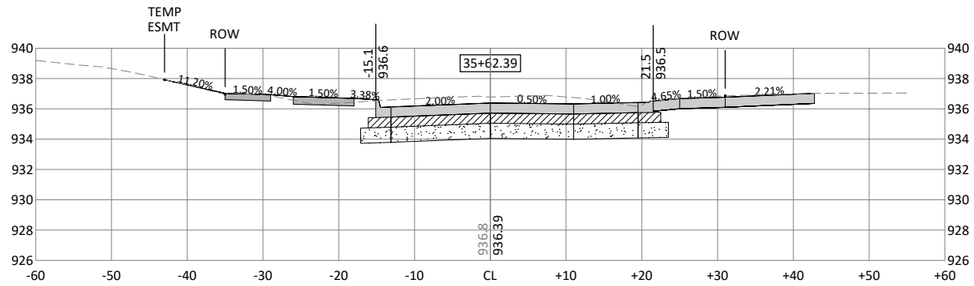

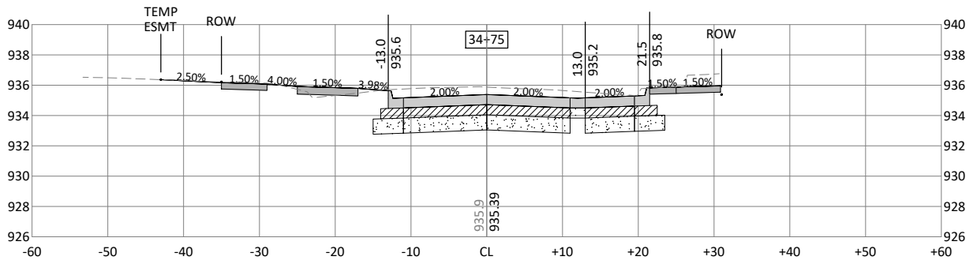

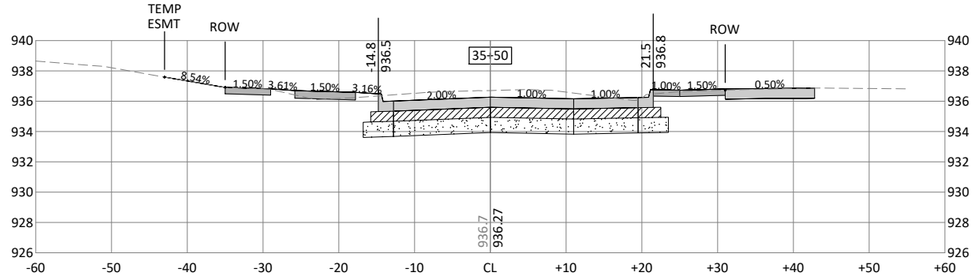

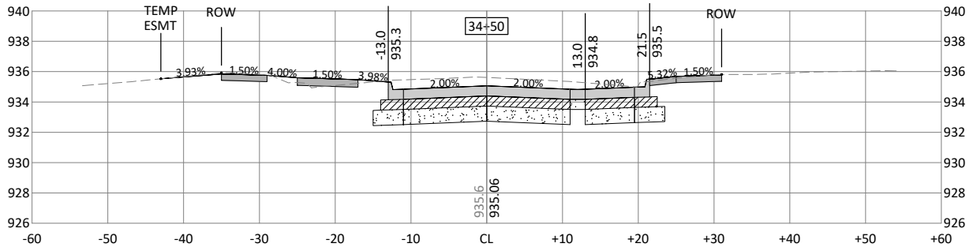

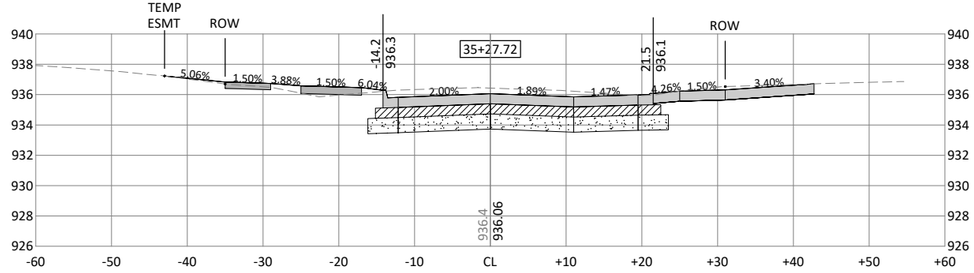

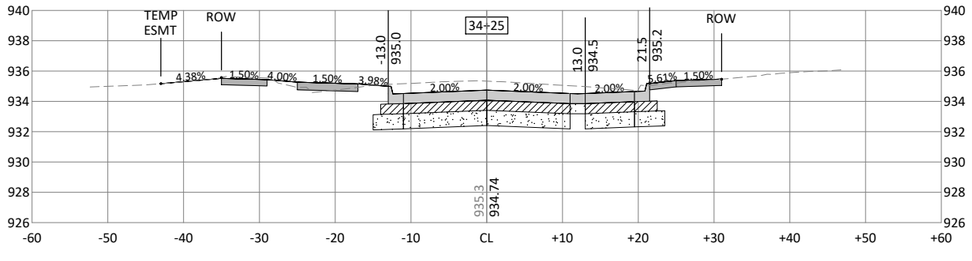

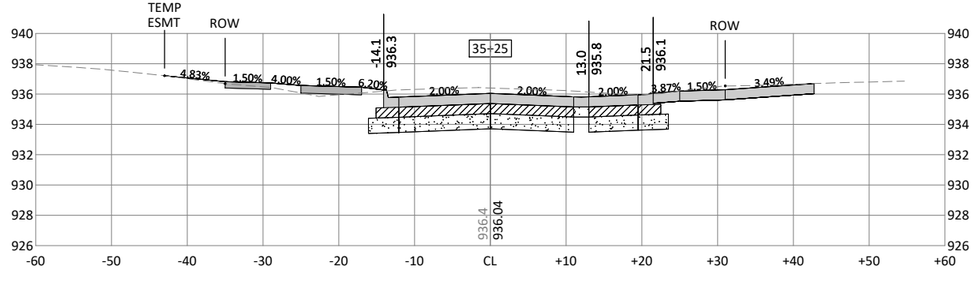

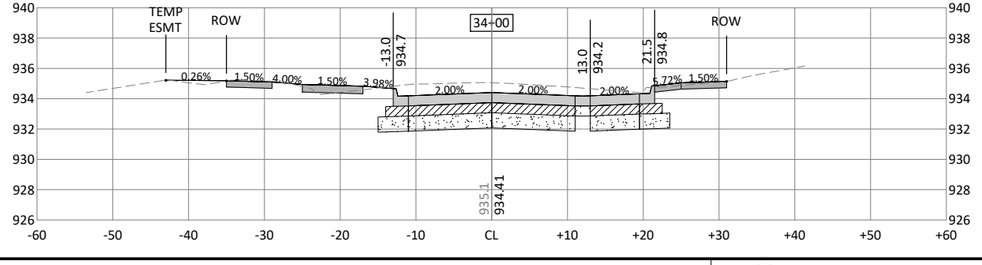

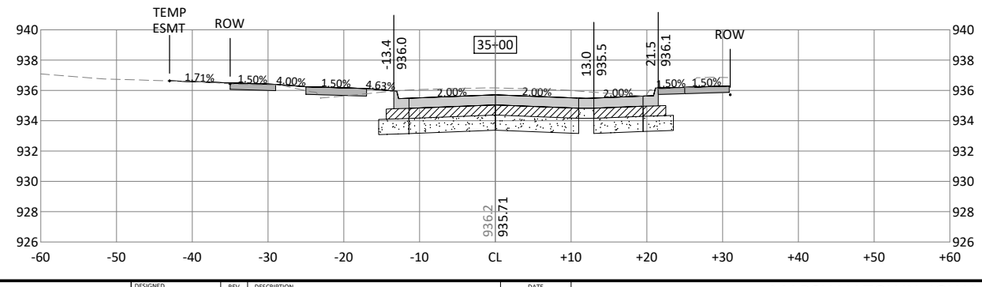

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AMES, IOWA 50010
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REV	DESCRIPTION	DATE

MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

SHEET
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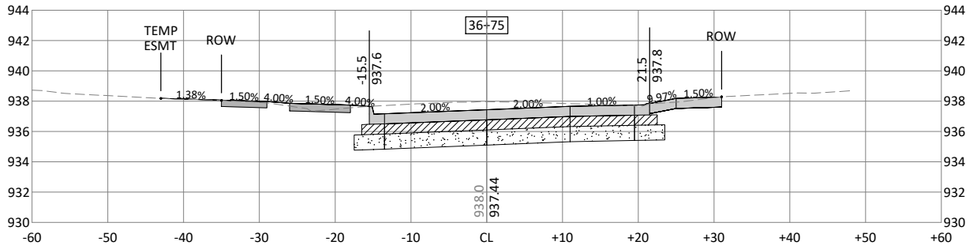

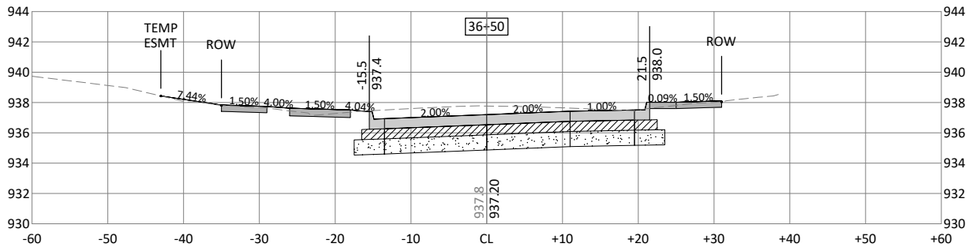

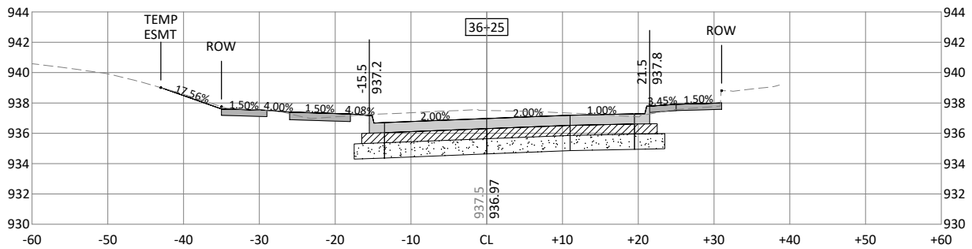

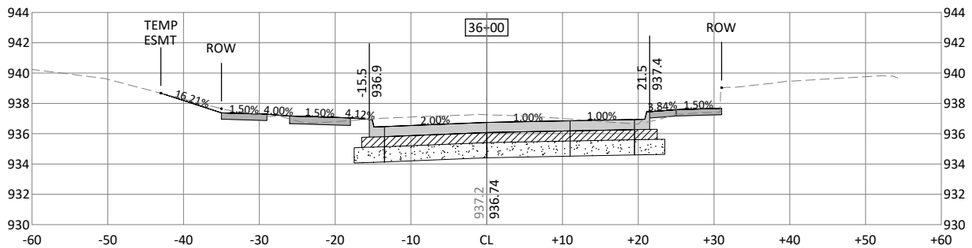

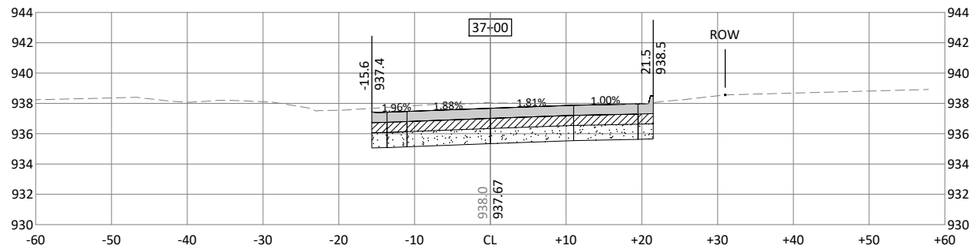

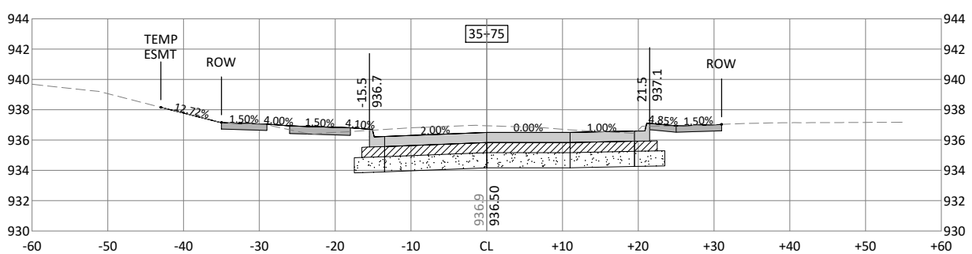

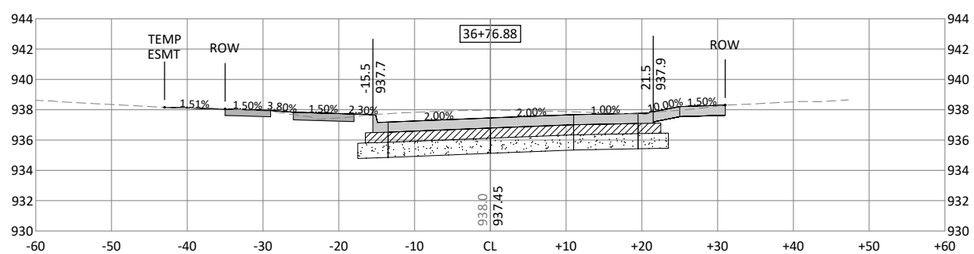

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MARSHALLTOWN, IOWA
STATE STREET RECONSTRUCTION
CROSS SECTIONS - STATE STREET

SHEET
W.14

Joel Greer, Mayor
Jessica Kinser, Administrator
Heather Thomas, Public Works
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

STATE STREET RECONSTRUCTION

PROJECT NO. STR-21004

PREPARED BY:

BOLTON & MENK

1519 BALTIMORE DR.

AMES, IA 50010

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Gregory Broussard Date: 4/20/2022

Name: Greg Broussard, P. E.

Iowa Reg. No. P21974

My license renewal date is December 31, 2023

Pages or sheets covered by this seal: ALL

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PART I – BIDDING AND CONTRACT DOCUMENTS

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OFFICIAL NOTICE OF HEARING AND LETTING

CITY OF MARSHALLTOWN

MARSHALLTOWN, IOWA

STATE STREET RECONSTRUCTION

PROJECT NO. STR-21004

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, PROPOSED FORM OF CONTRACT AND ESTIMATED COST FOR THE STATE STREET RECONSTRUCTION IN THE CITY OF MARSHALLTOWN, IOWA, AND THE TAKING OF BIDS FOR SUCH IMPROVEMENTS.

A public hearing will be held at 5:30 p.m. local time on the 9th day of May, 2022 in the Council Chambers, Second Floor, 10 West State Street, Marshalltown, Iowa, on the proposed plans, specifications, proposed form of contract, and the estimated cost of improvements proposed to be constructed under PROJECT NO. STR-21004, the STATE STREET RECONSTRUCTION is now on file in the office of the City Clerk and at said hearing any interested person may appear and file objection thereto or to the bidding process.

Sealed proposals based upon the proposed plans, specifications, proposed form of contract, estimated costs of improvement, will be received at the City Clerk's Office located at 24 N. Center Street, Marshalltown, IA until 10:00 a.m. local time, on the 17th day of May, 2022 for the construction of the STATE STREET RECONSTRUCTION as described in the plans and specifications for Project No. STR-21004, and which will be opened, read, and tabulated by the City Engineer or his designate at that time, will be acted upon by the City Council of said City at a meeting to be held in the Council Chambers on the 23rd day of May, 2022 or at such later time and place as may then be fixed.

The proposed work will involve furnishing the labor, equipment, and materials necessary for constructing the STATE STREET RECONSTRUCTION in Marshalltown, Iowa as shown in the plans and specifications for PROJECT NO. STR-21004 the STATE STREET RECONSTRUCTION

The estimated quantities of materials and labor to be furnished in the construction of said improvements and on which bids will be received are as follows:

ESTIMATED PROJECT QUANTITIES				
BASE BID ITEMS				
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL EST. QUANT.
1	2010-108-C-0	CLEARING AND GRUBBING	LS	1
2	2010-108-D-2	AMENDED PLANTING SOIL	CY	83
3	2010-108-D-3	TOPSOIL, OFF-SITE	CY	352
4	2010-108-D-4	STRUCTURAL SOIL	CY	400
5	2010-108-E-0	EXCAVATION, CLASS 13	CY	5,295

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6	2010-108-G-0	SUBGRADE PREPARATION, 12 INCH	SY	14,033
7	2010-108-H-0	SUBGRADE TREATMENT, CEMENT STABILIZATION	TON	122
8	2010-108-H-0	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	14,033
9	2010-108-J-0	SUBBASE, MODIFIED, 4 INCH	SY	9,982
10	2010-108-J-0	SUBBASE, MODIFIED, 6 INCH	SY	1,181
11	2010-108-J-0	SUBBASE, MODIFIED, 8 INCH	SY	14,033
12	2010-108-I-0	SUBBASE, TEMPORARY GRANULAR MATERIAL	TON	200
13	2010-108-J-1	REMOVAL OF STRUCTURE, LIGHT POLE FOOTINGS	EA	8
14	2010-108-M-1	COMPACTION TESTING	LS	1
15	2010-108-X-X	EXPLORATORY EXCAVATION	HR	20
16	3010-108-C-0	TRENCH FOUNDATION	TON	200
17	3010-108-D-0	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	400
18	3010-108-F-0	TRENCH COMPACTION TESTING	LS	1
19	3010-201-X-0	DISPOSAL OF CONTAMINATED SOIL	TONS	2,084
20	3010-201-X-0	DISPOSAL OF CONTAMINATED GROUNDWATER	GAL	2,000
21	4010-108-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, SDR 26, 8 INCH	LF	2,772
22	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 6 INCH	EA	24
23	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 8 INCH	EA	1
24	4010-108-F-0	SANITARY SEWER SERVICE REPLACEMENT, 10 INCH	EA	2
25	4010-108-I-0	SANITARY SEWER CLEANOUT	EA	1
26	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 6 INCH	LF	105
27	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	54
28	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	970
29	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	156
30	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 24 INCH	LF	818
31	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 30 INCH	LF	521
32	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 36 INCH	LF	292
33	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 36 INCH EQUIVALENT	LF	368
34	4020-108-A-1	STORM SEWER, TRENCHED, RCAP, 42 INCH EQUIVALENT	LF	427
35	4020-108-C-0	LINEAR TRENCH DRAIN	LF	9
36	4020-108-D-0	REMOVAL OF STORM SEWER, RCP, 36 INCH OR LESS	LF	3,051
37	4020-108-G-0	STORM SEWER ABANDONMENT, FILL AND PLUG	LF	106
38	4040-108-A-0	SUBDRAIN, PVC, 6 INCH	LF	2,519
39	4040-108-C-0	SUBDRAIN CLEANOUT, TYPE A-1, 6 INCH	EA	7
40	4040-108-D-0	SUBDRAIN OUTLETS AND CONNECTIONS	EA	29

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41	4050-108-G-3	BYPASS PUMPING	LS	1
42	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 4 INCH	LF	12
43	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 6 INCH	LF	604
44	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 10 INCH	LF	140
45	5010-108-A-1	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 12 INCH	LF	2,778
46	5010-108-C-2	FITTING, DUCTILE IRON,	LB	4,146
47	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3/4 INCH	LF	281
48	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 INCH	LF	89
49	5010-108-E-1	WATER SERVICE PIPE, COPPER, 1 1/4 INCH	LF	73
50	5010-108-E-1	WATER SERVICE PIPE, COPPER, 2 INCH	LF	33
51	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3 INCH	LF	32
52	5010-108-E-1	WATER SERVICE PIPE, COPPER, 4 INCH FIRE PROTECTION	LF	19
53	5010-108-E-1	WATER SERVICE PIPE, COPPER, 6 INCH FIRE PROTECTION	LF	157
54	5010-108-E-3	WATER SERVICE CURB STOP AND BOX	EA	35
55	5010-108-H-1	WATER MAIN REMOVAL	LF	6,187
56	5020-108-A-0	VALVE, GATE, 6 INCH	EA	10
57	5020-108-A-0	VALVE, GATE, 10 INCH	EA	2
58	5020-108-A-0	VALVE, GATE, 12 INCH	EA	11
59	5020-108-C-0	FIRE HYDRANT ASSEMBLY	EA	6
60	5020-108-E-0	FLUSHING DEVICE (TEMPORARY BLOWOFF HYDRANT)	EA	20
61	5020-108-F-0	VALVE BOX ADJUSTMENT	EA	2
62	5020-108-G-0	VALVE BOX REPLACEMENT	EA	2
63	5020-108-I-0	FIRE HYDRANT ASSEMBLY REMOVAL	EA	6
64	5020-108-J-0	VALVE REMOVAL	EA	37
65	6010-108-A-0	SANITARY MANHOLE, SW-301, 48 INCH	EA	10
66	6010-108-A-0	STORM MANHOLE, SW-401, 48 INCH	EA	3
67	6010-108-A-0	STORM MANHOLE, SW-401, 60 INCH	EA	2
68	6010-108-A-0	STORM MANHOLE, SW-401, 72 INCH	EA	3
69	6010-108-A-0	STORM MANHOLE, SW-402, 6'X6'	EA	3
70	6010-108-B-0	INTAKE, SW-501	EA	2
71	6010-108-B-0	INTAKE, SW-505	EA	10
72	6010-108-B-0	INTAKE, SW-507	EA	9
73	6010-108-B-0	INTAKE, SW-509	EA	14
74	6010-108-B-0	INTAKE, SW-510, MODIFIED	EA	12
75	6010-108-B-0	INTAKE, SW-541	EA	4
76	6010-108-B-0	INTAKE, SW-512	EA	1
77	6010-108-E-0	MANHOLE ADJUSTMENT, MINOR	EA	3

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78	6010-108-F-0	MANHOLE ADJUSTMENT, MAJOR	EA	3
79	6010-108-G-0	CONNECTION TO EXISTING MANHOLE	EA	1
80	6010-108-H-0	REMOVE MANHOLE	EA	21
81	6010-108-H-0	REMOVE INTAKE	EA	25
82	7010-108-A-0	PAVEMENT, PCC, 8 INCH	SY	12,650
83	7010-108-E-0	CURB AND GUTTER, PCC, 6 INCH	LF	340
84	7010-108-F-0	BEAM CURB	LF	22
85	7010-108-I-0	PCC PAVEMENT SAMPLES AND TESTING	LS	1
86	7020-108-B-0	PAVEMENT, HMA, 5"	SY	60
87	7030-108-A-0	REMOVAL OF SIDEWALK	SY	4,411
88	7030-108-A-0	REMOVAL OF DRIVEWAY	SY	1,965
89	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 5 INCH	SY	1,788
90	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 6 INCH	SY	286
91	7030-108-C-0	CYCLE TRACK, INTEGRAL COLORED PCC, 8 INCH	SY	54
92	7030-108-C-0	CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6 INCH	SY	15
93	7030-108-E-0	SIDEWALK, PCC, 5 INCH	SY	5,957
94	7030-108-E-0	SIDEWALK, PCC, 6 INCH	SY	661
95	7030-108-F-0	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE	SF	4,920
96	7030-108-G-0	DETECTABLE WARNING	SF	919
97	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6 INCH	SY	923
98	7030-108-H-1	DRIVEWAY, PAVED, PCC, 8 INCH	SY	204
99	7030-108-I-0	SIDEWALK ASSURANCE TESTING	LS	1
100	7030-108-I-0	CYCLE ASSURANCE TESTING	LS	1
101	7030-108-I-0	DRIVEWAY ASSURANCE TESTING	LS	1
102	7030-108-X-0	REINFORCED CONCRETE BAND, VARIABLE WIDTH	SF	1,041
103	7030-108-X-0	CONCRETE RAMP & STAIRS	SF	118
104	7040-108-H-0	PAVEMENT REMOVAL	SY	16,739
105	8010-108-A-0	TRAFFIC SIGNAL MODIFICATIONS	LS	1
106	8020-108-B-0	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	200
107	8020-108-G-0	PAINTED SYMBOLS AND LEGENDS	EA	33
108	8020-108-K-0	PAVEMENT MARKINGS REMOVED	STA	20
109	8020-108-L-0	SYMBOLS AND LEGENDS REMOVED	EA	6
110	8030-108-A-0	TEMPORARY TRAFFIC CONTROL	LS	1
111	8030-108-X-X	REMOVAL OF SIGN AND SIGN POST	EA	37
112	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (TYPE 1), FERTILIZING, AND MULCHING	AC	0
113	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING (LOW MOW), FERTILIZING, AND MULCHING	AC	0
114	9020-108-A-0	SOD	SQ	164
115	9030-108-B-0	PERENNIAL GROUND COVER (1 GAL)	EA	1,052

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116	9030-108-B-0	DECIDUOUS TREE	EA	42
117	9030-108-X-X	TREE GRATE AND FRAME	EA	27
118	9040-108-A-1	SWPPP PREPARATION	LS	1
119	9040-108-A-2	SWPPP MANAGEMENT	LS	1
120	9040-108-D-1	FILTER SOCK, 8 INCH	LF	4,000
121	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	LF	444
122	9040-108-O-1	STABILIZED CONSTRUCTION ENTRANCE	SY	600
123	9040-108-Q-2	EROSION CONTROL MULCHING, HYDROMULCHING	AC	1
124	9040-108-T-1	INLET PROTECTION DEVICE,	EA	52
125	9080-108-B-0	HANDRAIL, STEEL	LF	51
126	11010-108-A-1	CONSTRUCTION SURVEY	LS	1
127	11010-108-B-1	MONUMENT PRESERVATION AND REPLACEMENT	LS	1
128	11020-108-A-1	MOBILIZATION	LS	1
129	11030-108-A-0	MAINTENANCE OF POSTAL SERVICE	LS	1
130	11030-108-B-0	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1
131	11040-108-A-0	TEMPORARY PEDESTRIAN RESIDENTIAL ACCESS	SY	400
132	11050-108-A-0	CONCRETE WASHOUT	LS	1
133	12010-108-X-2	MONUMENT FOUNDATION	EA	1
134	12020-108-X-1	ROCK MULCH	TON	10
135	12030-108-X-1	ELECTRICAL CONDUIT, OPEN CUT, HDPE OR PVC, 2-INCH	LF	226
136	12030-108-X-2	JUNCTION BOX, ELECTRICAL, 12"X18"	EA	2
137	12030-108-X-3	GFCI RECEPTACLE, PEDESTAL	EA	6
138	12040-108-X-3	IRRIGATION SYSTEM ADJUSTMENTS	LS	1
BID ALTERNATE 1				
A1	12040-108-X-X	TEMPORARY WATER SERVICE (ADDITIVE)	LS	1
A2	12040-108-X-X	WATERMAIN FITTINGS (DEDUCT)	LB	-568
A3	12040-108-X-X	FLUSHING DEVICE - TEMPORARY BLOWOFF HYDRANT (DEDUCT)	EA	-12

All work is to be done in strict compliance with the Plans and Specifications for said PROJECT NO. STR-21004 as proposed by the City Engineer.

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Obtaining the Bidding Documents

Plans, specifications and proposed contract documents may be examined at the office of the City Engineer, Marshalltown, Iowa, and at the office of the City Clerk, Marshalltown, Iowa. Bidding Documents may be downloaded from the City of Marshalltown's web site upon registration at no cost. The documents may be downloaded at https://www.marshalltown-ia.gov/Bids.aspx.

A deposit of $150 per paper set of plans, specifications and proposed contract documents will be charged, all of which will be refunded if the paper documents are returned in reusable condition within 14 days of the Award of Contract. If all paper documents are not returned in reusable condition and within 14 days, the deposit will be forfeited.

Pre-bid Conference

A pre-bid conference will be held for the Project on May 10th, 2022 @10am in the Marshalltown Coliseum

Instructions to Bidders.

A Bid must be accompanied by Bid security made payable to Owner in an amount of ten (10) percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions or a certified check in an amount equal to ten percent (10%) of the total amount of the bid, drawn on and certified payable by a solvent bank to the City Treasurer of the City. Such Bid bond will be issued in the form included in the Bidding Documents.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

The City Council reserves the right to reject any and all bids and to waive technicalities and irregularities and all bids must remain effective for a period of 30 days of opening same.

This Notice to Bidders is hereby published by authority of resolution duly adopted by the Council of the City of Marshalltown on the 25th day of April, 2022.

Owner: City of Marshalltown

By: Alicia Hunter

Title: City Clerk

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INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—*DEFINED TERMS*

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—*BIDDING DOCUMENTS*

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner requires that Bidder register as a plan holder

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with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.06 Electronic Documents

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

C. After the Contract is awarded, the Owner will provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.

D. Electronic Documents that are available in native file format include:

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1. Plans in Microstation or Civil 3D formats.

E. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.

F. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.

G. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract

ARTICLE 3—*PRE-BID CONFERENCE*

3.01 A pre-bid conference will be conducted for this Project on May 10th 2022 @10am in the Marshalltown Coliseum

ARTICLE 4—*BID SECURITY*

4.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **ten (10)** percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions or a certified check in an amount equal to ten percent (10%) of the total amount of the bid, drawn on and certified payable by a solvent bank to the City Treasurer of the City. Such Bid bond will be issued in the form included in the Bidding Documents.

ARTICLE 5—*SUBSTITUTE AND "OR EQUAL" ITEMS*

5.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.

5.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the

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possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 6—*PREPARATION OF BID*

6.01 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

ARTICLE 7—*BIDS TO REMAIN SUBJECT TO ACCEPTANCE*

7.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

7.02 Should there be any reason why the contract cannot be awarded within the period of time stated in the Bid Form, the time may be extended by mutual agreement between the Owner and the apparent successful Bidder.

ARTICLE 8—*ENGINEER INFORMATION*

8.01 The Engineering firm is: Bolton & Menk, Inc

A. The Engineering firm’s contact person is: Greg Broussard

B. The firm’s address is:

1. 1519 Baltimore Drive, Ames, IA 50010
2. Phone (515) 233-6100
3. Email: ames@bolton-menk.com

ARTICLE 9—*EVALUATION OF BIDS AND AWARD OF CONTRACT*

9.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

9.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

9.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract

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Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

9.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

9.05 Evaluation of Bids

A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the base bid not including any option alternates.

9.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

9.07 Owner may conduct such investigations, as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

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BIDDING DOCUMENTS

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BID FORM FOR CONSTRUCTION CONTRACT

STATE STREET RECONSTRUCTION

PROJECT NO. STR21004

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—*OWNER AND BIDDER*

1.01 This Bid is submitted to: The City of Marshalltown, 24 N. Center Street, Marshalltown, IA 50158.

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—*ATTACHMENTS TO THIS BID*

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids; and

D. Bidders Status Form.

ARTICLE 3—*BASIS OF BID—UNIT PRICES*

3.01 Unit Price Bids

A. Bidder will perform the following Work at the indicated unit prices:

ITEM NO.	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
	BASE BID				
1	CLEARING AND GRUBBING	LS	1	$	$
2	AMENDED PLANTING SOIL	CY	83	$	$
3	TOPSOIL, OFF-SITE	CY	352	$	$
4	STRUCTURAL SOIL	CY	400	$	$
5	EXCAVATION, CLASS 13	CY	5295	$	$
6	SUBGRADE PREPARATION, 12 INCH	SY	14033	$	$
7	SUBGRADE TREATMENT, CEMENT STABILIZATION	TON	122	$	$
8	SUBGRADE TREATMENT, TRIAX GEO-GRID	SY	14033	$	$

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9	SUBBASE, MODIFIED, 4 INCH	SY	9982	$	$
10	SUBBASE, MODIFIED, 6 INCH	SY	1181	$	$
11	SUBBASE, MODIFIED, 8 INCH	SY	14033	$	$
12	SUBBASE, TEMPORARY GRANULAR MATERIAL	TON	200	$	$
13	REMOVAL OF STRUCTURE, LIGHT POLE FOOTINGS	EA	8	$	$
14	COMPACTION TESTING	LS	1	$	$
15	EXPLORATORY EXCAVATION	HR	20	$	$
16	TRENCH FOUNDATION	TON	200	$	$
17	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	400	$	$
18	TRENCH COMPACTION TESTING	LS	1	$	$
19	DISPOSAL OF CONTAMINATED SOIL	TONS	2084	$	$
20	DISPOSAL OF CONTAMINATED GROUNDWATER	GAL	2000	$	$
21	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, SDR 26, 8 INCH	LF	2772	$	$
22	SANITARY SEWER SERVICE REPLACEMENT, 6 INCH	EA	24	$	$
23	SANITARY SEWER SERVICE REPLACEMENT, 8 INCH	EA	1	$	$
24	SANITARY SEWER SERVICE REPLACEMENT, 10 INCH	EA	2	$	$
25	SANITARY SEWER CLEANOUT	EA	1	$	$
26	STORM SEWER, TRENCHED, PVC, 6 INCH	LF	105	$	$
27	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	54	$	$
28	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	970	$	$
29	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	156	$	$
30	STORM SEWER, TRENCHED, RCP, 24 INCH	LF	818	$	$
31	STORM SEWER, TRENCHED, RCP, 30 INCH	LF	521	$	$
32	STORM SEWER, TRENCHED, RCP, 36 INCH	LF	292	$	$
33	STORM SEWER, TRENCHED, RCAP, 36 INCH EQUIVALENT	LF	368	$	$
34	STORM SEWER, TRENCHED, RCAP, 42 INCH EQUIVALENT	LF	427	$	$
35	LINEAR TRENCH DRAIN	LF	9	$	$
36	REMOVAL OF STORM SEWER, RCP, 36 INCH OR LESS	LF	3051	$	$
37	STORM SEWER ABANDONMENT, FILL AND PLUG	LF	106	$	$
38	SUBDRAIN, PVC, 6 INCH	LF	2519	$	$
39	SUBDRAIN CLEANOUT, TYPE A-1, 6 INCH	EA	7	$	$
40	SUBDRAIN OUTLETS AND CONNECTIONS	EA	29	$	$
41	BYPASS PUMPING	LS	1	$	$
42	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 4 INCH	LF	12	$	$
43	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 6 INCH	LF	604	$	$
44	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 10 INCH	LF	140	$	$

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45	WATERMAIN, TRENCHED, DIP WITH NITRILE GASKETS, 12 INCH	LF	2778	$	$
46	FITTING, DUCTILE IRON,	LB	4146	$	$
47	WATER SERVICE PIPE, COPPER, 3/4 INCH	LF	281	$	$
48	WATER SERVICE PIPE, COPPER, 1 INCH	LF	89	$	$
49	WATER SERVICE PIPE, COPPER, 1 1/4 INCH	LF	73	$	$
50	WATER SERVICE PIPE, COPPER, 2 INCH	LF	33	$	$
51	WATER SERVICE PIPE, COPPER, 3 INCH	LF	32	$	$
52	WATER SERVICE PIPE, COPPER, 4 INCH FIRE PROTECTION	LF	19	$	$
53	WATER SERVICE PIPE, COPPER, 6 INCH FIRE PROTECTION	LF	157	$	$
54	WATER SERVICE CURB STOP AND BOX	EA	35	$	$
55	WATER MAIN REMOVAL	LF	6187	$	$
56	VALVE, GATE, 6 INCH	EA	10	$	$
57	VALVE, GATE, 10 INCH	EA	2	$	$
58	VALVE, GATE, 12 INCH	EA	11	$	$
59	FIRE HYDRANT ASSEMBLY	EA	6	$	$
60	FLUSHING DEVICE (TEMPORARY BLOWOFF HYDRANT)	EA	20	$	$
61	VALVE BOX ADJUSTMENT	EA	2	$	$
62	VALVE BOX REPLACEMENT	EA	2	$	$
63	FIRE HYDRANT ASSEMBLY REMOVAL	EA	6	$	$
64	VALVE REMOVAL	EA	37	$	$
65	SANITARY MANHOLE, SW-301, 48 INCH	EA	10	$	$
66	STORM MANHOLE, SW-401, 48 INCH	EA	3	$	$
67	STORM MANHOLE, SW-401, 60 INCH	EA	2	$	$
68	STORM MANHOLE, SW-401, 72 INCH	EA	3	$	$
69	STORM MANHOLE, SW-402, 6'X6'	EA	3	$	$
70	INTAKE, SW-501	EA	2	$	$
71	INTAKE, SW-505	EA	10	$	$
72	INTAKE, SW-507	EA	9	$	$
73	INTAKE, SW-509	EA	14	$	$
74	INTAKE, SW-510, MODIFIED	EA	12	$	$
75	INTAKE, SW-541	EA	4	$	$
76	INTAKE, SW-512	EA	1	$	$
77	MANHOLE ADJUSTMENT, MINOR	EA	3	$	$
78	MANHOLE ADJUSTMENT, MAJOR	EA	3	$	$
79	CONNECTION TO EXISTING MANHOLE	EA	1	$	$
80	REMOVE MANHOLE	EA	21	$	$
81	REMOVE INTAKE	EA	25	$	$
82	PAVEMENT, PCC, 8 INCH	SY	12650	$	$

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83	CURB AND GUTTER, PCC, 6 INCH	LF	340	$	$
84	BEAM CURB	LF	22	$	$
85	PCC PAVEMENT SAMPLES AND TESTING	LS	1	$	$
86	PAVEMENT, HMA, 5"	SY	60	$	$
87	REMOVAL OF SIDEWALK	SY	4411	$	$
88	REMOVAL OF DRIVEWAY	SY	1965	$	$
89	CYCLE TRACK, INTEGRAL COLORED PCC, 5 INCH	SY	1788	$	$
90	CYCLE TRACK, INTEGRAL COLORED PCC, 6 INCH	SY	286	$	$
91	CYCLE TRACK, INTEGRAL COLORED PCC, 8 INCH	SY	54	$	$
92	CYCLE TRACK, STAMPED INTEGRAL COLORED PCC, 6 INCH	SY	15	$	$
93	SIDEWALK, PCC, 5 INCH	SY	5957	$	$
94	SIDEWALK, PCC, 6 INCH	SY	661	$	$
95	CONCRETE UNIT PAVERS WITH SAND SETTING BED & PCC SUBBASE	SF	4920	$	$
96	DETECTABLE WARNING	SF	919	$	$
97	DRIVEWAY, PAVED, PCC, 6 INCH	SY	923	$	$
98	DRIVEWAY, PAVED, PCC, 8 INCH	SY	204	$	$
99	SIDEWALK ASSURANCE TESTING	LS	1	$	$
100	CYCLE ASSURANCE TESTING	LS	1	$	$
101	DRIVEWAY ASSURANCE TESTING	LS	1	$	$
102	REINFORCED CONCRETE BAND, VARIABLE WIDTH	SF	1041	$	$
103	CONCRETE RAMP & STAIRS	SF	118	$	$
104	PAVEMENT REMOVAL	SY	16739	$	$
105	TRAFFIC SIGNAL MODIFICATIONS	LS	1	$	$
106	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBORNE	STA	200	$	$
107	PAINTED SYMBOLS AND LEGENDS	EA	33	$	$
108	PAVEMENT MARKINGS REMOVED	STA	20	$	$
109	SYMBOLS AND LEGENDS REMOVED	EA	6	$	$
110	TEMPORARY TRAFFIC CONTROL	LS	1	$	$
111	REMOVAL OF SIGN AND SIGN POST	EA	37	$	$
112	CONVENTIONAL SEEDING, SEEDING (TYPE 1), FERTILIZING, AND MULCHING	AC	0.01	$	$
113	CONVENTIONAL SEEDING, SEEDING (LOW MOW), FERTILIZING, AND MULCHING	AC	0.05	$	$
114	SOD	SQ	164	$	$
115	PERENNIAL GROUND COVER (1 GAL)	EA	1052	$	$
116	DECIDUOUS TREE	EA	42	$	$
117	TREE GRATE AND FRAME	EA	27	$	$
118	SWPPP PREPARATION	LS	1	$	$
119	SWPPP MANAGEMENT	LS	1	$	$

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120	FILTER SOCK, 8 INCH	LF	4000	$	$
121	SILT FENCE OR SILT FENCE DITCH CHECK	LF	444	$	$
122	STABILIZED CONSTRUCTION ENTRANCE	SY	600	$	$
123	EROSION CONTROL MULCHING, HYDROMULCHING	AC	1	$	$
124	INLET PROTECTION DEVICE,	EA	52	$	$
125	HANDRAIL, STEEL	LF	51	$	$
126	CONSTRUCTION SURVEY	LS	1	$	$
127	MONUMENT PRESERVATION AND REPLACEMENT	LS	1	$	$
128	MOBILIZATION	LS	1	$	$
129	MAINTENANCE OF POSTAL SERVICE	LS	1	$	$
130	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1	$	$
131	TEMPORARY PEDESTRIAN RESIDENTIAL ACCESS	SY	400	$	$
132	CONCRETE WASHOUT	LS	1	$	$
133	MONUMENT FOUNDATION	EA	1	$	$
134	ROCK MULCH	TON	10	$	$
135	ELECTRICAL CONDUIT, OPEN CUT, HDPE OR PVC, 2-INCH	LF	226	$	$
136	JUNCTION BOX, ELECTRICAL, 12"X18"	EA	2	$	$
137	GFCI RECEPTACLE, PEDESTAL	EA	6	$	$
138	IRRIGATION SYSTEM ADJUSTMENTS	LS	1	$	$
				TOTAL BASE BID AMOUNT:	$

	ALTERNATE A				
A1	TEMPORARY WATER SERVICE (ADDITIVE)	LS	1	$	$
A2	WATERMAIN FITTINGS (DEDUCT)	LB	-568	$	$
A3	FLUSHING DEVICE - TEMPORARY BLOWOFF HYDRANT (DEDUCT)	EA	-12	$	$
				TOTAL ALTERNATE A BID AMOUNT:	$

3.02 Bidder acknowledges that:

A. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

B. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents

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ARTICLE 4—*TIME OF COMPLETION*

4.01 Bd If work begins in 2022, the date by which Substantial Completion must be achieved is August 25th 2023, and the date by which readiness for final payment must be achieved is October 20th 2023

4.02 If work begins in 2023, the date by which Substantial Completion must be achieved is August 31st 2024, and the date by which readiness for final payment must be achieved is October 11th 2024

ARTICLE 5—*LIQUIDATED DAMAGES*

5.01 Substantial Completion: Contractor shall pay Owner $2,000 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

5.02 Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $2,000 for each day that expires after such time until the Work is completed and ready for final payment.

5.03 Milestones: Contractor shall pay Owner $1,000 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.

5.04 Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

ARTICLE 6—*BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA*

6.01 Bid Acceptance Period

A. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

6.02 Instructions to Bidders

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

6.03 Receipt of Addenda

A. Bidder hereby acknowledges receipt of the following Addenda: **[Add rows as needed. Bidder is to complete table.]**

Addendum Number	Addendum Date

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ARTICLE 7—*BIDDER hereby submits this Bid as set forth above:*

Bidder:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

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BID BOND (PENAL SUM FORM)

Bidder Name: **[Full formal name of Bidder]** Address *(principal place of business)*: **[Address of Bidder's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **City of Marshalltown** Address *(principal place of business)*: **24 N. Center Street** **Marshalltown, IA 50158**	**Bid** Project *(name and location)*: **State Street Reconstruction** **City of Marshalltown** Bid Due Date: **5/17/2022**
Bond Penal Sum: **[Amount]** Date of Bond: **[Date]**	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	

Bidder	Surety
(Full formal name of Bidder)	*(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

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1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
    3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
    3.2. All Bids are rejected by Owner, or
    3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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BIDDER STATUS FORM

To be completed by all bidders — Part A

Please answer "Yes" or "No" for each of the following:

☐ Yes ☐ No My company is authorized to transact business in Iowa.

(To help you determine if your company is authorized, please review the worksheet on the next page).

☐ Yes ☐ No My company has an office to transact business in Iowa.

☐ Yes ☐ No My company's office in Iowa is suitable for more than receiving mail, telephone calls, and e-mail.

☐ Yes ☐ No My company has been conducting business in Iowa for at least 3 years prior to the first request for bids on this project.

☐ Yes ☐ No My company is not a subsidiary of another business entity or my company is a subsidiary of another business entity that would qualify as a resident bidder in Iowa.

If you answered "Yes" for each question above, your company qualifies as a resident bidder. Please complete Parts B and D of this form.

If you answered "No" to one or more questions above, your company is a nonresident bidder. Please complete Parts C and D of this form.

To be completed by resident bidders — Part B

My company has maintained offices in Iowa during the past 3 years at the following addresses:

Dates:_____/_____/_____to_____/_____/_____Address: _____

City, State, Zip: _____

Dates:_____/_____/_____to_____/_____/_____Address: _____

City, State, Zip: _____

Dates:_____/_____/_____to_____/_____/_____Address: _____

You may attach additional sheet(s) if needed. City, State, Zip: _____

To be completed by non-resident bidders — Part C

1. Name of home state or foreign country reported to the Iowa Secretary of State:

_____

2. Does your company's home state or foreign country offer preferences to resident bidders, resident labor force preferences or any other type of preference to bidders or laborers? g Yes g No

3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.

_____

_____

_____*You may attach additional sheet(s) if needed.*

To be completed by all bidders — Part D

I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be a reason to reject my bid.

Firm Name: _____

Signature:_____ Date: _____

You must submit the completed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156. This form has been approved by the Iowa Labor Commissioner.

Worksheet: Authorization to Transact Business

This worksheet may be used to help complete Part A of the Resident Bidder Status form. If at least one of the following describes your business, you are authorized to transact business in Iowa.

☐ Yes ☐ No My business is currently registered as a contractor with the Iowa Division of Labor.

☐ Yes ☐ No My business is a sole proprietorship and I am an Iowa resident for Iowa income tax purposes.

☐ Yes ☐ No My business is a general partnership or joint venture. More than 50 percent of the general partners or joint venture parties are residents of Iowa for Iowa income tax purposes.

☐ Yes ☐ No My business is an active corporation with the Iowa Secretary of State and has paid all fees required by the Secretary of State, has filed its most recent biennial report, and has not filed articles of dissolution.

☐ Yes ☐ No My business is a corporation whose articles of incorporation are filed in a state other than Iowa, the corporation has received a certificate of authority from the Iowa secretary of state, has filed its most recent biennial report with the secretary of state, and has neither received a certificate of withdrawal from the secretary of state nor had its authority revoked.

☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in this state and the statement has not been canceled.

☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in a state other than Iowa, has filed a statement of foreign qualification in Iowa and a statement of cancellation has not been filed.

☐ Yes ☐ No My business is a limited partnership or limited liability limited partnership which has filed a certificate of limited partnership in this state, and has not filed a statement of termination.

☐ Yes ☐ No My business is a limited partnership or a limited liability limited partnership whose certificate of limited partnership is filed in a state other than Iowa, the limited partnership or limited liability limited partnership has received notification from the Iowa secretary of state that the application for certificate of authority has been approved and no notice of cancellation has been filed by the limited partnership or the limited liability limited partnership.

☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in Iowa and has not filed a statement of termination.

☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in a state other than Iowa, has received a certificate of authority to transact business in Iowa and the certificate has not been revoked or canceled.

CONTRACT DOCUMENTS

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NOTICE OF AWARD

Date of Issuance:			
Owner:	City of Marshalltown	Owner's Project No.:	STR-21004
Engineer:	Bolton & Menk	Engineer's Project No.:	0A1.125646
Project:	State Street Reconstruction		
Contract Name:	State Street Reconstruction		
Bidder:			
Bidder's Address:			

You are notified that Owner has accepted your Bid dated **5/17/2022** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

State Street Reconstruction

The Contract Price of the awarded Contract is $**[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

5 unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **5** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): **[Describe other conditions that require Successful Bidder's compliance]**

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents.

Owner:	**City of Marshalltown, Iowa**
By *(signature)*:	
Name *(printed)*:	Joel Greer
Title:	Mayor

Copy: Engineer

EJCDC® C 510, Notice of Award.
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AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between the City of Marshalltown ("Owner") and [name of contracting entity] ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: [Brief description of Work]

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **State Street Reconstruction**

ARTICLE 3 – ENGINEER

3.01 The Owner has retained **Bolton & Menk** ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by [insert "Engineer" if an entity has been identified as such in Paragraph 3.01, and that same entity prepared the design; or indicate by name the entity other than Engineer that prepared the design].

ARTICLE 4 – CONTRACT TIMES

4.01 Contract Times: Dates

A. If work begins in 2022 all Work will be substantially complete on or before **August 25st 2023**, and completed and ready for final payment on or before **October 20th 2023**

B. If work begins in 2023 all Work will be substantially complete on or before **August 31st 2024**, and completed and ready for final payment on or before **October 11th 2024**.

4.02 Milestones

A. Parts of the Work must be substantially completed on or before the following Milestone(s):

1. Milestone 1 – If construction starts in 2022, Phase 1A shall be substantially completed by October 28, 2022. Phase 1B or phase 2 cannot be started in 2022 unless they can be substantially completed by October 28, 2022.

2. Milestone 2– If construction starts in 2023, Phase 1A & 1B shall be substantially completed by October 13, 2023. Phase 2 cannot be started in 2023 unless it can be substantially completed by October 27, 2023.

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4.03 Liquidated Damages

A. Substantial Completion: Contractor shall pay Owner $2,000 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

B. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $2,000 for each day that expires after such time until the Work is completed and ready for final payment.

C. Milestones: Contractor shall pay Owner $1,000 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.

4.04 Special Damages

A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.01 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – CONTRACT DOCUMENTS

6.01 Contents

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. Bonds:
    a. Performance bond (together with power of attorney).

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b. Payment bond (together with power of attorney).

3. General Conditions.

4. Supplementary Conditions.

5. Specifications as listed in the table of contents of the project manual (copy of list attached).

6. Drawings (not attached but incorporated by reference) consisting of **166** sheets with each sheet bearing the following general title: **State Street Reconstruction**.

7. Addenda (numbers [number] to [number], inclusive).

8. Exhibits to this Agreement (enumerated as follows):

9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

   a. Notice to Proceed.

   b. Work Change Directives.

   c. Change Orders.

   d. Field Orders.

   e. Warranty Bond.

B. The Contract Documents listed in Paragraph 6.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 6.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

6.02 General Conditions

A. Owner stipulates that if the General Conditions that are made a part of this Contract are the SUDAS Standard Specifications, General Provisions and Covenants, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor in the Supplementary Conditions.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on **[indicate date on which Contract becomes effective]** (which is the Effective Date of the Contract).

Owner:	Contractor:
City of Marshalltown	
(typed or printed name of organization)	*(typed or printed name of organization)*
By:	By:
(individual's signature)	*(individual's signature)*
Date:	Date:
(date signed)	*(date signed)*
Name: Joel Greer	Name:
(typed or printed)	*(typed or printed)*
Title: Mayor	Title:
(typed or printed)	*(typed or printed)*
	*(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest:	Attest:
(individual's signature)	*(individual's signature)*
Title: Alicia Hunter	Title:
(typed or printed)	*(typed or printed)*
Address for giving notices:	Address for giving notices:
24 N. Center Street	
Marshalltown, Iowa	
50158	
Designated Representative:	Designated Representative:
Name: Heather Thomas, P.E.	Name:
(typed or printed)	*(typed or printed)*
Title: Public Works Director	Title:
(typed or printed)	*(typed or printed)*
Address:	Address:
24 N. Center Street	
Marshalltown, Iowa	
50158	
Phone: (641) 754-5734	Phone:
Email: hthomas@marshalltown-ia.gov	Email:
*(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*	License No.: *(where applicable)*
	State:

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PERFORMANCE BOND

Contractor	**Surety**
Name: **[Full formal name of Contractor]**	Name: **[Full formal name of Surety]**
Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner	**Contract**
Name: **City of Marshalltown**	Description *(name and location)*: **State Street Reconstruction City of Marshalltown**
Mailing address *(principal place of business)*: **24 North Center Street Marshalltown, IA 50158**	Contract Price: **[Amount from Contract]**
	Effective Date of Contract: **[Date from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
    5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

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12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **"None"**

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PAYMENT BOND

Contractor Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **City of Marshalltown** Mailing address *(principal place of business)*: **24 North Center Street** **Marshalltown, IA 50158**	**Contract** Description *(name and location)*: **State Street Reconstruction** **City of Marshalltown** Contract Price: **[Amount, from Contract]** Effective Date of Contract: **[Date, from Contract]**
Bond Bond Amount: **[Amount]** Date of Bond: **[Date]** *(Date of Bond cannot be earlier than Effective Date of Contract)* Modifications to this Bond form: ☐ None ☐ See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal _____ *(Full formal name of Contractor)* By: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____ Attest: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____	Surety _____ *(Full formal name of Surety) (corporate seal)* By: _____ *(Signature)(Attach Power of Attorney)* Name: _____ *(Printed or typed)* Title: _____ Attest: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____
Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.	

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
    5.1. Claimants who do not have a direct contract with the Contractor
        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
    7.2. Pay or arrange for payment of any undisputed amounts.
    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its

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obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

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16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

16.1.4. A brief description of the labor, materials, or equipment furnished;

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **"None"**

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WARRANTY BOND

Contractor Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Insert address of Surety's principal place of business]**
Owner Name: **City of Marshalltown** Address *(principal place of business)*: **24 North Center Street** **Marshalltown, IA 50158**	**Construction Contract** Description *(name and location)*: **State Street Reconstruction** **City of Marshalltown** Contract Price: **[Amount from Contract]** Effective Date of Contract: **[Date from Contract]** Contract's Date of Substantial Completion: **[Date from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

Bond Period: Commencing after Substantial completion of the work under the construction contract, and continuing for four (4) years after substantial completion.

Modifications to this Bond form:
☐ None ☒ See Paragraph 9

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth herein, do each cause this Warranty Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract's Correction Period Obligations. The Construction Contract is incorporated herein by reference.
2. If the Contractor performs the Correction Period Obligations, the Surety and the Contractor shall have no obligation under this Warranty Bond.
3. If Owner gives written notice to Contractor and Surety during the Bond Period of Contractor's obligation under the Correction Period Obligations, and Contractor does not fulfill such obligation, then Surety shall be responsible for fulfillment of such Correction Period Obligations. Surety shall either fulfill the Correction Period Obligations itself, through its agents or contractors, or, in the alternative, Surety may waive the right to fulfill the Correction Period Obligations itself, and reimburse the Owner for all resulting costs incurred by Owner in performing Contractor's Correction Period Obligations, including but not limited to correction, removal, replacement, and repair costs.
4. The Surety's liability is limited to the amount of this Warranty Bond. Renewal or continuation of the Warranty Bond will not modify such amount, unless expressly agreed to by Surety in writing.
5. The Surety shall have no liability under this Warranty Bond for obligations of the Contractor that are unrelated to the Construction Contract. No right of action will accrue on this Warranty Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
6. Any proceeding, legal or equitable, under this Warranty Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and must be instituted within two years after the Surety refuses or fails to perform its obligations under this Warranty Bond.
7. Written notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown in this Warranty Bond.
8. Definitions

    8.1. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page of this Warranty Bond, including all Contract Documents and changes made to the agreement and the Contract Documents.

    8.2. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

    8.3. *Correction Period Obligations*—The duties, responsibilities, commitments, and obligations of the Contractor with respect to correction or replacement of defective Work, as set forth in the SUDAS General Conditions, as duly modified.

    8.4. *Substantial Completion*—As defined in the Construction Contract.

    8.5. *Work*—As defined in the Construction Contract.
9. Modifications to this Bond are as follows: **100 percent** of the final contract price for the first two (2) years and **25 percent** of the final Contract Price for the last two (2) years. The warranty bond period will extend to a date **four (4) year**s after Substantial Completion of the Work.

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NOTICE TO PROCEED

Owner:	City of Marshalltown	Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract Name:			
Effective Date of Contract:			

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Section 1080,1.02 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement: **(Choose statement based on start year)**

If work begins in 2022, the date by which Substantial Completion must be achieved is **August 25th 2023**, and the date by which readiness for final payment must be achieved is **October 20th 2023**

If work begins in 2023, the date by which Substantial Completion must be achieved is **August 31st 2024**, and the date by which readiness for final payment must be achieved is **October 11th 2024**

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner:	**City of Marshalltown**
By *(signature)*:	
Name *(printed)*:	
Title:	
Date Issued:	

Copy: Engineer

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PART II – CONTRACT CONDITIONS

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MARSHALLTOWN SUPPLEMENTARY SPECIFICATIONS TO AMEND THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS)

These Supplementary Specifications amend or supplement the Statewide Urban Design and Standards (SUDAS) and other provisions of the Contract Documents. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Specifications will have the meanings indicated in SUDAS. The Supplementary Specifications are provided in the same order and format as the SUDAS documents.

The following documents replace the City of Marshalltown's:

Standard Specifications for Sanitary Sewer Construction

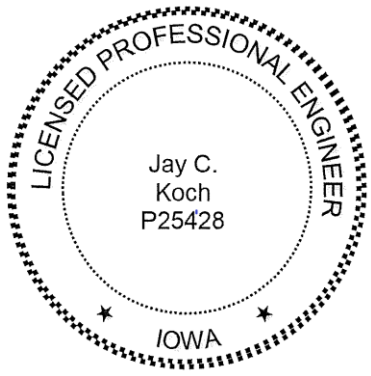
Standard Specifications for Sidewalk and Driveway Construction

Standard Specifications for Storm Sewer Construction

Standard Specifications for Street and Roadway Construction

Standard Specifications for Street Excavation and Pavement Restoration Construction

Standard Specifications for Subdivision Development



`I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Jay C. Koch Date: 03/03/2021

License number P25428

Printed or typed name: Jay C. Koch, P.E.

My license renewal date is 12/31/2022

Pages or sheets covered by this seal: All

PREPARED BY:

PUBLIC WORKS/ENGINEERING DEPARTMENT

CITY OF MARSHALLTOWN

24 N. CENTER STREET

MARSHALLTOWN, IOWA 50158

SUPPLEMENTAL SPECIFICATIONS.

These Supplementary Conditions amend or supplement the General Supplemental Specifications approved by the Board of Directors for the Iowa SUDAS Corporation subsequent to publication of the latest edition of the SUDAS Standard Specifications. They involve changes in the SUDAS Standard Specifications and apply only when specified in the contract documents. The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

Specifications adopted by a Jurisdiction that involve changes to the SUDAS Standard Specifications are as follow:

Section 1040 – Scope of Work

1.06 INCREASE OR DECREASE OF WORK

Add the following new paragraphs immediately after Paragraph C:

D. Adjustments in Unit Price

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
    a. the extended price of a particular item of Unit Price Work amounts to five (5) percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
    b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

Section 1070 – Legal Relations and Responsibility to the Public

3.01 PERFORMANCE, PAYMENT, AND MAINTENANCE BOND

Add the following subparagraphs to Paragraph C:

1. After Substantial Completion, Contractor shall furnish a warranty bond issued in the form of EJCDC® C-612, Warranty Bond (2018). The warranty bond must be in a bond amount of **100 percent** of the final contract price for the first two (2) years and **25 percent** of the final Contract Price for the last two (2) years. The warranty bond period will extend to a date **four (4) year**s after

Substantial Completion of the Work.

3. The warranty bond must be issued by the same surety that issues the performance bond required under Paragraph 3.01 of the General Conditions.

Section 1080 – Prosecution and Progress

1.07 WORK ON SUNDAYS OR LEGAL HOLIDAYS

Add the following new subparagraphs immediately after Paragraph A:

1. No Work shall be done between 6:00pm and 7:00am without permission of Owner. However, emergency work may be done without prior permission.
2. Night Work may be undertaken as a regular procedure with the permission of Owner; such permission, however, may be revoked at any time by Owner if Contractor fails to maintain adequate equipment and supervision for the proper prosecution and control of the Work at night.
3. Owner's legal holidays are: New Year's Day, Good Friday, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

1.09 EXTENSION OF TIME

Amend Paragraph 1.09.B.1 by adding the following subparagraphs:

a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.

b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:

   1) Every workday on which one or more of the following conditions exist will be considered a "bad weather day":

      i) Total precipitation (as rain equivalent) occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds 1.67 inches of precipitation (as rain equivalent, based on the snow/rain conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this SC-4.05.C by reference.

      ii) Ambient outdoor air temperature at 11:00 a.m. is equal to or less than the following low temperature threshold: 35 degrees Fahrenheit; or, at 3:00 p.m. the ambient outdoor temperature is equal to or greater than the following high temperature threshold:

85 degrees Fahrenheit.

2) Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by National Weather Service weather monitoring station at Marshalltown, Marshalltown Municipal Airport (KMIW).

3) Contractor shall anticipate the number of foreseeable bad weather days per month indicated in the table in Exhibit B—Foreseeable Bad Weather Days.

4) In each month, every bad weather day exceeding the number of foreseeable bad weather days established in the table in Exhibit A—Foreseeable Bad Weather Days will be considered as "abnormal weather conditions." The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor's then-current Progress Schedule's critical path for the Project.

EXHIBIT A— FORESEEABLE BAD WEATHER DAYS

Month	Number of Foreseeable Bad Weather Days in Month Based on Precipitation as Rain Equivalent (inches) ≥1.67"	Ambient Outdoor Air Temperature (degrees F)	
		Number of Foreseeable Bad Weather Days in Month Based on Low Temperature (at 11:00 a.m.) ≤35°F	Number of Foreseeable Bad Weather Days in Month Based on High Temperature (at 3:00 p.m.) ≥85°F
January	0	31	0
February	0	29	0
March	7	31	0
April	12	12	0
May	20	0	0
June	22	0	0
July	22	0	0
August	20	0	0
September	17	0	0
October	13	6	0
November	8	30	0
December	0	31	0

Notes:
1. Two inches of sleet equal one inch of rain. Five inches of wet, heavy snow equal one inch of rain. Fifteen inches of "dry" powder snow equals one inch of rain.

Section 1090 - Measurement and Payment

1.05 PROGRESS PAYMENTS

Add the following new Paragraph D:

D. Contractor's Application for Progress Payment shall be prepared on the EJCDC C-620 form provided in the Contract Documents.

SUPPLEMENTAL DIVISION 2 - EARTHWORK

DIVISION 2010 – EARTHWORK, SUBGRADE, AND SUBBASE SPECIAL PROVISIONS

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

I. Subbase:

1. Measurement: The area of the proposed pavement under which subbase is provided, ~~plus 2 feet on each side~~, will be measured in square yards or in tons.
2. Payment: Payment will be at the unit price per square yard or per 0.1 tons.
3. Includes: Work includes, but is not limited to, furnishing, placing, compacting, and trimming to the proper grade.

PART 2 - MATERIALS

2.04 FOUNDATION MATERIALS

5. Geogrid:

a. (DELETE) ~~Rectangular or Square:~~ ~~Use an integrally formed grid structure manufactured of a stress-resistant polypropylene material. Use Type 1 geogrid, unless Type 2 is specified. Meet the following minimum physical properties:~~

~~Table 2010.02: Geogrid (Rectangular or Square)~~

~~Property~~	~~Test Method~~	~~Units~~	~~Type 1[1]~~	~~Type 2~~
~~Aperture stability modulus at 20 kg-cm~~	~~Kinney[2] - 01~~	~~kg-cm/deg~~	~~3.2~~	~~6.5~~
~~Minimum true initial modulus in use~~				
~~Machine direction (MD)~~	~~ASTM D 6637~~	~~lb/ft~~	~~15,080~~	~~32,890~~
~~Cross Machine direction (CMD)~~			~~20,560~~	~~44,725~~
~~Tensile strength, 2% strain~~				
~~MD~~	~~ASTM D 6637~~	~~lb/ft~~	~~270~~	~~410~~
~~CMD~~			~~380~~	~~590~~
~~Junction efficiency~~	~~GRI-GG2-87~~	~~%~~	~~93~~	~~93~~
~~Flexural rigidity~~	~~ASTM D 1388~~	~~mg-cm~~	~~250,000~~	~~750,000~~
~~Aperture size~~				
~~Minimum~~	~~N/A~~	~~in.~~	~~0.5~~	~~0.5~~
~~Maximum~~			~~2.0~~	~~2.0~~

~~[1] Geogrids meeting the requirements of Iowa DOT Article 4196.01, B and Materials I.M. 496.01 will be acceptable.~~

~~[2] Dr. Thomas C. Kinney, P.E. and US Army Corps of Engineers.~~

c. (ADD) Triangular geogrid shall be required on all streets and roadways. Geogrid shall be TriAx® TX160 Geogrid or approved equal.

PART 3 – EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 3 - TRENCH AND TRENCHLESS CONSTRUCTION

SECTION 3010 - TRENCH EXCAVATION AND BACKFILL

PART 1 - GENERAL

NO REVISIONS

PART 2 – PRODUCTS

NO REVISIONS

PART 3 – EXECUTION

3.06 (REVISE) PIPE BEDDING AND BACKFILL SEE DIVISION 4

SECTION 3020 - TRENCHLESS CONSTRUCTION (BORING, JACKING, AND TUNNELING)

PART 1 - GENERAL

NO REVISIONS

PART 2 – PRODUCTS

2.01 CARRIER PIPE

A. Carrier Pipe Installed within Casing Pipe:

1. **Sanitary Sewer Gravity Main:** (DELETE) ~~Comply with Section 4010, 2.01~~.
   a. (ADD) All gravity piping installed in an encasement pipe or installed by boring shall be restrained joint pipe.
   b. (ADD) Pipe and couplings shall be made from unplasticized PVC compounds meeting ASTM D2241 and have a minimum cell classification of 12454, as defined in ASTM D1784. Pipe joints shall meet the standards of ASTM D3212 and have elastomeric gaskets conforming to ASTM F477.
   c. (ADD) Nominal outside diameters and wall thicknesses of thrust-restrained pipe shall conform to the requirements of ASTM D2241, SDR 21 pipe. Pipe shall be furnished in standard lengths of 10 or 20 feet. All pipe shall be marked with the following: Nominal pipe size, material code designation, DR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers.
   d. (ADD) Pipe shall be joined:

1) (ADD) Using non-metallic couplings to form an integral system for maximum reliability and interchangeability. High-strength, flexible thermoplastic splines shall be inserted into mating, precision machined grooves in the pipe and coupling to provide full 360º restraint with evenly distributed loading.

2) (ADD) Push-Together restraint system with internal steel locking ring providing uniform circumferential contact.

e. (ADD) Pre-Approved piping includes Certa-Flo® PVC Gravity Sewer Pipe with Certa-Lok® Restrained Joints, and Integral Bell; or Engineer approved equal.

2. Sanitary Sewer Force Main:

b. Restrained Joint PVC Pipe: (DELETE) ~~Comply with Section 4010, 2.02.~~

1) (ADD) All pressure piping installed in encasement pipe or installed by boring shall be restrained joint pipe.

2) (ADD) Pipe and couplings shall be made from unplasticized PVC compounds having a minimum cell classification of 12454-B, as defined in ASTM D1784. The compound shall qualify for a Hydrostatic Design Basis (HDB) of 4000 psi for water at 73.4ºF, in accordance with the requirements of ASTM D2837.

3) (ADD) Nominal outside diameters and wall thicknesses of thrust-restrained pipe shall conform to the requirements of AWWA C900, DR18 pipe. Pipe shall be furnished in standard lengths of 20 feet. All pipe shall be marked with the following: Nominal pipe size, material code designation, DR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers.

4) (ADD) Pipe shall be joined:

a) (ADD) Using non-metallic couplings to form an integral system for maximum reliability and interchangeability. High-strength, flexible thermoplastic splines shall be inserted into mating, precision machined grooves in the pipe and coupling to provide full 360º restraint with evenly distributed loading.

b) (ADD) Push-Together restraint system with internal steel locking ring providing uniform circumferential contact.

7) (ADD) Couplings shall be designed for use at or above the rated pressures of the pipe with which they are utilized and shall incorporate twin elastomeric sealing gaskets meeting the requirements of ASTM F477. Joints shall be designed to meet the leakage test requirements of ASTM D3139.

8) (ADD) Pre-Approved restrained joint piping is: Certa-Lok C900/RJ, C905/RJ piping; Diamond Lok-21; Eagle Loc900; or Engineer approved equal.

5. (DELETE) ~~Water Main:~~

   a. (DELETE) ~~Restrained Joint Ductile Iron Pipe: Comply with Section 5010, 2.01.~~

   b. (DELETE) ~~Restrained Joint PVC Pipe: Comply with Section 5010, 2.01.~~

B. Carrier Pipe Installed without a Casing Pipe:

1. Sanitary Sewer Gravity Main:

   b. (DELETE) ~~Vitrified Clay Pipe: Comply with Section 4010, 2.01.~~

   d. Restrained Joint PVC Pipe: Comply with (DELETE) ~~Section 4010, 2.02~~ (ADD) 2.01.

2. Sanitary Sewer Force Main:

   b. Restrained Joint PVC Pipe: Comply with (DELETE) ~~Section 4010, 2.02~~ (ADD) 2.01.

4. (DELETE) ~~Water Main:~~

   a. (DELETE) ~~Restrained Joint Ductile Iron Pipe: Comply with Section 5010, 2.01.~~

   b. (DELETE) ~~Restrained Joint PVC Pipe: Comply with Section 5010, 2.01.~~

2.02 CASING PIPE

D. (ADD) PVC Encasement Pipe:

1. (ADD) Meet the requirements of 2.02 for force main C900, DR 18 rated pipe.
2. (ADD) PVC encasement pipe shall be furnished with gasket joints conforming to ASTM D3139. Rubber gaskets shall conform to the requirement of ASTM F477.
3. (ADD) Minimum inside diameter as specified in the contract documents. If diameter is not specified, use a minimum inside casing diameter of at least 4 inches greater than the largest outside diameter of the carrier pipe, including pipe bells.

2.03 CASING SPACERS

C. (ADD) Casing spacers will be required on all gravity sewer piping and on force main piping where encasement piping exceeds 20 feet in length.

2.06 CASING END SEAL

C. (ADD) Casing end seals are required on all encasement pipes.

PART 3 – EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 4 - SEWERS AND DRAINS

SECTION 4010 - SANITARY SEWERS

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

M. (ADD) Ductile Iron Fittings and Restraining Devices:

1. **Measurement:** Each fitting and/or restraining device installed, including gaskets and fasteners, will be counted.
2. **Payment:** Payment will be made at the unit price for each fitting and/or restraining device installed.

1.09 (ADD) ACCEPTANCE CHECKLIST & MAINTENANCE BOND

Prior to final acceptance of the work, the contractor shall file with the City Clerk of the City of Marshalltown a maintenance bond guaranteeing suitable repairs of any defects or failures due to deficiencies in materials or inadequacies in workmanship for a period of 4 years for all improvements following completion of construction. The bond shall be for a sum equal to the total amount of the project. The contractor shall also file with the City Engineer all other required acceptance checklist items including testing/inspection forms, lateral construction forms, as-built drawings, construction costs and engineering certificate of completion forms. The acceptance checklist and warranty bond form are provided at end of section.

PART 2 - PRODUCTS

2.01 SANITARY SEWER (Gravity Mains)

A. Solid Wall Polyvinyl Chloride Pipe (PVC) 8 inch to 15 inch:

1. Comply with ASTM D 3034, SDR 26, (DELETE) ~~unless SDR 35 is specified.~~
2. Pipe stiffness per ASTM D 2412.
   b. (DELETE) ~~SDR 35: Minimum pipe stiffness of 46 psi.~~

C. Corrugated Polyvinyl Chloride Pipe (PVC) 8 inch to 36 inch:

5. (ADD) This pipe shall not be used without prior approval by Engineer.

D. Closed Profile Polyvinyl Chloride Pipe (PVC) 21 inch to 36 inch:

5. (ADD) This pipe shall not be used without prior approval by Engineer.

E. Polyvinyl Chloride Composite Pipe (truss type PVC) 8 inch to 15 inch:

5. (ADD) This pipe shall not be used without prior approval by Engineer.

F. Reinforced Concrete Pipe (RCP) 18 inch to 144 inch:

3. (ADD) This pipe shall not be used without prior approval by Engineer.

H. Vitrified Clay Pipe (VCP) 8 inch to 42 inch:

4. (ADD) This pipe shall not be used without prior approval by Engineer.

I. Double Walled Polypropylene Pipe 12 inch to 30 inch:

4. (ADD) This pipe shall not be used without prior approval by Engineer.

J. Triple Walled Polypropylene Pipe 30 inch to 36 inch:

4. (ADD) This pipe shall not be used without prior approval by Engineer.

2.02 SANITARY SEWER FORCE MAINS

A. Ductile Iron Pipe (DIP) 4 inch to 54 inch: Comply with the DIP requirements in Section 4010, 2.01. (DELETE) ~~If joint restraints are specified, comply with Section 5010, 2.03.~~

B. Polyvinyl Chloride Pipe (PVC): (DELETE) ~~Comply with the requirements in Section 5010, 2.01 for PVC pipe.~~ Provide restrained joints when specified.

1. (ADD) Polyvinyl chloride pipe 4-inches to 24-inches shall be C 900, DR 18 rated pipe.
2. (ADD) Polyvinyl chloride pipe 2-inches to 3-inches shall be pressure Class 200, SDR 21 rated pipe.
3. (ADD) The pipe shall be made from Type 1, Grade 1, Class 12454-B compounds conforming to ASTM D 1784 with a hydrostatic design basis (HDB) of 4,000 psi as per ASTM D 2837.
4. (ADD) All pipe shall be marked with the following: Nominal pipe size, material code designation, DR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers. All sanitary sewer force main pipes shall be installed with a locating tape to distinguish force main sewer from potable water.
5. (ADD) The PVC pipe shall be furnished in 20-foot laying lengths. Longer lengths will be allowed only if the Contractor certifies that he will provide equipment on the project to fully support the pipe while being transported and distributed over the project.
6. (ADD) All PVC pipe shall be furnished with gasket joints conforming to ASTM D 3139. Rubber gaskets shall conform to the requirement of ASTM F 477.
7. (ADD) The ends of the pipe to be inserted into couplings or joints shall be factory marked to allow field checking of the depth of setting of the pipe in the joint socket.

C. Sewage Air Release Valve: (ADD) See Part 2.07.

1. **(DELETE) ~~General~~**: ~~Consists of an elongated tapered or conical body and a float to operate (open and close) under pressure without spillage. Provide valves suitable for pressures up to 150 psi. Use a float with a linkage connection to the seal plug assembly to prevent irregular air release and protect the connecting rod. Ensure the bottom of the valve body is sloped or funnel-shaped to encourage the accumulated sewage and solids to drain from the valve. Preserve a volume of air at all times between the liquid sewage and~~

~~the seal plug assembly. Provide a flushing port with attachments for backwashing.~~

2. **(DELETE) ~~Materials~~**:

   a. (DELETE) **~~Body and Cover:~~**

      1) (DELETE) ~~Stainless Steel: ASTM A 351.~~

      2) (DELETE) ~~Cast Iron: ASTM A 126, Grade B.~~

      3) (DELETE) ~~Ductile Iron: ASTM A 536, Grade 65-45-12. 4) Other corrosion resistant materials.~~

   b. (DELETE) ~~Internal Metal Components: Stainless steel.~~

   c. (DELETE) ~~Float: Stainless steel, ASTM A 240, Type 304 or Type 316, or foamed polypropylene.~~

   d. (DELETE) ~~Seal Plug Assembly: Stainless steel, foamed polypropylene, EPDM rubber, Nitrile (Buna-N) rubber, and reinforced nylon~~.

3. (DELETE) ~~Tapping Saddle: Stainless steel or nylon.~~

4. (DELETE)~~ Pit: Construct according to Figure 4010.202.~~

D. Tracer Wire: (DELETE) ~~Comply with Section 5010, 2.05.~~ (RETAIN) Tracer wire will be required on all force mains (ADD) and sewer services extending from the main to the property line.

1. (ADD) Tracer wire shall be 12-gauge solid copper or high strength stainless steel wire with a 45-mil polyethylene coating. Provide sufficient length to be continuous over each separate run of nonmetallic pipe.

2. (ADD) The splice kit shall be an inline resin splice kit with split bolt (1 kV and 5 kV) for use with single conductor and unshielded cable splices in direct bury and submersible applications.

3. (ADD) The ground rods shall be a 3/8 inch diameter, 60 inch steel rod uniformly coated with metallically bonded electrolytic copper.

4. (ADD) Wire shall be connected with a high-strength, corrosion-resistant copper alloy ground rod clamp.

E. Tracer Wire Station:

1. (DELETE)~~ Two internal terminals with shunt.~~

2. (DELETE) ~~Five to six foot plastic post (color as specified by the Jurisdiction)~~.

3. (DELETE) ~~Removable top cap with lock.~~

4. (DELETE) ~~Decals indicating “Sewer Force Main” or similar language.~~

1 (ADD) All tracer wires are to be connected to a cast iron or ABS/PVC tamper proof tracer wire access box. The cover is to be manufactured of cast iron and ABS/PVC components produced in the USA. Cast iron collar & cover is to be manufactured in accordance with ASTM A48 Class 25. The ABS is to

be manufactured in accordance with ASTM D1788. The cover shall be lettered “Sewer” and shall have a standard AWWA size cast-in pentagonal bolt. Box will be a minimum of 3 inches in diameter.

2. (ADD) Tracer Wire Access Box shall be Valvco Pipe Tracer Wire Terminal Box or Engineer approved equal.

2.04 SANITARY SEWER SERVICE

E. Service Pipe: Use products as required by local plumbing code or regulations, if applicable. Otherwise, use the following:

1. PVC:

   b. PVC plastic meeting ASTM D 1784, Cell Classification 12454. (ADD) (Rigid PVC or CPVC).

2.06 SANITARY SEWER CLEANOUT

A. Comply with (DELETE) ~~Figure 4010.203~~ (ADD) MP-4.

2.07 (ADD) AIR RELEASE AND COMBINATION VALVES

A. Sewage Air Release Valves:

1. Sewage Air Release Valves shall release accumulated air (gases) from the system while it is under pressure and operating. The valve’s design will enable the separation of the liquid from the sealing mechanism and assures optimum working conditions.
2. The valve shall incorporate an air-gap separation between the sewage and sealing mechanism. This will be obtained by a single float. The valve will operate with working pressures of 0.2 – 10 bar. The valve shall withstand 230-psi test.
3. All internals shall be easily removed without removing the main valve from the lines.
4. The valve inlet shall be 2 inch N.P.T. All fittings to connect to force main shall be brass or stainless steel. A two (2) inch ball valve will be installed below the valve to allow for removal of valve without shutting down the system. Ball valve will be brass or stainless steel.
5. The body shall be Reinforced Nylon Composite, Cast Iron, Steel or Stainless Steel. Cast iron and steel valves shall be coated with a fusion bonded epoxy.
6. Internal metal materials shall be stainless steel. Float shall be a foamed polypropylene material.
7. The sewage air release valve shall be as manufactured by A.R.I. Flow Control Accessories Models S-025 or S-020 or Engineer approved equal.

B. Combination Valves

1. Combination Valves shall have three components:

a. Air & vacuum component discharges large volumes of air during filling of the system.

b. Air & vacuum component admits large volumes of air during drainage and at water column separation.

c. The air release component releases entrapped air in pressurized systems.

2. The valve's design will enable the separation of the liquid from the sealing mechanism and assures optimum working conditions.

3. The valve shall incorporate an air-gap separation between the sewage and sealing mechanism. This will be obtained by a single float. The valve will operate with working pressures of 0.5 – 10 bar. Valves with working pressures lower than 0.5 bar and higher than 10 bar will be allowed. The valve shall withstand a minimum 215-psi test.

4. All internals shall be easily removed without removing the main valve from the lines.

5. The valve inlet shall be 2 inch N.P.T. All fittings to connect to force main shall be brass or stainless steel. A two (2) inch ball valve will be installed below the valve to allow for removal of valve without shutting down the system. Ball valve will be brass or stainless steel.

6. The body shall be Reinforced Nylon Composite, Cast Iron, Steel or Stainless Steel. Cast iron and steel valves shall be coated with a fusion bonded epoxy.

7. Internal metal materials shall be stainless steel. Float shall be a foamed polypropylene material.

8. The combination valve shall be as manufactured by A.R.I. Flow Control Models D-025, D-025L, D-26 or Engineer approved equal.

C. Tapping Saddle:

1. The body shall be made of high strength ductile iron per ASTM A536.

2. The clamping band shall be a double wide band with 5/8" UNC threaded bolts of 18-8 type 304 stainless steel with stainless steel spring tension washers under the nuts.

3. The gasket shall be EPDM rubber per ASTM-D2000.

4. The finish on saddle body shall be fusion bonded epoxy coating approximately 12 mils thick.

5. Pre-Approved saddles are as manufactured by: Ford Meter Box Co., style FC202; JCM Industries, Inc., Model No. 406; Mueller Company, DR 2; Style 202NS as manufactured by Romac Industries; or Engineer approved equal.

D. Construct Air Release/Combination Valve manhole in accordance with MP-3 details.

2.08 (ADD) GRAVITY PVC PIPE FITTINGS

A. Repair couplers, tees, wyes, and bends for Polyvinyl Chloride (PVC) gravity pipe fittings shall be manufactured from the same material as piping.

B. Gaskets for elastomeric joints shall conform to the requirements of ASTM F477.

C. Solvent Cement for solvent weld joints shall conform to the requirements of ASTM Specification D2564 and shall be applied in conformance with ASTM D2855. Solvent weld joints will be allowed on PVC cleanout risers only.

D. Sewer "Wyes" for service connections on new sewer piping shall be in-line sewer wyes. Saddle wyes will not be permitted for use without permission from Engineer.

E. Sewer “Wyes” for existing piping connections shall be: Romac “CB” Sewer Saddle by Romac Industries Inc.; Inserta-Tee by Fowler Manufacturing Co.; or Engineer approved equal.

2.09 (ADD) TRANSITION COUPLINGS (GRAVITY PIPING)

A. Gasket:

1. Manufactured to meet the material requirements of:

   a. CSA B602 - mechanical couplings for drain, waste, vent pipe and sewer pipe

   b. ASTM D5926 - Standard Specification for Poly Vinyl Chloride (PVC) Gaskets for Drain, Waste, and Vent (DWV), Sewer, Sanitary, and Storm Plumbing Systems

   c. ASTM C1173 - Standard Specification for Flexible Transition Couplings for Underground Piping Systems

B. Clamps

1. Manufactured to the requirements of CSA B602
2. Clamp Housing 301 Stainless Steel
3. Clamp Band 301 Stainless Steel
4. Clamp Screw 305 Stainless Steel
5. Installation Torque 60 in-lbs

C. Shear Ring

1. 0.012" Thick, 300 Series Stainless Steel
2. Width manufactured according to coupling width (1.50", 2.13", or 4")
3. Length manufactured according to coupling diameter
4. Clamps spot welded in place

D. Coupling

1. Manufactured to conform to the performance requirements of:

a. ASTM C1173 - standard specification for flexible transition couplings for underground piping systems

b. CSA B602 - mechanical couplings for drain, waste, vent pipe and sewer pipe

c. Maximum test pressure: 4.3 PSI (29.6KPA)

d. Maximum operating temperature: 140° F non-consistent

E. (ADD) Pre-Approved transition couplers are Strong Back RC Series Repair Couplings manufactured by Fernco Inc. or Engineer approved equal.

2.10 (ADD) FITTINGS FOR PVC FORCE MAIN PIPE

A. All fitting shall be same materials as pipe supplied.

B. Repair couplers and gaskets shall be pressure rated same as piping and meet the following specifications, standards and approvals:

1. NSF Standards 14 & 61

2. ASTM D1784 materials

3. ASTM D3139 joints

4. DR 18 dimensions and pressure ratings per ASTM D2241 for C900 Pipe

5. SDR 21 dimensions and pressure ratings per ASTM D2241 for pressure class 200 pipe

6. ASTM F477 gaskets

C. All other fittings for use on four (4) inches and larger PVC pipe will be ductile iron fittings conforming to the requirements of paragraph 2.01 above, with the exception of transition couplers as specified in paragraph 2.11.

D. Fittings for use on 3" or smaller PVC pipe shall be gasket PVC push-on style fittings conforming to ASTM D2241, ASTM F477, and ASTM D3139. Fittings shall be made to the same quality as the piping furnished.

2.11 (ADD) TRANSITION COUPLINGS FOR FORCE MAIN PIPING

A. The couplings used for transitions between piping of different materials shall be a wide-range flexible coupler with a sleeve type design meeting the requirements of AWWA C219.

1. The coupling body shall be a center sleeve fabricated of high strength carbon steel tubing equivalent to ANSI/AWWA C200. The transition couplers will be readily available in nominal diameter ranges from 1.5 to 24 inches on all pipe classes.

2. Compression End Rings: One gasket compression end ring per coupling end. End rings to be of either one or two bolt designs, fabricated of carbon steel equivalent to ASTM A576. (One bolt per end in Nominal Size ranges of 2 to 12 inches and two bolts per end on the 16 to 24-inch nominal diameter coupling.)

3. Hydraulic Wide Range Gasket: Chloramine Resistant NSF-61 approved EPDM gasket designed with a multi-layered wide range removable outer layer. Gasket hydraulically actuated with a pressure-equalizing dam, pressure cavity and sealing lip for working pressure of 260 psi (1.5 to 16 inches) and 232 psi (18 to 24-inch nominal diameter coupling).

4. Fasteners shall be grade 304 (A2) or 316 (A4) stainless steel with yield strengths that conform to all nationally recognized standards. Bolts to be coated with an anti-seize type coating to prevent galling.

5. The interior and exterior coatings shall NSF-61 approved fusion bonded epoxy coating conforming to AWWA C213.

6. When properly installed the coupling will provide a minimum deflection of 8 degrees, up to 260 psi working pressure and 3/8-inch longitudinal pipe movement without leakage. (Flanged adapters will provide half the longitudinal movement and deflection.)

7. All products will be proof tested to a minimum of 1.5 times working pressure.

B. Flanged couplers shall consist of one compression end and gasket, coupling center sleeve, and AWWA Class "D" Flange (per AWWA C207).

C. Pre-Approved transition couplers are: Hymax-2000 Series wide range coupling; Hymax-2100 Series wide range flanged coupling adapter; “Macro” extended range coupling by Romac Industries, Inc.; or Engineer approved equal.

2.12 (ADD) FASTENERS

All fasteners in buried locations shall be Grade 304 (A2) or Grade 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

2.13 (ADD) LUBRICANT FOR GASKETED PIPE

Lubricant shall be an emulsified polymer-based product, specifically formulated to be water-soluble without causing turbidity. Lubricant shall not transfer taste and/or odor to new water main installations. Lubricant must not promote bacterial growth and be safe for use on all metal and plastic pipes. Lubricant shall be easily flushed from the line and be non-reactive to chlorinated water. Lubricant should work easily on both wet and dry surfaces.

2.14 (ADD) POLYETHYLENE WRAP

All ductile fittings shall be wrapped with polyethylene plastic film having a minimum thickness of 0.008 inches or with a cross woven polyethylene plastic film having a minimum thickness of 0.004 inches.

2.15 (ADD) RESTRAINING DEVICES

A. Restraint devices for use on ductile iron and C-900 PVC “push-on” joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All

devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Block Buster Series 1390-C; Star Pipe Products Allgrip series 3600 and Pipe Restrainers Series 1200S; EBAA Iron, Inc. Mega-Lug Series 1700; or Engineer approved equal.

B. Restraint devices for use on mechanical joint to C-900 PVC, shall be constructed of high strength ductile iron, conforming to the requirements of ASTM A536, Grade 65-45-12, and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1500; Star Pipe Products, Allgrip Series 3600; Romac Industries, Inc GripRing; Romac Industries, Inc RomaGrip; EBAA Iron, Inc. Mega-Lug Series 2000; or Engineer approved equal.

C. Restraint devices for use on mechanical joint ductile iron, shall be constructed of high strength ductile iron, conforming to the requirements of ASTM A536, Grade 65-45-12, and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1300-C; Star Pipe Products, Allgrip Series 3600; Romac Industries, Inc. GripRing; EBAA Iron, Inc. Mega-Lug Series 1100; or Engineer approved equal.

2.16 (ADD) GATE VALVES

A. Gate valves shall be resilient wedge type manufactured to meet all applicable requirements of AWWA Standard for Resilient Seated Gate Valve C509 or C515.

B. All valves shall have non rising stems, opening by turning left and provided with standard 2-inch square nut operator (hand-wheel operator in manholes) with arrow cast in metal to indicate direction of opening.

C. Cast iron wedge shall have sealing surfaces of the wedge permanently bonded with resilient material to meet ASTM tests for rubber to metal bond ASTM D429. Each valve shall have a smooth unobstructed waterway free from any sediment pockets. Stuffing boxes shall be O Ring seal type with 2 rings located in stem above thrust collar. Low friction torque reduction thrust bearings shall be located both above and below the stem collar.

D. Body and cover bolts and nuts shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

E. Exterior and interior coatings in accordance with ANSI/AWWA C550 for potable water.

F. Non rising stems shall be in full compliance with AWWA specification with cast integral stem collar and furnished of bronze conforming to ASTM B584 Alloy A. Stem nuts shall be independent of wedge and shall be made of solid bronze conforming to ASTM B62.

G. Valves shall have hydrostatic shell test of 400 psi and shut-off test of 200 psi. At the 200-psi shut-off test, valve must be bubble tight with a zero (0) leakage allowance.

H. Resilient wedge gate valves shall be the product of a manufacturer having a minimum of five (5) years' experience in the manufacture of water works and distribution valves.

I. Pre-Approved resilient wedge gate valves are as manufactured by: American Darling Valve Co.; Mueller Company; Clow Valve Division; American AVK Company; or Engineer approved equal.

2.17 (ADD) VALVE BOXES

A. Valve boxes shall be cast iron, 5 1/4" inside diameter, adjustable valve boxes of the screw type with sufficient length for the pipe bury as shown. Where the valve box is shown or required on control manholes, the length shall be sufficient to penetrate the valve marker and the Type II reinforced manhole cover. The cast iron cover of the valve box shall have an arrow indicating the direction of opening.

B. Covers for sewer piping shall have the word "SEWER" cast on the top.

C. Pre-Approved valve boxes and covers are as manufactured by: Tyler Pipe Utilities Division; Mueller Co.; or Engineer approved equal.

D. Each valve box shall be furnished with valve box centering adaptor compatible with the valve boxes furnished.

PART 3 – EXECUTION

3.05 FORCE MAIN INSTALLATION

A. General: (DELETE) ~~Install according to Section 5010~~.

1. (ADD) The Contractor shall install restraining devices in accordance with the manufacturer's recommendations.
2. (ADD) Restraining devices shall be installed on all mechanical joint fittings.
3. (ADD) Joint restraining devices shall be installed on all joints within 30 feet of all fittings.

B. Tracer Wire: (ADD) See 3.14 Below.

1. Required for all force main installations and sanitary sewer services that extend from the main to the property line. (DELETE) ~~Comply with Section 5010.~~
2. (DELETE) ~~Install tracer wire station at each end of the force main and at additional locations specified in the contract documents.~~

3. (DELETE) ~~Bury end of tracer wire station 2 feet and compact.~~

3.10 SANITARY SEWER CLEANOUT

A. Provide cleanouts where specified in the contract documents. Comply with (DELETE) ~~Figure 4010.203~~ (ADD) Standard Detail MP-4.

3.12 CONFLICTS

A. Horizontal Separation of Gravity Sewers from Water Mains: Separate gravity sewer mains from water mains by a horizontal distance of at least 10 feet unless:

   3. When it is impossible to obtain the required horizontal clearance of 3 feet and a vertical clearance of 18 inches between sewers and water mains, the sewers must be constructed of water main materials meeting the requirements of **(DELETE)** ~~Section 5010, 2.01~~ **(ADD)** 2.02. However, provide a linear separation of at least 2 feet.

B. Separation of Sewer Force Mains from Water Mains: Separate sewer force mains and water mains by a horizontal distance of at least 10 feet unless:

   1. The force main is constructed of water main materials meeting a minimum pressure rating of 150 psi and the requirements of (DELETE) ~~Section 5010, 2.01~~ (ADD) 2.02 and

3.14 (ADD) TRACER WIRE INSTALLATION

A. Tracer wire shall be installed on all force main piping and sanitary sewer services in the trench at the same time as the pipe or immediately prior to starting the backfill of the trench.

B. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.

C. Splices will be allowed at pipeline intersections, manholes, bored crossings, locator boxes and at other locations as agreed upon by the Engineer. Splices in tracer wire will be made with split bolt or compression-type connectors. Wire nuts may not be used. A waterproof connection is necessary to prevent corrosion. Splices shall be completed in accordance with the manufacturer's recommendations.

D. Install tracer wire on all sanitary sewer services from the main to the end of the service. Install ground rod at sewer wye and at service end. Connect wire to ground rods and extend wire to the ground surface and loop the wire in a tracer wire terminal box. These boxes shall be located at the connection to sewer service with at least two feet of extra wire inside the box. The tracer wire terminal box must be installed flush with the finished grade.

E. Install tracer wire on all force main piping. A ground rod shall be installed at each end of the piping and at all tracer wire terminal boxes. Tracer wire terminal boxes shall be installed at each end of the force main piping and as directed by the Engineer.

F. Prior to final acceptance, all tracer wire shall be electrically tested for continuity from one exposed end to another.

G. See MP-1 and MP-2 for additional details.

3.15 (ADD) VALVE INSTALLATION

A. All valves shall be installed in locations as shown on the plans or as directed by the Engineer.

B. The valve and joints shall be installed in accordance with the manufacturer's recommendations.

C. All pipe bevels shall be removed prior to installation of any valve or ductile iron fitting.

3.16 (ADD) VALVE BOX INSTALLATION

A. All foreign material and debris shall be removed from the top of the valve operator prior to setting the valve box.

B. Valve box centering device shall be installed to center valve box on valve.

C. Valve boxes shall be centered and plumb over the operating nut of the valve and shall be set so that no shock or stress will be transmitted to the valve.

D. Tops of the valve boxes shall be set flush with the valve identification collar or manhole cover unless otherwise directed.

3.17 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

1. MP-1 Typical Sanitary Sewer Service Detail
2. MP-2 Typical Sanitary Sewer Service with Riser Detail
3. MP-3 Typical Air Release/Combination Valve Manhole Detail
4. MP-4 Typical Service Line Cleanout Detail
5. MP-8 Typical Sanitary Sewer Utility Crossing Detail
6. MR-5 Typical Street Utility Section Detail

B. Deleted SUDAS Figures

1. 4010.201 Sanitary Sewer Service Stub
2. 4010.201 Sanitary Sewer Service Stub
3. 4010.202 Sewage Air Release Valve Pit
4. 4010.203 Sanitary Sewer Cleanout

MARSHALLTOWN SPECIAL PROVISIONS
FINAL ACCEPTANCE CHECKLIST

A. Deflection/Mandrel Testing – all Flexible Sanitary Sewer Pipe

B. Low Pressure Air Testing of Pipe – For Sanitary Sewer

C. Lateral Construction Forms – All Sanitary Sewer Laterals

D. Warranty Bond – Sanitary and Storm Sewers (See Specifications Part I)

E. TV Inspection – For Sanitary and Storm Sewer Pipe.

F. As-Built Drawings – For Sanitary and Storm Sewers

G. Engineering Certificate of Completion in accordance with the Plans and Specifications – Sanitary and Storm Sewers

H. Contractors Cost of Construction Report - This is to meet the financial reporting requirements of the city (GASB 34)

DEFLECTION TESTING OF FLEXIBLE PIPE

Deflection tests shall be performed on all flexible sanitary sewer pipes. The deflection test shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5%. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe and the tests shall be performed without mechanical pulling devices.

PROJECT NAME: _____

LOCATION: _____

CONTRACTOR: _____

SECTION TESTED

Start Station: _____ MH Upstream _____ Pipe Diameter: _____

End Station: _____ MH Downstream _____ Length: _____

Date Of Test: _____ Pass ☐

Date Of Construction _____ Fail ☐

MANUFACTURER OF TEST DEVICE AND DIAMETER _____

_____

Comments _____

_____

Inspector _____

SECTION TESTED

Start Station: _____ MH Upstream _____ Pipe Diameter: _____

End Station: _____ MH Downstream _____ Length: _____

Date Of Test: _____ Pass ☐

Date Of Construction _____ Fail ☐

MANUFACTURER OF TEST DEVICE AND DIAMETER _____

_____

Comments _____

_____

Inspector _____

SECTION TESTED

Start Station: _____ MH Upstream _____ Pipe Diameter: _____

End Station: _____ MH Downstream _____ Length: _____

Date Of Test: _____ Pass ☐

Date Of Construction _____ Fail ☐

MANUFACTURER OF TEST DEVICE AND DIAMETER _____

_____

Comments _____

_____

Inspector _____

LOW PRESSURE TESTING OF SANITARY SEWER LINE (ASTM: F 1417)

PROJECT NAME: _____
LOCATION: _____
CONTRACTOR: _____

LIST SECTION TESTED: DATE: _____
Start Station.: _____ MH Upstream _____
End Station: _____ MH Downstream _____
Pipe Dia. _____ Length _____
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Min(s)
Comments:

TEST INFORMATION:

Constant Pressure Method:
Rotameter reading: _____ cf/min
Computed Air Loss: _____ cf/min

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.1 for acceptance: Yes __ No __

Time-Pressure Drop Method
Time for 1.0 psi drop: _____ Min(s) --OR--
Variance in Test Pressure: _____ psi
Variance allowed by local jurisdiction: _____ psi

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.2 for acceptance: Yes _____ No _____

LIST SECTION TESTED: DATE: _____
Start Station.: _____ MH Upstream _____
End Station: _____ MH Downstream _____
Pipe Dia. _____ Length _____
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Min(s)
Comments:

TEST INFORMATION:

Constant Pressure Method:
Rotameter reading: _____ cf/min
Computed Air Loss: _____ cf/min

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.1 for acceptance: Yes __ No __

Time-Pressure Drop Method
Time for 1.0 psi drop: _____ Min(s) --OR--
Variance in Test Pressure: _____ psi
Variance allowed by local jurisdiction: _____ psi
CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.2 for acceptance: Yes _____ No _____

LIST SECTION TESTED: DATE: _____
Start Station.: _____ MH Upstream _____
End Station: _____ MH Downstream _____
Pipe Dia. _____ Length _____
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Min(s)
Comments:

TEST INFORMATION:

Constant Pressure Method:
Rotameter reading: _____ cf/min
Computed Air Loss: _____ cf/min

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.1 for acceptance: Yes __ No __

Time-Pressure Drop Method
Time for 1.0 psi drop: _____ Min(s) --OR--
Variance in Test Pressure: _____ psi
Variance allowed by local jurisdiction: _____ psi

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.2 for acceptance: Yes _____ No _____

Testing procedures observed and Information recorded by:

_____
Project Representative

Results reviewed and affirmed by:

_____
Project Engineer

City of Marshalltown, Iowa

SANITARY SEWER LATERAL CONSTRUCTION FORM

Project Number _____

Date Wye Installed: 20___
4Date Service Installed: 20___ (NA) if no service

Street Address: (or) _____
General Location: _____

Upstream Manhole # _____ Downstream Manhole # _____

Service Status: _____ 1 - Active 2 - Inactive 3 - Abandoned

Connection Type: _____ 2 - Wye 3 - MH stub 4 - Tap

Diameter (inches): _____

Pipe Material: _____ 1 - VCP 2 - PVC 3 - Concrete 4 - RCP
5 - DIP 6 – CIP 7 - CMP

Slope/Fall (%): _____ Length (feet): _____

Source of Data: _____ 1 - Construction Inspection 2 – Superintendent

Direction from Main: _____ Distance from Upstream MH (feet): _____

Depth at Main (feet): _____ Depth at Property Line (feet): _____

Depth at service end (feet): _____ (NA) if no service

Indicate North:

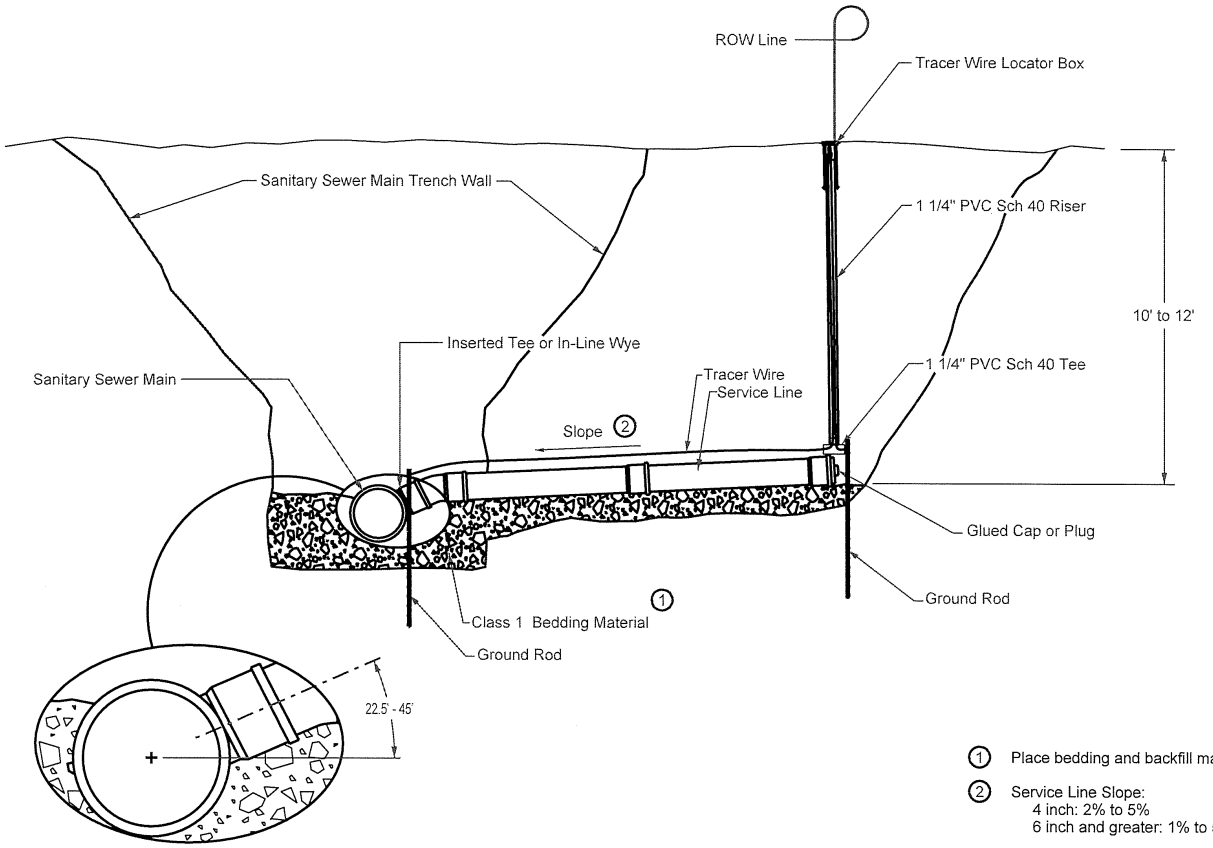
O ----------O

Upstream MH# _____ Downstream MH# _____

Station: _____ Station: _____

Wye Station: _____
Service end Station: _____
Service Offset Direction/Distance (feet): _____

Inspector: _____
Department of Public Works
Engineering Division



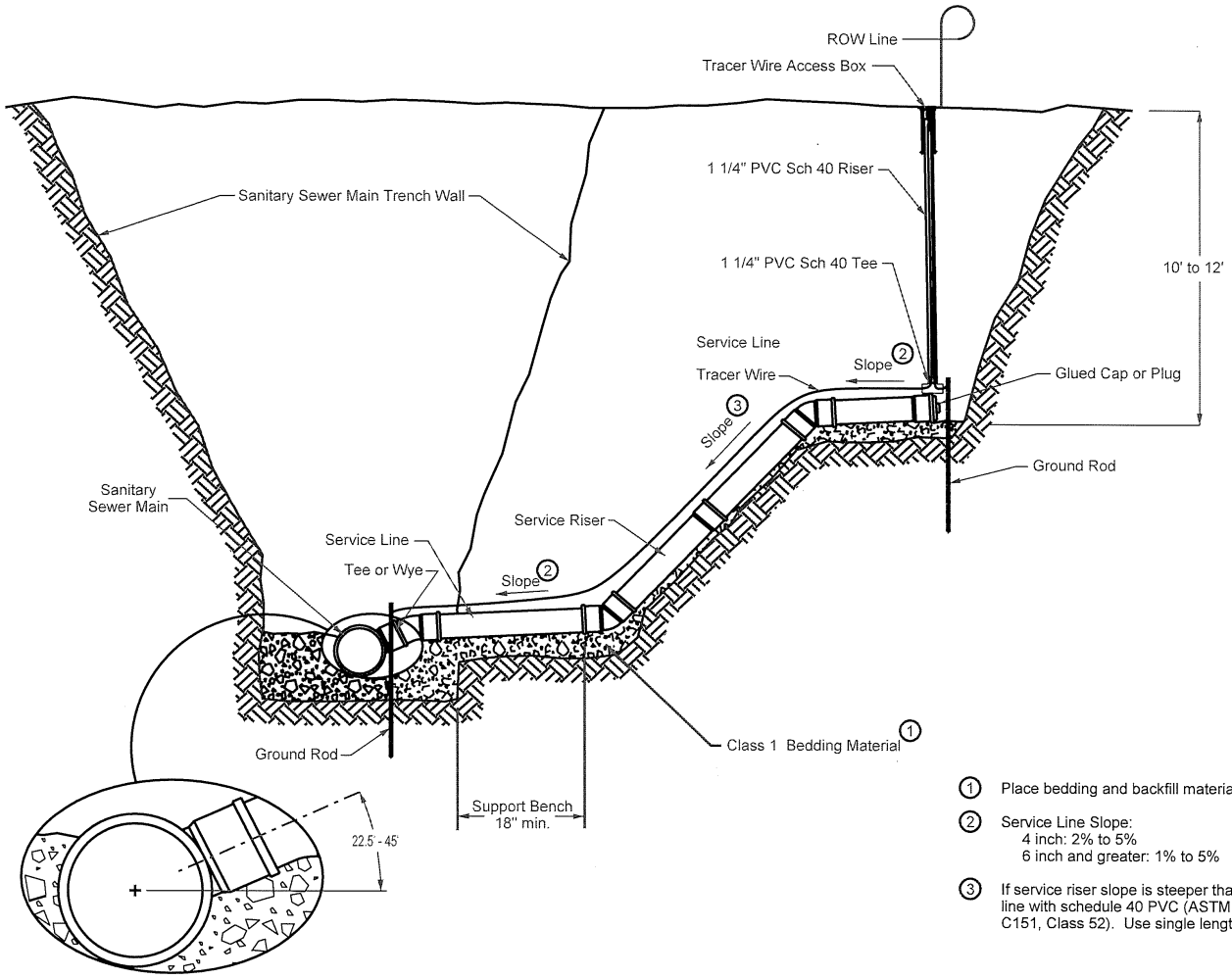
1. Place bedding and backfill material as required for sewer main.
2. Service Line Slope:
   4 inch: 2% to 5%
   6 inch and greater: 1% to 5%

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER SERVICE DETAIL

DATE: 05/20/19

MP-1



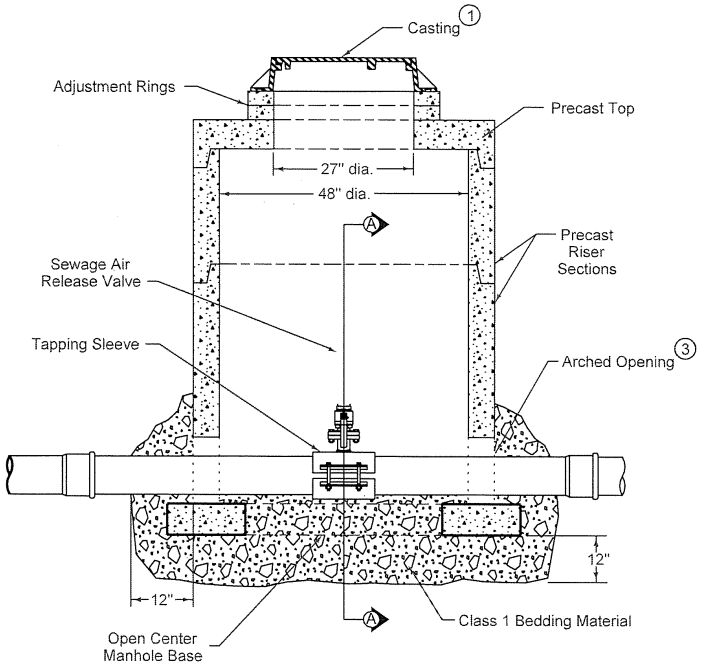
1. Place bedding and backfill material as required for sewer main.
2. Service Line Slope:
   4 inch: 2% to 5%
   6 inch and greater: 1% to 5%
3. If service riser slope is steeper than 1:1, construct riser of entire service line with schedule 40 PVC (ASTM D 1785) or ductile iron (AWWA C151, Class 52). Use single length of pipe for riser, if possible.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

DATE: 05/20/19

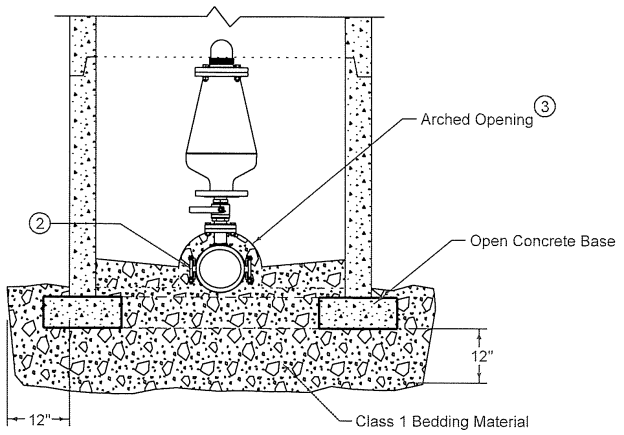
TYPICAL SANITARY SEWER SERVICE WITH RISER DETAIL

MP-2



TYPICAL SECTION

1. Water Tight Casting.
2. Place bedding material to springline of pipe.
3. Prevent riser from bearing on pipe by providing an arched opening with a diameter up to 6 inches larger than pipe diameter.

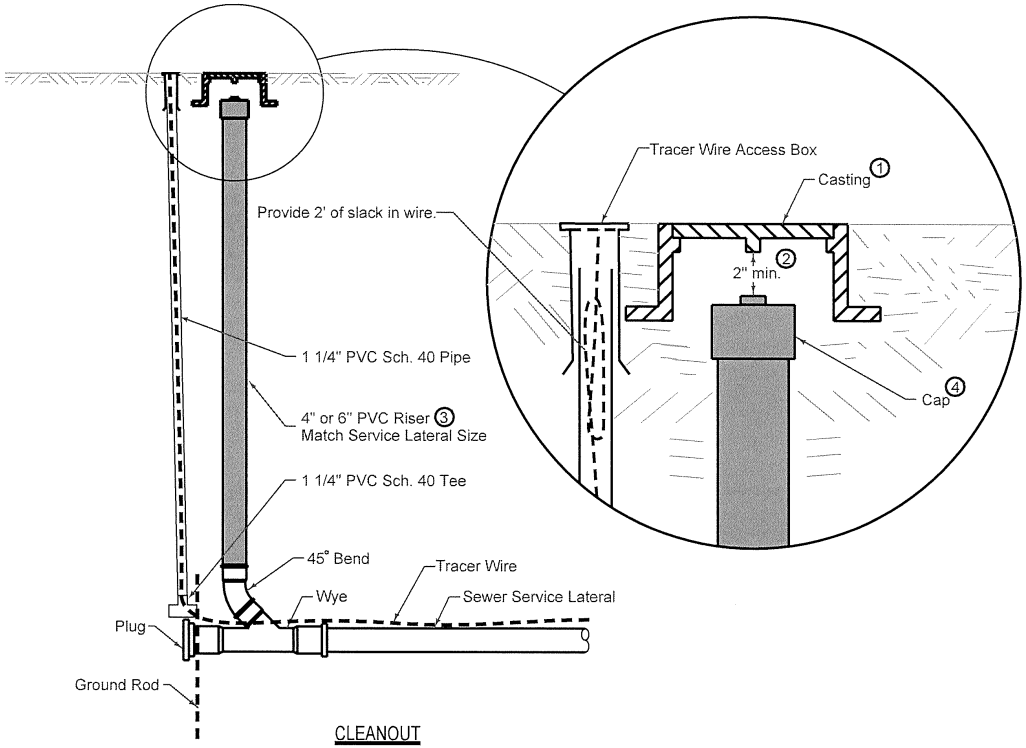


SECTION A-A

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

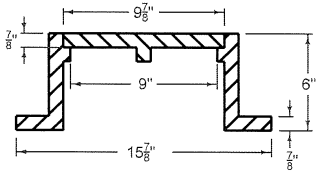
TYPICAL AIR RELEASE/COMBINATION VALVE MANHOLE DETAIL

MP-3



CLEANOUT

1. Standard duty casting. Mark lid with "Sanitary" or "Sanitary C.O." Casting will be provided in all hard surfaced areas.
2. Do not allow casting to bear on top of riser pipe.
3. 4-inch or 6-inch PVC Service Pipe
4. Threaded PVC cap or iron body ferrule with brass screw plug



CASTING 1

(Dimensions are nominal)

the City of Marshalltown

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SERVICE LINE CLEANOUT DETAIL

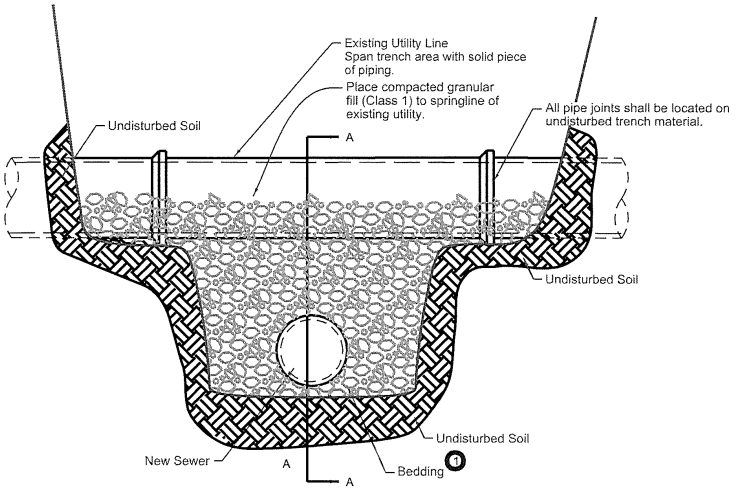
DATE: 05/20/19

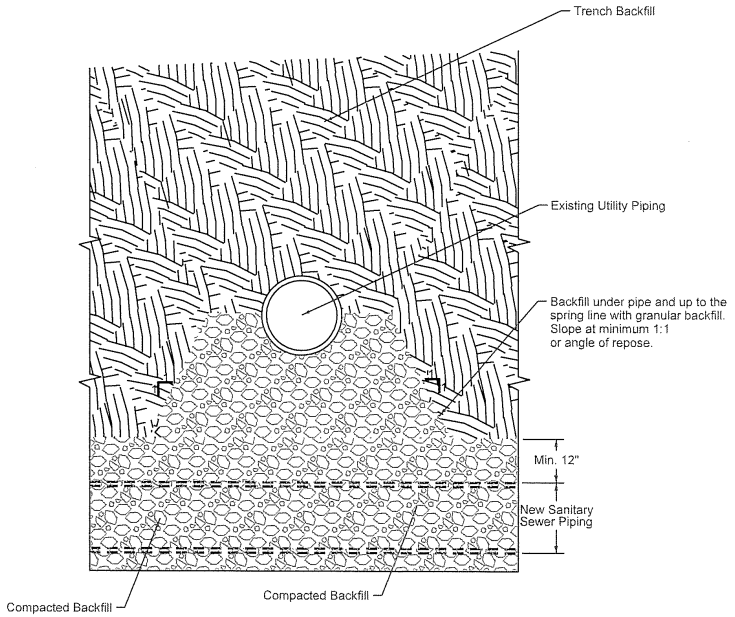
MP-4

The Contractor may, at their option, use flowable mortar to support the existing utility line (sewer lines, water lines, gas lines, etc.) in place of the compacted backfill. Flowwable fill will be placed in same configuration as granular backfill or as directed by the Engineer.

Allow flowable mortar fill to cure a minimum of 24 hours before placing backfill material.

(1) Bedding shall comply with Class 1 gradation. Material shall be placed in lifts not exceeding 12-inches and compacted to 95% Standard proctor density. Care shall be taken not to displace either pipe during backfill.





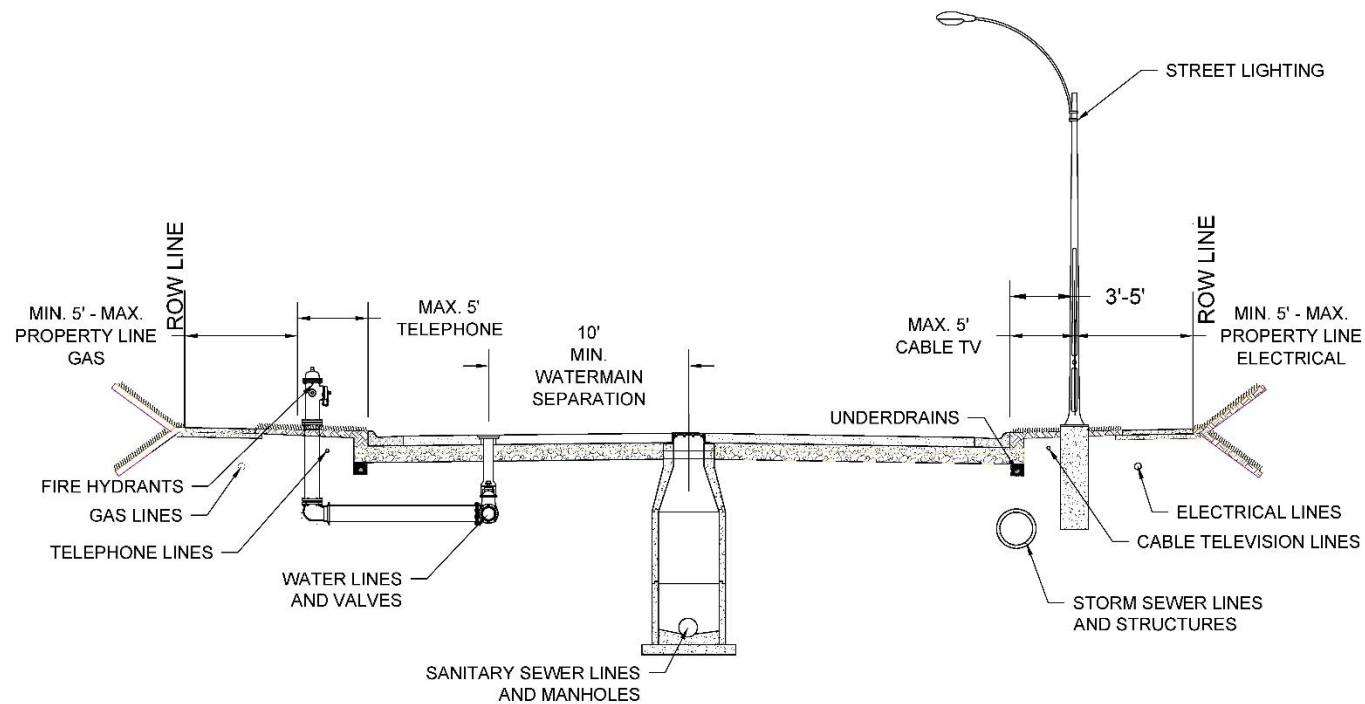
SECTION A-A

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER UTILITY CROSSING DETAILS

DATE: 05/20/19

MP-8



TYPICAL STREET UTILITY SECTION DETAIL

NO SCALE

The City of Marshalltown

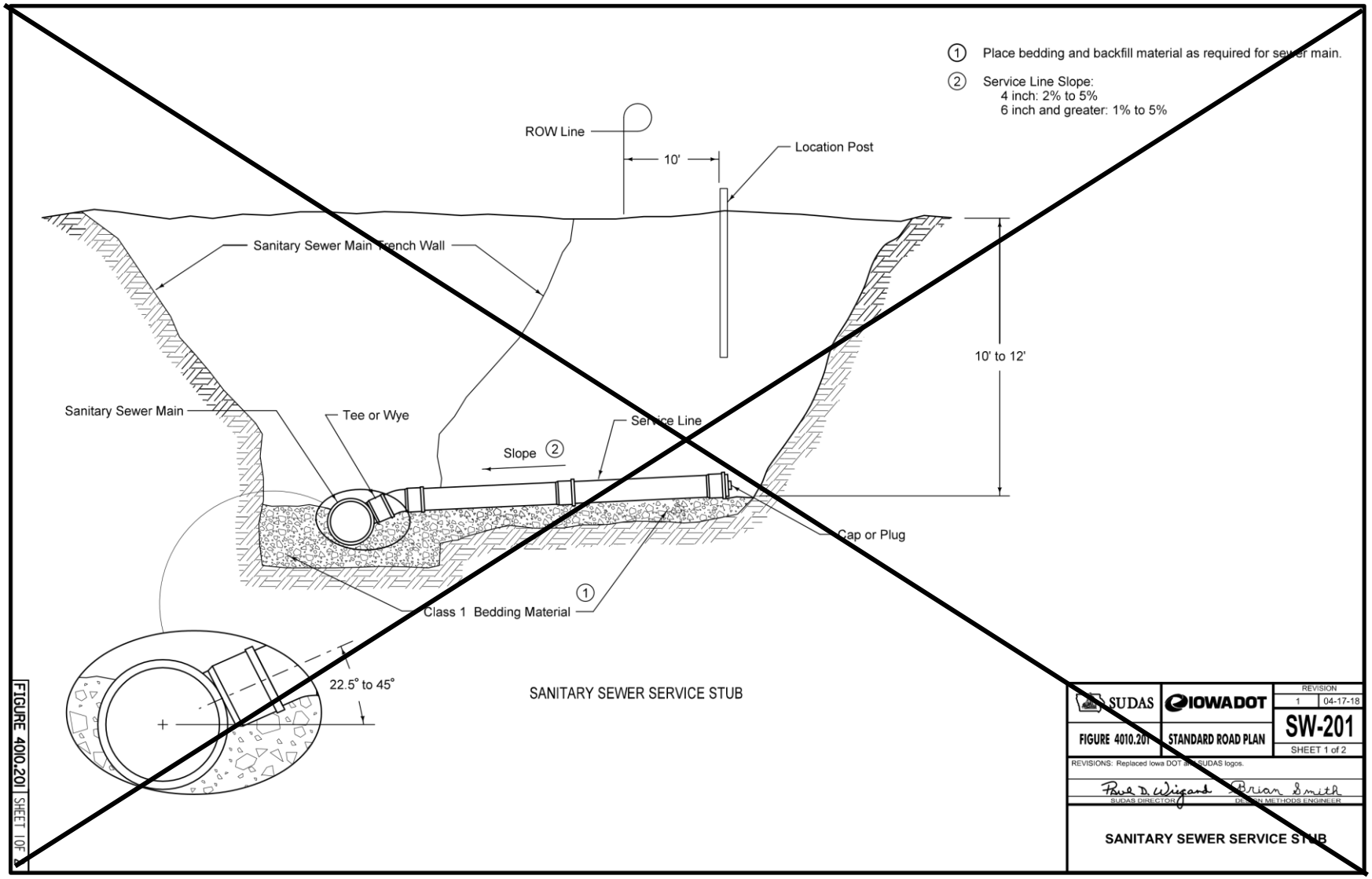
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

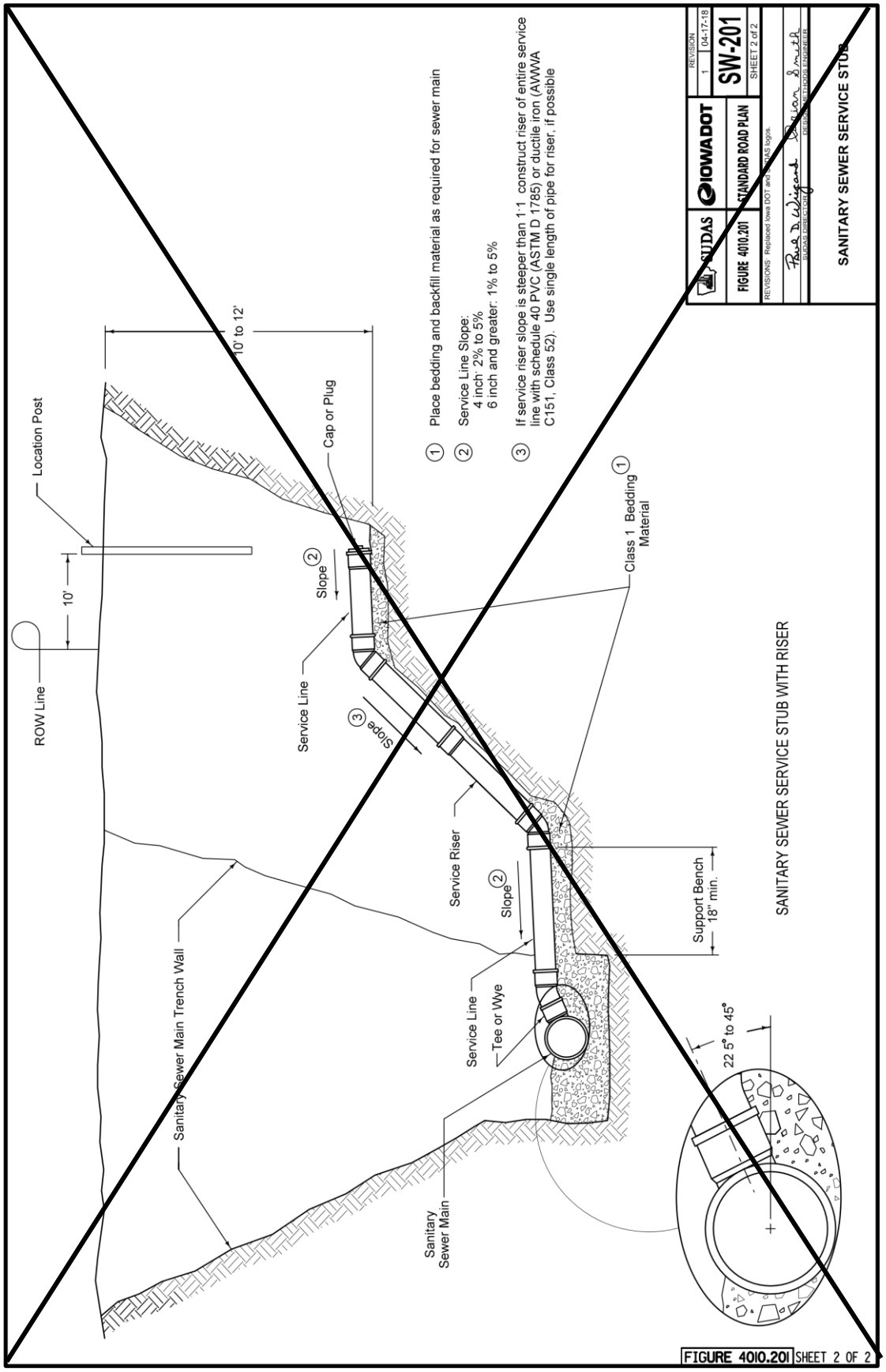
Drawn By: JCK
Scale: NONE
Proj. No: 1000
Dwg. No: Manual
Vol. No: MR-5
Date: 10/22/19

MR-5 TYPICAL STREET UTILITY LAYOUT

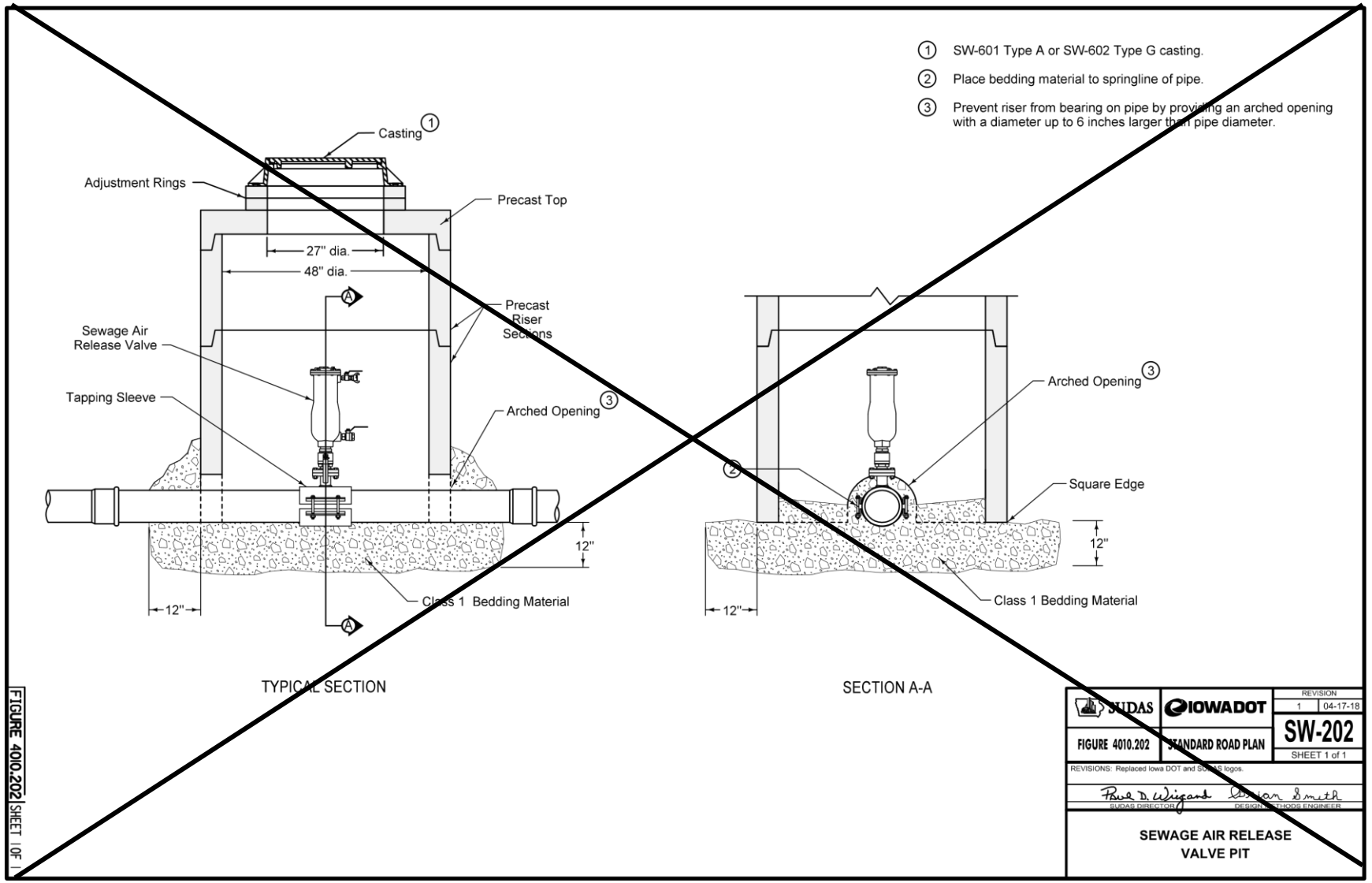
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

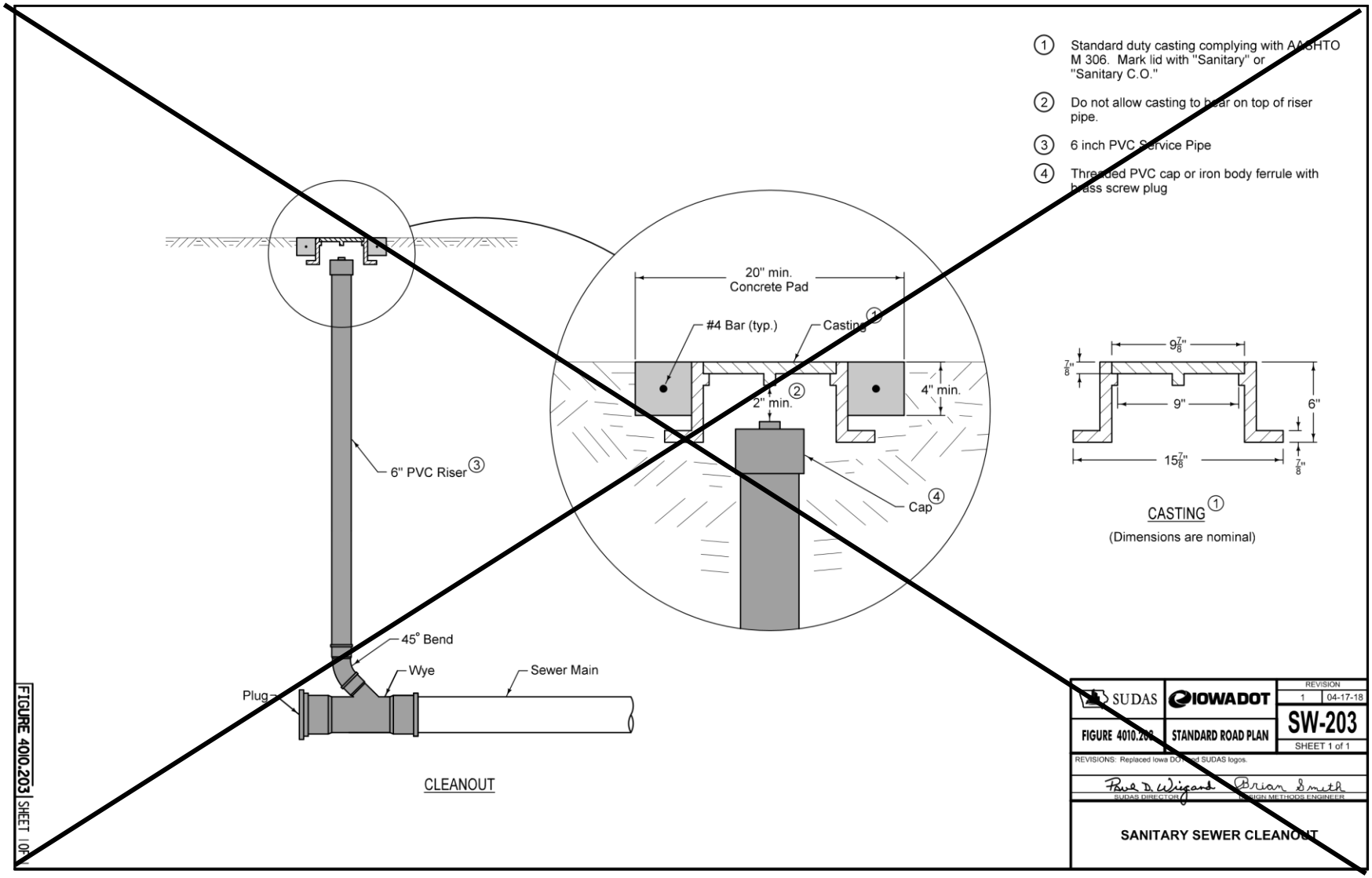
5 OF 5


1 Place bedding and backfill material as required for sewer main.
2 Service Line Slope:
4 inch: 2% to 5%
6 inch and greater: 1% to 5%
ROW Line
10'
Location Post
Sanitary Sewer Main Trench Wall
10' to 12'
Sanitary Sewer Main
Tee or Wye
Service Line
Slope 2
Cap or Plug
1
Class 1 Bedding Material
22.5° to 45°
SANITARY SEWER SERVICE STUB
FIGURE 4010.201 SHEET 1 OF 2
SUDAS
IOWA DOT
REVISION
1 04-17-18
FIGURE 4010.201
STANDARD ROAD PLAN
SW-201
SHEET 1 of 2
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SANITARY SEWER SERVICE STUB



Location Post
10'
ROW Line
10' to 12'
Cap or Plug
Slope 2
Service Line
Slope 3
Class 1 Bedding Material 1
Service Riser
Slope 2
Support Bench 18" min.
Service Line
Tee or Wye
Sanitary Sewer Main Trench Wall
Sanitary Sewer Main
22 5° to 45°
1 Place bedding and backfill material as required for sewer main
2 Service Line Slope:
4 inch: 2% to 5%
6 inch and greater: 1% to 5%
3 If service riser slope is steeper than 1:1 construct riser of entire service line with schedule 40 PVC (ASTM D 1785) or ductile iron (AWWA C151, Class 52). Use single length of pipe for riser, if possible
SANITARY SEWER SERVICE STUB WITH RISER
SUDAS
IOWA DOT
FIGURE 4010.201
STANDARD ROAD PLAN
REVISION
1
04-17-18
SW-201
SHEET 2 of 2
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SANITARY SEWER SERVICE STUB
FIGURE 4010.201 SHEET 2 OF 2


1 SW-601 Type A or SW-602 Type G casting.
2 Place bedding material to springline of pipe.
3 Prevent riser from bearing on pipe by providing an arched opening with a diameter up to 6 inches larger than pipe diameter.
Casting
Adjustment Rings
Precast Top
27" dia.
48" dia.
Precast Riser Sections
Sewage Air Release Valve
Tapping Sleeve
Arched Opening
12"
12"
Class 1 Bedding Material
TYPICAL SECTION
Arched Opening
Square Edge
12"
12"
Class 1 Bedding Material
SECTION A-A
SUDAS
IOWA DOT
REVISION 1 04-17-18
FIGURE 4010.202
STANDARD ROAD PLAN
SW-202
SHEET 1 of 1
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SEWAGE AIR RELEASE VALVE PIT
FIGURE 4010.202 SHEET 1 OF 1


1 Standard duty casting complying with AASHTO M 306. Mark lid with "Sanitary" or "Sanitary C.O."
2 Do not allow casting to bear on top of riser pipe.
3 6 inch PVC Service Pipe
4 Threaded PVC cap or iron body ferrule with brass screw plug
20" min. Concrete Pad
#4 Bar (typ.)
Casting 1
2" min. 2
4" min.
6" PVC Riser 3
Cap 4
45° Bend
Wye
Sewer Main
Plug
CLEANOUT
9 7/8"
7/8"
9"
6"
15 7/8"
CASTING 1
(Dimensions are nominal)
SUDAS
IOWADOT
REVISION
1 04-17-18
FIGURE 4010.203
STANDARD ROAD PLAN
SW-203
SHEET 1 of 1
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SANITARY SEWER CLEANOUT
FIGURE 4010.203 SHEET 1 OF 1

SECTION 04020 - STORM SEWERS

PART 1 - GENERAL

1.09 (ADD) ACCEPTANCE CHECKLIST & MAINTENANCE BOND

Prior to final acceptance of the work, the contractor shall file with the City Clerk of the City of Marshalltown a maintenance bond guaranteeing suitable repairs of any defects or failures due to deficiencies in materials or inadequacies in workmanship for a period of 4 years for all improvements following completion of construction. The bond shall be for a sum equal to the total amount of the project. The contractor shall also file with the City Engineer all other required acceptance checklist items including testing/inspection forms, lateral construction forms, as-built drawings, construction costs and engineering certificate of completion forms. The acceptance checklist and warranty bond form are provided at end of section.

PART 2 – PRODUCTS

NO REVISIONS

PART 3 – EXECUTION

3.02 PIPE INSTALLATION

A. General:

8. (ADD) All lift holes in the pipe shall be filled with concrete.

9. (ADD) Protect utilities crossing the sewer main trench.

B. Trenched:

7. (ADD) No more than 300-feet of trench shall be left open at any time. Open trenches shall be properly marked and/or attended. Trenches shall be closed at the end of each day.

3.07 CONFLICTS

A. Horizontal Separation of Gravity Sewers from Water Mains:

2. When it is impossible to obtain the required horizontal clearance of 3 feet and a vertical clearance of 18 inches between sewers and water mains, the sewers must be constructed of water main materials meeting the requirements of Section (DELETE) ~~5010, 2.01~~ (ADD) 4010, 2.02. However, provide a linear separation of at least 2 feet.

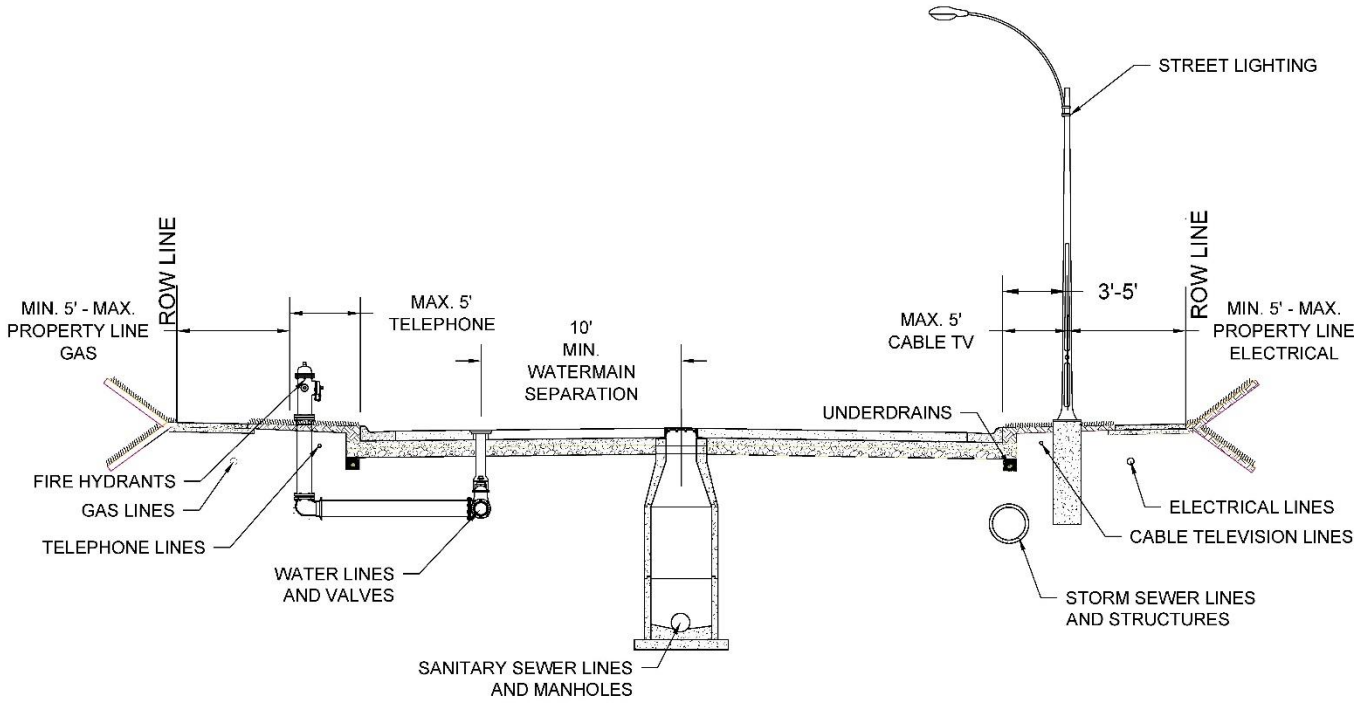
B. Separation of Sewer Force Mains from Water Mains: Separate storm sewer force mains and water mains by a horizontal distance of at least 10 feet unless:

1. The force main is constructed of water main materials meeting a minimum pressure rating of 150 psi and the requirements of (DELETE) ~~5010, 2.01~~ (ADD) 4010, 2.02. and

3.11 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following detail.

1. MR-5 Typical Street Utility Section Detail



TYPICAL STREET UTILITY SECTION DETAIL

NO SCALE

MR-5 TYPICAL STREET UTILITY LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

5 OF 5

SECTION 4030 - PIPE CULVERTS

PART 1 – GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 2 - PRODUCTS

2.01 PIPE CULVERTS

B. Entrance Pipe Culverts: The following pipe culvert types described in Section 4020 may be used within right-of-way as entrance pipe culverts:

5. Corrugated Metal Pipe (CMP). (ADD) Use of this pipe material requires specific approval by the Engineer.
6. Spiral Rib Pipe. (ADD) Use of this pipe material requires specific approval by the Engineer.
7. Coated Corrugated Metal Pipe. (ADD) Use of this pipe material requires specific approval by the Engineer.
8. Corrugated Metal Arch Pipe. (ADD) Use of this pipe material requires specific approval by the Engineer.

C. Structural Plate Culverts: Structural plate culverts may be used in the right-of-way as roadway or entrance pipe culverts.

6. (ADD) Use of this pipe material requires specific approval by the Engineer.

D. Aluminum Structural Plate Culverts: Aluminum structural plate culverts may be used in the right-of-way as roadway or entrance pipe culverts.

9. (ADD) Use of this pipe material requires specific approval by the Engineer.

PART 3 - EXECUTION

3.04 (ADD) IOWA DOT STANDARD ROAD PLANS

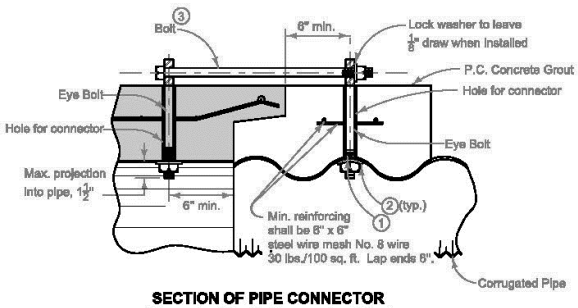
Add the following details:

A. DR-121 Connected Pipe Joints

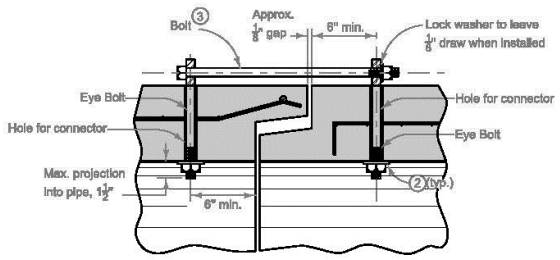
B. DR-203 Metal Pipe Aprons and Beveled Ends

C. DR-211 Metal Safety Slope Apron 6:1 Slope

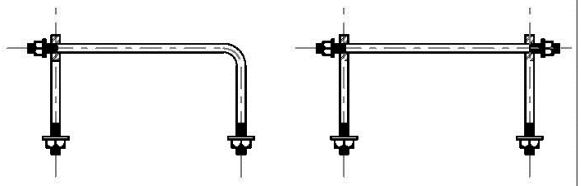
D. DR-212 Beveled Pipe and Guard



SECTION OF PIPE CONNECTOR
(Concrete Pipe to Corrugated Pipe)

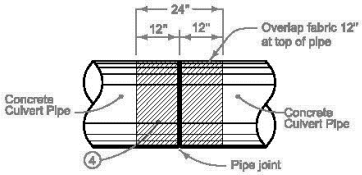


SECTION OF PIPE CONNECTOR
(Concrete Pipe to Concrete Pipe)



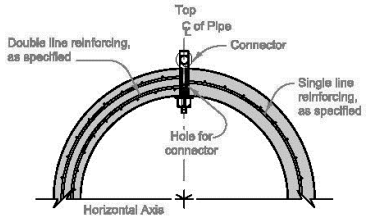
ONE BEND END **THREADED AT BOTH ENDS**

OPTIONAL BOLTS/CONNECTORS

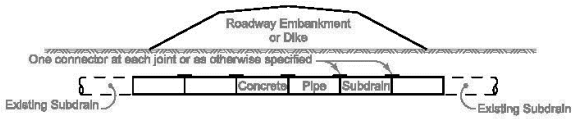


PIPE JOINT WRAPPING

PIPE SIZE (in)	CONNECTOR AND BOLT SIZE (in.)	HOLE FOR CONNECTOR (in.)
12 to 27	$\frac{5}{8}$	$\frac{7}{8}$
30 to 60	$\frac{3}{4}$	1.0
66 to 132	1.0	$1\frac{1}{4}$



TYPICAL SECTION
(Non-Sealed Joint)



TYPICAL INSTALLATION

TYPE 1 CONNECTION

Wrap all joints on concrete roadway pipe culverts.

Use Type 3 Connections on all culvert pipes, unless specified otherwise. Refer to Materials I.M. 445.01 for Connector requirements.

Minimum 2 threads showing at all threaded ends.

Connections not required on pipe sections installed by trenchless methods.

For belled concrete pipe joints, connectors may be installed on the inside of the pipe.

TYPE 1

One connector at the top of the pipe section.

TYPE 2 (Sealed Joint)

Two connectors near the top of the pipe section. For details of reinforcement, refer to AASHTO M 170 for the class of pipe required. Refer to Materials I.M. 491.09 for seal requirements.

TYPE 3 (Non - Sealed Joint)

Two connectors near the top of the pipe section. For details of reinforcement, refer to AASHTO M 170 for the class of pipe required.

① If holes are field drilled, place a ribbon of butyl sealant around bolts before placing 3 in. x 3 in. x ¼ in. plate on bolts through corrugated metal pipe and tightening nuts.

② $1\frac{3}{4}$ inch round x $\frac{9}{64}$ inch thick washer or 3 in. x 3 in. x ¼ in. square plate (shaped to pipe radius).

③ Connectors with One Bend End and Bell End spacers allowed per Materials I.M. 451. Refer to Optional Bolts detail.

④ Engineering fabric for embankment erosion control.

Possible Tabulations:
104-3
104-5B

IOWADOT

REVISION	
3	10-17-17

STANDARD ROAD PLAN

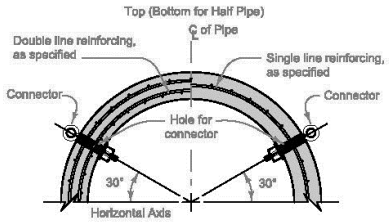
DR-121

SHEET 1 of 2

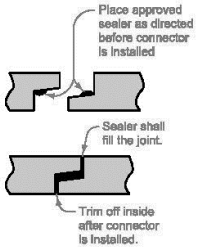
REVISIONS: Added 104-5B to Possible Tabulations. Added Type 3 connection to storm sewer outlet.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

CONNECTED PIPE JOINTS

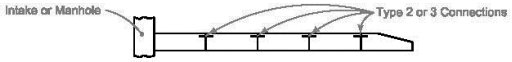


TYPICAL SECTION
TYPE 2 CONNECTION
TYPE 3 CONNECTION

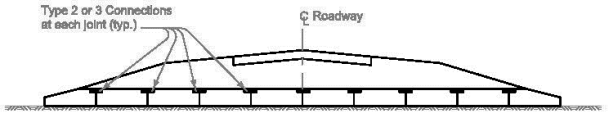


SEALED JOINT
TYPE 2 CONNECTION

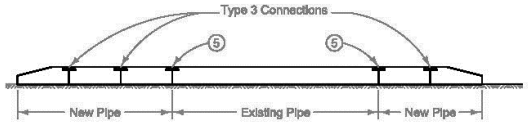
⑤ On culvert extensions, connect all new joints including the joint between the old and new culvert pipe. Holes may need to be drilled into existing pipes.



TYPICAL INSTALLATION
STORM SEWER OUTLET - TYPE 2 OR TYPE 3 CONNECTION



TYPICAL INSTALLATION
NEW CONSTRUCTION - TYPE 2 or 3 CONNECTION



TYPICAL INSTALLATION
PIPE EXTENSION - TYPE 3 CONNECTION

TYPE 2 AND TYPE 3 CONNECTIONS

IOWA DOT

REVISION	
3	10-17-17

STANDARD ROAD PLAN

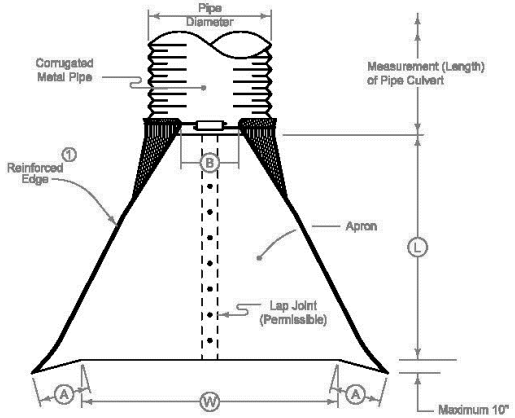
DR-121

SHEET 2 of 2

REVISIONS: Added 104-5B to Possible Tabulations. Added Type 3 connection to storm sewer outlet.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

CONNECTED PIPE JOINTS



PLAN VIEW

DIMENSIONS					
PIPE DIAM.	A (±1")	B MAX.	H (±1")	L (±1½")	W (±2")
6"	4½"	1"	3"	8½"	12"
8"	5½"	3"	4"	14½"	16"
10"	7½"	6"	6"	21"	24"
12"	4½"	6"	6"	21"	24"
15"	6"	6"	6"	26"	30"
18"	7"	9"	6"	31"	36"
21"	8½"	11"	6"	36"	42"
24"	9½"	12"	6"	42"	48"
30"	12"	15"	7½"	52½"	60"
36"	14"	18"	9"	63"	72"
42"	16"	21"	10½"	73½"	84"
48"	18"	27"	12"	84"	90"
54"	18"	30"	12"	84"	102"
60"	18"	33"	12"	87"	114"
66"	18"	36"	12"	87"	120"
72"	18"	39"	12"	87"	126"
78"	18"	42"	12"	87"	132"
84"	18"	45"	12"	87"	138"
90"	24"	37"	11"	87"	144"
96"	25"	35"	12"	87"	150"

Install aprons and hardware fabricated from galvanized steel complying with Section 4141 of the Standard Specifications. Alternate design details may be submitted to the Engineer for approval.

Aprons may be attached to culvert pipe as follows:

A. If normal culvert is of circumferential type, use an approved bolt or clamp to fasten directly to culvert.

B. If normal culvert is of helical corrugation type:
   1. Use an approved sizing ring securely fastened to inside diameter of apron to connect the culvert pipe using special dimple band connector.
   2. "Dimple" bands are not allowed when a positive joint is specified.

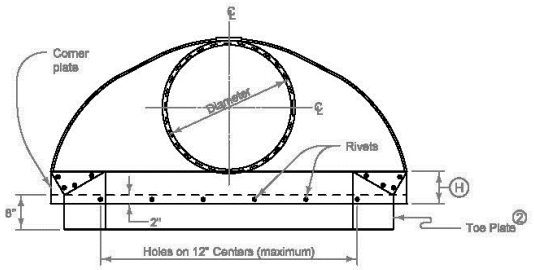
Refer to Materials I.M. 441 for approved coupling devices.

Repair, to the Engineer's satisfaction, breaks or damage to the coating that occur during handling or installation.

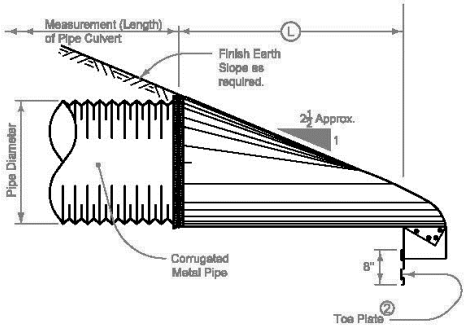
Price bid for "Aprons, Metal" is full compensation for fabrication and installation of the metal apron.

① On sizes 60 inches and larger, the reinforced edge should be supplemental with a galvanized stiffener angle attached with bolts.

② Install Galvanized Toe Plate (same gage metal as apron) on all aprons 24 inch diameter and larger



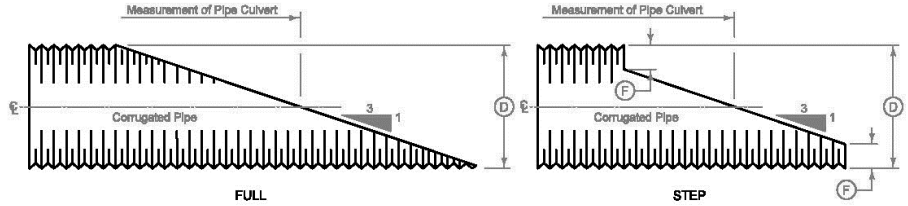
END VIEW



SIDE VIEW

Possible Contract Item:
Apron, Metal

Possible Tabulations:
104-3
104-5C



FULL STEP

BEVELED ENDS FOR CORRUGATED METAL PIPE

BEVEL 3:1	
Ⓓ	Ⓕ
54"	3"
60"	6"
66"	9"
72"	12"
78"	15"
84"	18"
90"	21"
96"	24"

When specifically required as part of detail project plans, ends of pipe culvert may be provided with beveled ends as shown.

Either Full Bevel or Step Bevel may be used unless one type is specified. The slope of the bevel is 3:1 unless specified otherwise.

Beveled ends, when required, are incidental to the price bid for the culvert.

IOWA DOT

STANDARD ROAD PLAN

REVISION	
New	04-21-15

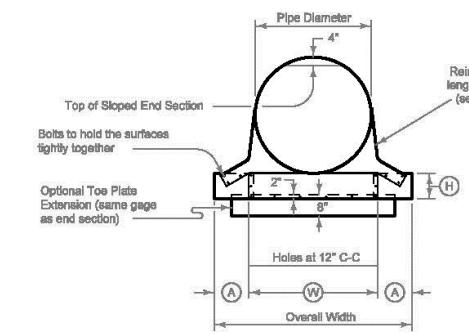
DR-203

SHEET 1 of 1

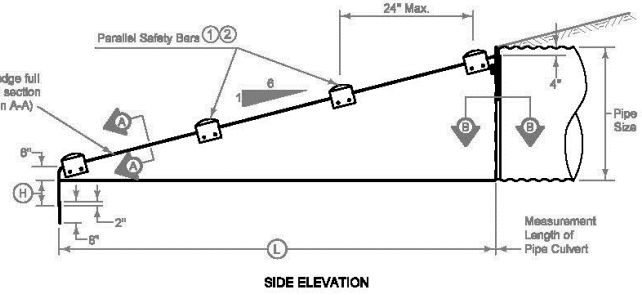
REVISIONS: New. Replaces RF-5.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

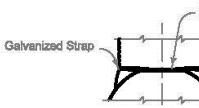
METAL PIPE APRONS AND BEVELED ENDS



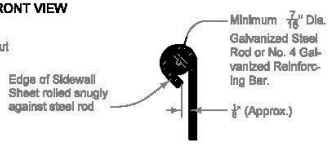
FRONT VIEW



SIDE ELEVATION

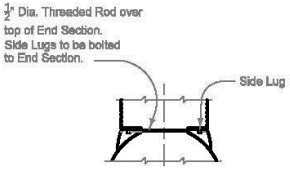


CONNECTOR
(15"-24" Dia.)

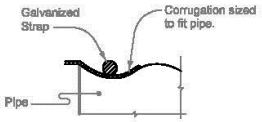


SECTION A-A

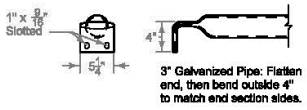
METAL END SECTIONS FOR CIRCULAR PIPES								
Pipe Dia. (In.)	Min. Thick.		Dimensions (Inches)				
	In.	Gage	A	H	W	Overall Width	L
15	.064	16	8	6	21	37	30
18	.064	16	8	6	24	40	48
21	.064	16	8	6	27	43	66
24	.064	16	8	6	30	46	84
30	.109	12	12	9	36	60	120
36	.109	12	12	9	42	66	156
42	.109	12	16	12	48	80	192
48	.109	12	16	12	54	86	228
54	.109	12	16	12	60	92	264
60	.109	12	16	12	66	98	300



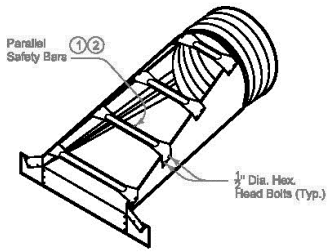
CONNECTOR
(30"-60" Dia.)



SECTION B-B



PARALLEL SAFETY BARS



PERSPECTIVE VIEW
OF APRON

Install aprons and hardware fabricated from galvanized steel complying with Section 4141 of the Standard Specifications. Alternate design details may be submitted to the Engineer for approval.

Apron may be attached to culvert pipe as follows:

A. If normal culvert is of circumferential corrugation type, use an approved bolt or clamp to fasten apron directly to apron.
B. If normal culvert is of helical corrugation type:
   1. Use an approved sizing ring securely fastened to inside diameter to apron to connect to the culvert pipe using special dimple band connector.
   2. "Dimple" bands will not be allowed when a positive joint is specified.

Refer to Materials I.M. 441 for approved coupling devices.

Repair, to the Engineer's satisfaction, breaks or damage to the coating that occur during handling or installation.

Price bid for "Aprons, Safety Slope" is full compensation for fabrication and installation of the apron.

1 Number of bars required will vary depending on the length of the end section.

2 Parallel safety bars are required for pipes 30" diameter and larger. For pipe 24" diameter and smaller, parallel safety bars will be required only when specified in the project plans.

Possible Contract Item:
Aprons, Safety Slope

Possible Tabulation:
104-3

IOWADOT

STANDARD ROAD PLAN

REVISION	
New	04-21-15

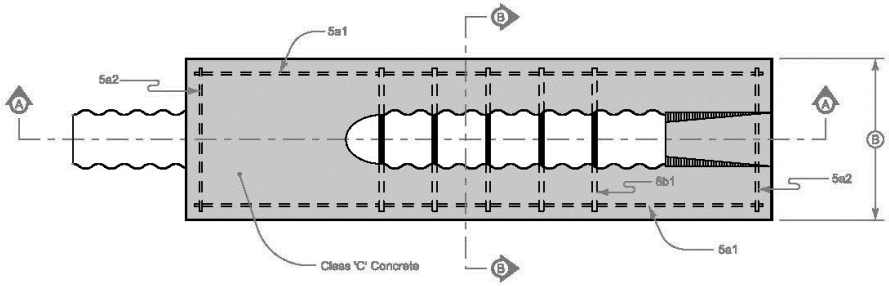
DR-211

SHEET 1 of 1

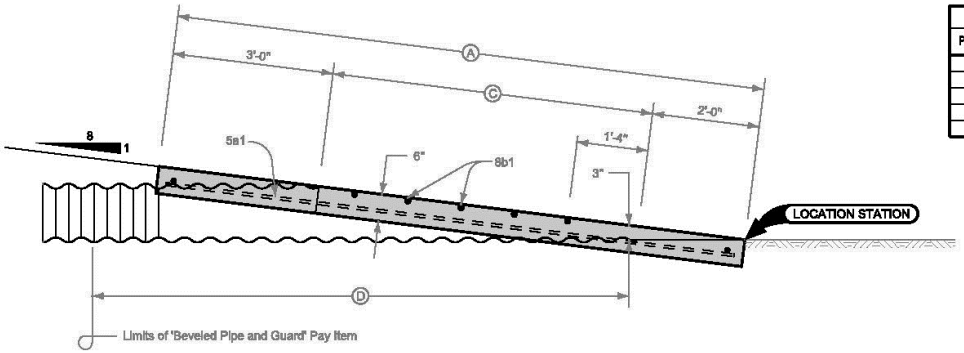
REVISIONS: New. Replaces RF-44

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

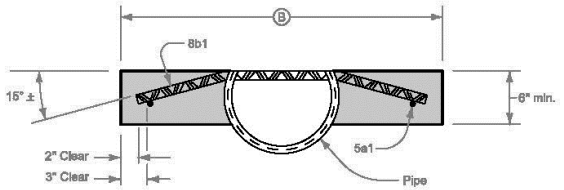
METAL SAFETY SLOPE APRON 6:1 SLOPE



PLAN



SECTION A-A



SECTION B-B

TABLE OF DIMENSIONS				
PIPE SIZE	A	B	C	D
12"	11'-0"	3'-0"	6'-0"	10'-0"
15"	13'-2"	3'-3"	8'-2"	12'-0"
18"	15'-4"	3'-6"	10'-4"	14'-0"
21"	17'-6"	3'-9"	12'-6"	16'-0"
24"	19'-8"	4'-0"	14'-8"	18'-0"

REINFORCING BAR LIST									
PIPE SIZE	BAR	LOCATION	SHAPE	COUNT	LENGTH	LIN. FT.	WEIGHT	TOTAL WEIGHT	SPACING
12"	5a1	Base		2	10'-8"	21.4	22.3	85.8	See Detail
	5a2	Base		2	2'-8"	5.4	5.8		See Detail
	8b1	Base		5	2'-10"	14.2	37.9		12"
15"	5a1	Base		2	12'-10"	25.7	26.8	90.7	See Detail
	5a2	Base		2	2'-11"	5.9	6.2		See Detail
	8b1	Base		7	3'-1"	21.6	57.7		12"
18"	5a1	Base		2	15'-0"	30.0	31.3	118.1	See Detail
	5a2	Base		2	3'-2"	6.4	6.7		See Detail
	8b1	Base		9	3'-4"	30.0	80.1		12"
21"	5a1	Base		2	17'-2"	34.4	35.9	148.6	See Detail
	5a2	Base		2	3'-5"	6.9	7.2		See Detail
	8b1	Base		11	3'-7"	39.5	105.5		12"
24"	5a1	Base		2	19'-4"	38.7	40.4	161.3	See Detail
	5a2	Base		2	3'-8"	7.4	7.7		See Detail
	8b1	Base		13	3'-10"	49.9	133.2		12"

For reinforcing steel used in construction of "Beveled Pipe and Guard", use deformed bars meeting the requirements of Article 4151.03 of the Standard Specifications and hot-dip galvanized according to ASTM A123.

Use Class 'C' Concrete in the construction of Beveled Pipe and Guard.

Cut the pipe to fit the foreslope. Cut slots into the pipe for placement of the No. 8 bars. After the foreslope has been placed, fit the No. 8 bars into the slots cut in the pipe so they will be in proper position when the concrete collar is poured.

Price bid for "Beveled Pipe and Guard," each, is full compensation for furnishing all materials and constructing the Beveled Pipe and Guard.

Special Note:

A silt fence ditch check is required immediately upstream from the inlet. Refer to EC-201 for construction details.

Possible Contract Item:
Beveled Pipe and Guard

Possible Tabulations:
104-3
112-8

IOWADOT

STANDARD ROAD PLAN

REVISION
New 04-21-15

DR-212

SHEET 1 of 1

REVISIONS: New. Replaces RF-27.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

BEVELED PIPE AND GUARD

SECTION 4040 - SUBDRAINS AND FOOTING DRAIN COLLECTORS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 2 – PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

3.01 SUBDRAINS

A. Install Type 1 or Type 2 subdrain where specified in the contract documents. Comply with Figure 4040.231 (ADD), DR-301, and DR-303.

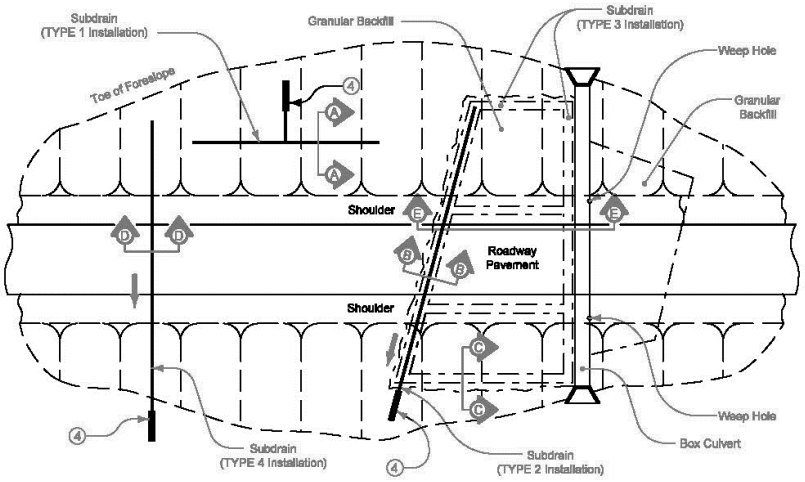
C. Provide outlets where specified in the contract documents.

3. (ADD) Comply with 4040.233 and DR-306 for outlets to grade.

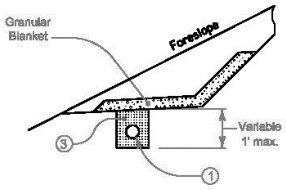
3.04 (ADD) IOWA DOT STANDARD ROAD PLANS

A. Add the following details:

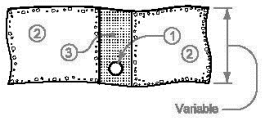
1. DR-301 Subdrains for Fill or Foundation Drainage (Standard)
2. DR-303 Subdrains (Longitudinal)
3. DR-306 Precast Concrete Headwall for Subdrain Outlets.



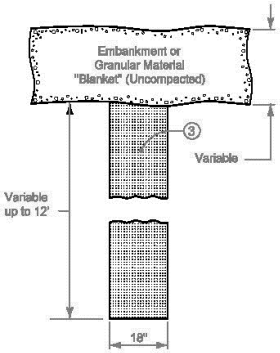
PLAN VIEW OF TYPICAL STANDARD SUBDRAIN INSTALLATIONS



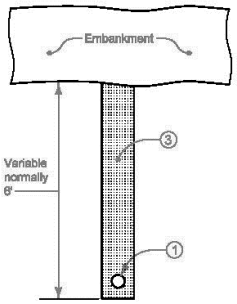
TYPE 1 INSTALLATION
BENCH DRAIN
SECTION A-A



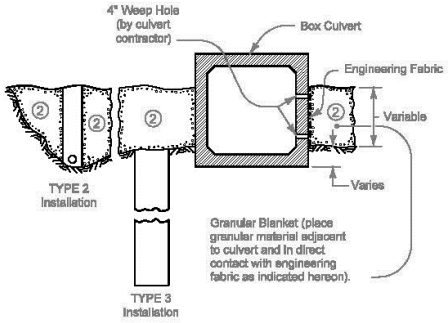
TYPE 2 INSTALLATION
SUBDRAIN
SECTION B-B



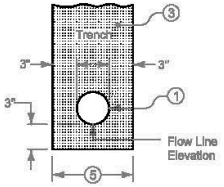
TYPE 3 INSTALLATION
TRENCH DRAIN
SECTION C-C



TYPE 4 INSTALLATION
SUBDRAIN
SECTION D-D



SECTION E-E
SUBSOIL DRAINAGE



TUBING PLACEMENT DETAIL
ALL TYPES

For specific information for individual locations, refer to the detail project plans, soils survey sheets, and tabulations of subdrains.

Dispose of material excavated from trenches for subdrain as directed by the Engineer. No extra compensation will be made for such disposal.

Cap blind ends of subdrains with a metal cap or by other methods approved by the Engineer. Install all perforated pipe with the perforations centered on flowline of the bottom side of the subdrain.

Place Granular Material for Blankets as indicated on the plans.

① Perforated Subdrain (Polyethylene Corrugated Tubing).

② Granular Material for Blanket (Uncompacted).

③ Porous Backfill (Uncompacted).

④ For Subdrain outlet construction details, see DR-305 and DR-306.

⑤ 10 inches for 4 inch subdrain; 12 inches for 6 inch subdrain.

Possible Contract Items:
- Standard Subdrain
- Trench Drain
- Granular Material for Blanket and Subdrain
- Subdrain Outlet (DR-305)
- Subdrain Outlet (DR-306)

Possible Tabulation:
- 104-5C

IOWA DOT

REVISION
1 10-17-17

STANDARD ROAD PLAN

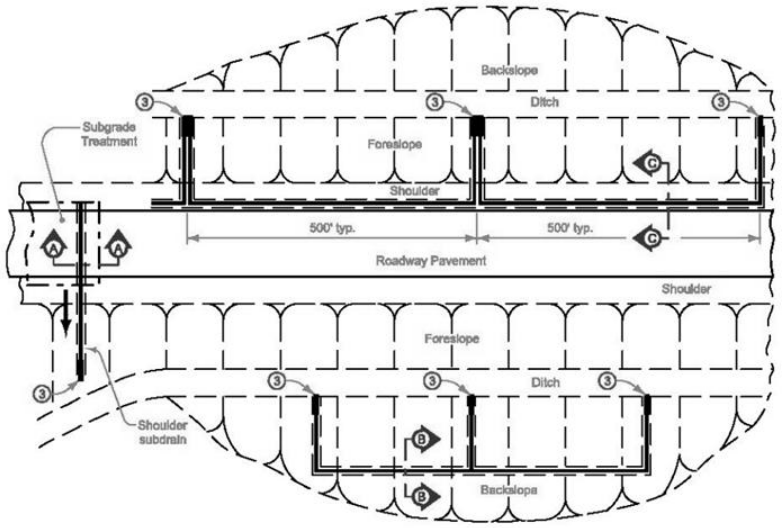
DR-301

SHEET 1 of 1

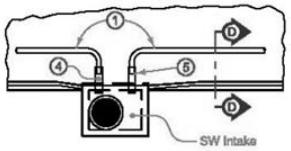
REVISIONS: Reference to the DR-304 have been changed to the DR-306.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

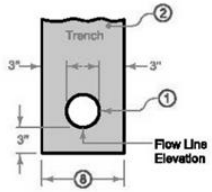
SUBDRAINS FOR FILL OR FOUNDATION DRAINAGE (STANDARD)



PLAN



INTAKE OUTLET



TUBING PLACEMENT
ALL TYPES

When culverts which are less than 1 foot below the trench bottom are encountered within a tabulated subdrain, stop the trench 3 feet from the culvert and resume 3 feet beyond the culvert.

On new construction projects, place the subdrain after the special backfill, if required, and prior to granular or paved shoulder material.

Except for backslope installations, if the Contractor's operations result in a trench, place and compact granular shoulder material in the trench to be level with the adjacent surface prior to opening lanes to traffic.

(1) Perforated Subdrain (Corrugated Polyethylene Tubing).

(2) Porous Backfill for Subdrain (compacted).

(3) Subdrain outlets. See DR-306.

(4) 2 foot section of corrugated metal pipe of diameter 2" larger than subdrain or 2 foot section of double-walled PE or PVC pipe of the same diameter as subdrain. Pipe will be paid for as "Subdrain Outlet (DR-303)".

(5) Connect PE or PVC outlet with an appropriate coupler. Connect CMP outlet one of two ways: (1) inside-fit reducer coupler (1 foot minimum fit inside CMP); or (2) insert 1 foot of the 4 inch subdrain into 6 inch CMP and fully seal entire opening with grout.

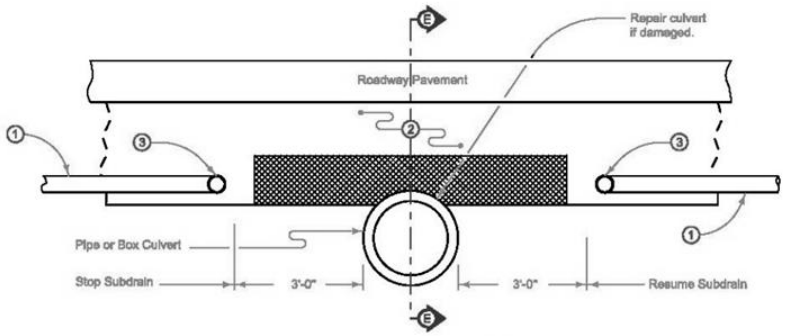
(6) Place porous backfill in direct contact with a minimum of 2 inches of pavement and continuous to shoulder material as per note 10 or 11.

(7) If the trench is inadvertently carried over the culvert, repair the trench as detailed on this sheet. If obstruction is 1 foot or more below trench bottom, carry subdrain line over in continuous alignment. No payment will be made for trench repair.

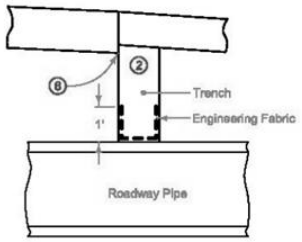
(8) 10 inches for 4 inch subdrain. 12 inches for 6 inch subdrain.

Possible Contract Items:
Subdrain, Longitudinal, (Backslope)
Subdrain, Longitudinal, (Shoulder)
Subdrain Outlet (DR-303)
Subdrain Outlet (DR-306)

Possible Tabulation:
104-9



TRENCH REPAIR AT PIPE CULVERT (7)



SECTION E-E

IOWADOT

STANDARD ROAD PLAN

REVISION	
3	10-17-17

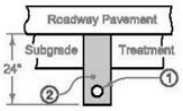
DR-303

SHEET 1 of 2

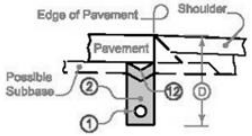
REVISIONS: Reference to the DR-304 have been changed to the DR-306.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

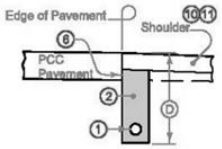
SUBDRAINS
(LONGITUDINAL)



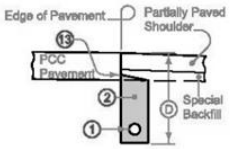
TYPE 5 INSTALLATION
SECTION A-A
Subgrade Treatment Subdrain



TYPE 6 INSTALLATION
SECTION C-C
For Drain Placement Prior to Subbase or Pavement Placement

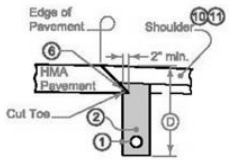


TYPE 7A INSTALLATION
SECTION C-C

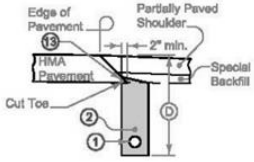


TYPE 7B INSTALLATION
SECTION C-C

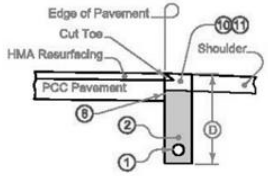
1. Perforated Subdrain (Corrugated Polyethylene Tubing).
2. Porous Backfill for Subdrain (compacted).
6. Place porous backfill in direct contact with a minimum of 2 inches of pavement and continuous to shoulder material as per note 11 or 12.
9. Install subdrain as cut proceeds.
10. On existing Granular or Earth Shoulders, replace with 4 inch minimum depth granular shoulder material.
11. On Paved Shoulders, refer to Section 2502 of the Standard Specifications for finishing shoulder.
12. Cut "V" notch just prior to subbase (if proposed) or pavement placement to assure uncontaminated contact.
13. Place top of subdrain trench at the bottom of pavement. Backfill trench so that a wedge of porous backfill has a minimum vertical contact of 2 inches with the pavement.



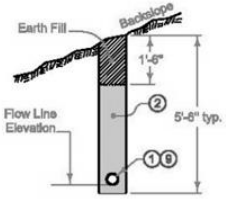
TYPE 8A INSTALLATION
SECTION C-C



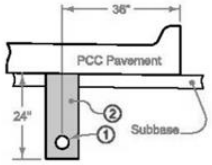
TYPE 8B INSTALLATION
SECTION C-C



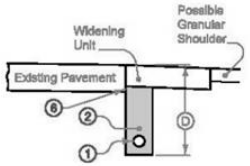
TYPE 9 INSTALLATION
SECTION C-C
Composite Pavement with Existing Shoulder



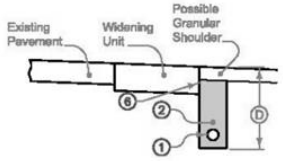
TYPE 11 INSTALLATION
SECTION B-B
Backslope



TYPE 12 INSTALLATION
SECTION D-D



TYPE 13 INSTALLATION
SECTION C-C
For New Widening Unit If Thinner than Existing Pavement



TYPE 14 INSTALLATION
SECTION C-C
For New Widening Unit If Thicker than Existing Pavement

IOWA DOT

REVISION	
3	10-17-17

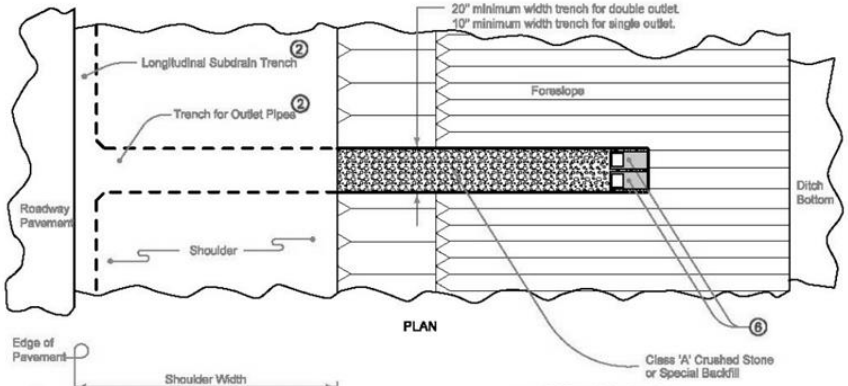
STANDARD ROAD PLAN DR-303

SHEET 2 of 2

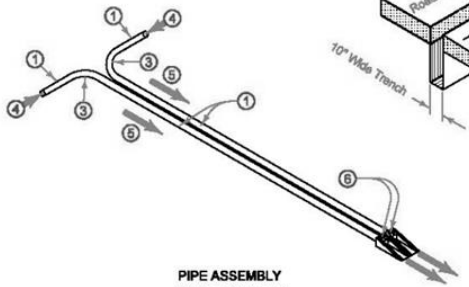
REVISIONS: Reference to the DR-304 have been changed to the DR-306.

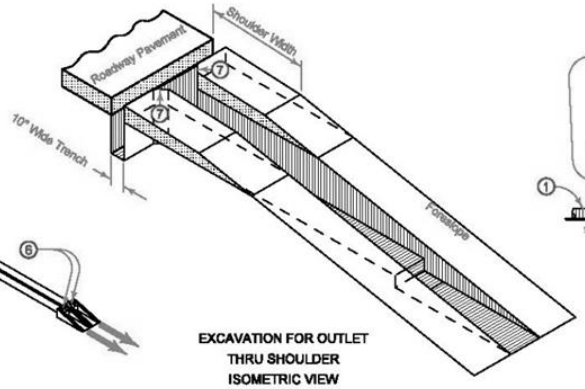
Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

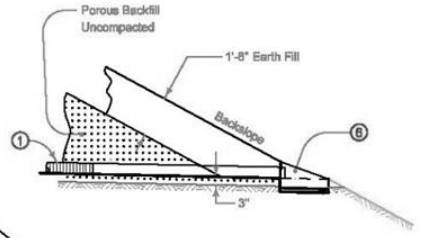
SUBDRAINS (LONGITUDINAL)



LONGITUDINAL AND TRANSVERSE OUTLETS







Extend subdrain 3 inches minimum (6 inches maximum) into precast subdrain headwall. Connect using one of the following methods:
- -Grouted connection using a non-shrink grout complying with Materials I.M. 491.13.
- -Gasketed connection approved by the Engineer.

Shape adjacent slope to match slope of precast subdrain headwall.

1. Perforated Subdrain (Polyethylene Corrugated Tubing).
2. On projects where existing shoulder material is removed, replace the shoulder material according to Article 2502.03, C of the Standard Specifications.
3. 'Y' or 'T' connection will not be allowed. Place subdrain on 1 foot minimum radius.
4. Direction of flow.
5. 6 inch minimum drop in elevation between longitudinal subdrain and outlet. 12 inch minimum drop for projects using recycled PCC subbase.
6. Precast concrete headwall.
7. Bevel the trench to provide a minimum of 3 inches of porous backfill surrounding all portions of subdrain pipe.
8. Place class 'A' crushed stone or Special Backfill over outlet and carefully compact to avoid damaging outlet pipe.

Possible Contract Item:
Subdrain Outlet, DR-306

Possible Tabulation:
104-5C
104-9

IOWA DOT

REVISION	
1	10-16-18

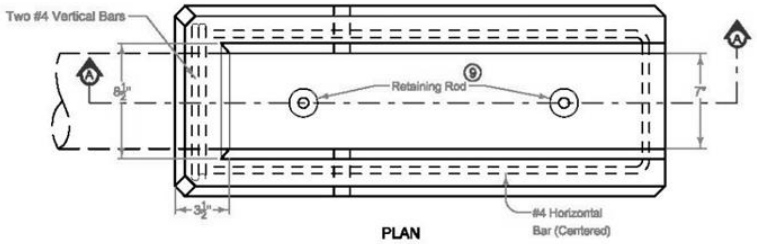
STANDARD ROAD PLAN DR-306

SHEET 1 of 2

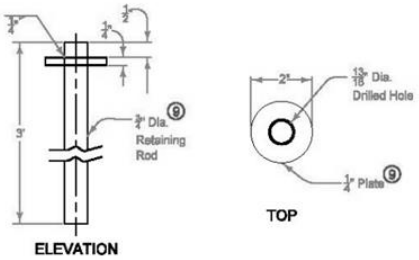
REVISIONS: Modified drawing on sheet 2 to allow one size headwall to be cast. Modified circle note 8 and added circle note 12 on sheet 2.

APPROVED BY DESIGN METHODS ENGINEER

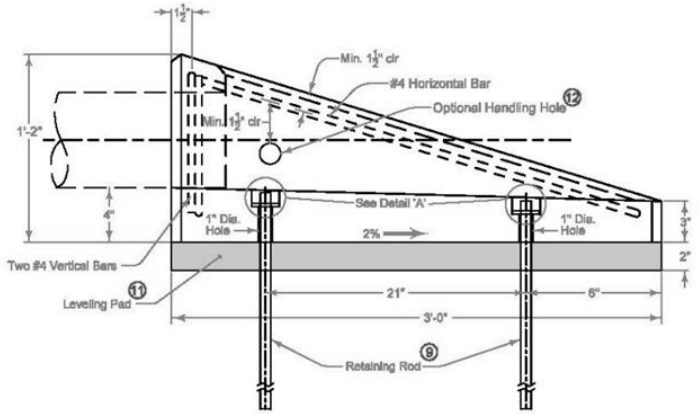
PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS



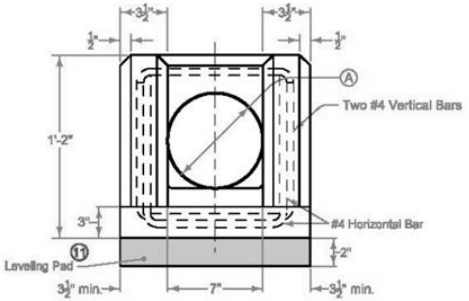
PLAN



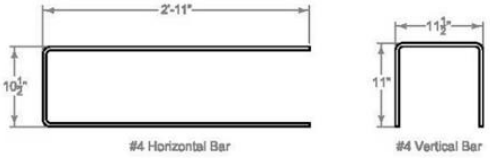
RETAINING ROD



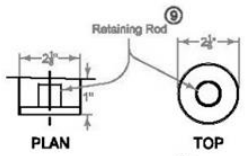
SECTION A-A



END



BENT BAR SHAPES



DETAIL 'A'
(Recess for Retaining Rod)

Comply with Section 2419 of the Standard Specifications.

(9) ASTM A36 Steel galvanized according to ASTM A123 or ASTM F2329 after shop welding is complete.

(10) After installing retaining rod, fill recess with bituminous material complying with ASTM C990 to prevent moisture infiltration.

(11) Granular material complying with Section 4133 of the Standard Specifications.

(12) Maximum diameter 2 inches. Fill hole with soil tight plug after placing headwall and before placing backfill.

DIMENSION	4" DIA PIPE	6" DIA PIPE
Ⓐ	5"	7"

IOWA DOT

STANDARD ROAD PLAN

REVISION	
1	10-16-18

DR-306

SHEET 2 of 2

REVISIONS: Modified drawing on sheet 2 to allow one size headwall to be cast. Modified circle note 9 and added circle note 12 on sheet 2.

APPROVED BY DESIGN METHODS ENGINEER

PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS

SECTION 4050 - PIPE REHABILITATION

PART 1 - GENERAL

NO REVISIONS

PART 2 – PRODUCTS

NO REVISIONS

PART 3 – EXECUTION

NO REVISIONS

SECTION 4060 - CLEANING, INSPECTION, AND TESTING OF SEWERS

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

2.02 (ADD) FORCE MAIN CLEANING PIG

A. The force main cleaning pigs shall be light-density crisscross pigs constructed of a minimum of two (2) pounds per cubic foot density foam and coated with polyurethane elastomer in crisscross pattern.

B. The force main cleaning pigs shall have an open nose design for maximum jetting action and pressure equalization. The pigs shall have the ability to scratch, scrape, plow and jet to assist in cleaning and flushing debris from the force main. The pig units shall be sized to the pipe in accordance with the manufacturer's recommendations and shall have a length two times the diameter. The nose shall be parabolic shaped in order that it may better enter restrictions. The pigs shall have the ability to negotiate mitered and short radius bends, short radius elbows, tees, crosses, and multi-dimensional pipe sizes and valves.

C. All pipeline pig ingredients shall be certified by the manufacturer as having been successfully used in similar applications and comply with these specifications.

PART 3 – EXECUTION

3.03 VIDEO INSPECTION

A. (DELETE) ~~General:~~

~~1. Unless otherwise specified in the contract documents conduct video inspection of all new and rehabilitated sanitary and storm sewers after all backfill and compaction operations are completed, but prior to paving.~~

~~2. Notify the Engineer the day prior to inspection so the Engineer may be~~

~~present during the inspection.~~

3. ~~Notify the Engineer of the extent of noncompliance with the low spot depth tolerances in Section 4010 for sanitary sewers and Section 4020 for storm sewers.~~

4. ~~Re-inspect sewers after any corrective action has been completed.~~

B. (DELETE) ~~Inspection Procedure:~~

1. ~~Prior to video inspection, run sufficient water through the pipe to saturate potential low spots so they may be detected during inspection.~~

2. ~~Inspect each pipe segment between manholes or access points in a single, continuous run. Progress through the entire project in a uniform direction.~~

3. ~~Inspect all lateral connections and other observations at right angles utilizing the pan and tilt capabilities of the camera.~~

4. ~~Center the video camera in the pipe during the inspection.~~

5. ~~Do not exceed 30 feet of inspection per minute.~~

C. (DELETE) ~~Inspection Reporting:~~

1. ~~Provide a copy of the video inspection including on-screen continuous footage, pipe diameter, direction of viewing, and manhole and street location references in the recording. Affix labels to the recording media to include the name of the project, the date, and the location of the inspection.~~

2. ~~Provide a written report of the inspection. In the report, include true-to-scale drawings of all sewer defects and observation locations. Reference the time stamp on each line item entry on the written report.~~

A. (ADD) Prior to acceptance by the City, a television inspection on Sanitary Sewers shall be completed by the contractor. Said TV inspection shall be performed 30 days after backfilling. The TV inspection shall be with a pan & tilt color camera and a footage meter that accurately displays the camera's location on tape.

B. (ADD) The developer/contractor will be required to ensure that an informational meeting is set up between the entity performing the television inspection on the new construction and the City Engineer and/or Sewer Superintendent. The meeting is used to educate the entity's television operator on the proper inspection techniques while televising for the City of Marshalltown. Proper techniques are, but not limited to the following:

1. Identify each structure by proper structure number

2. Separate reports for each line segment televised

3. Pipe preparation before televising, to include cleaning or putting water down the line to show sags

4. Video tape procedures, including procedures for viewing laterals or connections

5. Timeliness in returning videos and paper reports

C. (ADD) All television inspections shall be provided in digital format (.MPEG, .MPG, or .WMV), PDF written report and in Wincan digital CD format. If not provided in Wincan digital format, the contractor shall pay $20 per line segment for the information to be data entered into the City system.

D. (ADD) After review of the videos and written reports, the City of Marshalltown will contact the developer or contractor of a positive review or identify areas that need to be repaired prior to final acceptance. Any repairs will need to be re-televised.

3.07 (ADD) FORCE MAIN CLEANING

A. All lines shall be thoroughly cleaned before acceptance until all traces of construction materials, soil or other foreign matter have been removed.

B. The Contractor shall take all necessary measures to protect adjacent facilities and property. Damages caused by water or water carried material shall be the responsibility of the Contractor.

C. All cleaning shall be completed prior to the initiation of the testing process described in Part 3.06.

D. Force main cleaning shall be accomplished using a hydraulically propelled polyurethane pig, conforming to the requirements of Part 2 above, to remove all construction debris from the force main.

SUPPLEMENTAL DIVISION 5 – WATER MAINS AND APPURTENANCES

(SEE MARSHALLTOWN WATER WORKS RULES AND REGULATIONS)

SUPPLEMENTAL DIVISION 6 - STRUCTURES FOR SANITARY AND STORM SEWER

SECTION 6010 - STRUCTURES FOR SANITARY AND STORM SEWERS

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

D. Casting Extension Rings:

1. Measurement: (DELETE) ~~Each casting extension ring will be counted~~ (ADD) None.
2. Payment: (DELETE) ~~Payment will be at the unit price for each casting extension ring~~ (ADD) Incidental to manhole.

1.09 (ADD) ACCEPTANCE CHECKLIST & WARRANTY BOND

Prior to final acceptance of the work, the contractor shall file with the City Clerk of the City of Marshalltown a maintenance bond guaranteeing suitable repairs of any defects or failures due to deficiencies in materials or inadequacies in workmanship for a period of 4 years for all improvements following completion of construction. The bond shall be for a sum equal to the total amount of the project. The contractor shall also file with the City Engineer all other required acceptance checklist items including testing/inspection forms, lateral construction forms, as-built drawings, construction costs and engineering certificate of completion forms. The acceptance checklist and warranty bond form are provided at end of section.

PART 2 - PRODUCTS

2.02 PRECAST

B. (ADD) Pre-cast manholes or parts of pre-cast manholes are preferred in lieu of building on the site.

2.03 CAST-IN-PLACE

C. (ADD) Manholes will be constructed with no lift holes in the manhole sections.

D. (ADD) Manholes shall be provided with gasketed joints conforming to ASTM C-443 for rubber “O” ring joints or be sealed with a double layer of a cold-applied mastic joint sealing compound recommended by the manufacturer for the intended use and approved by the Engineer. Comply with ASTM C 990.

2.09 MANHOLE OR INTAKE ADJUSTMENT RINGS (Grade Rings)

A. Use one of the following materials for grade adjustments of manhole or intake frame and cover assemblies:

1. Reinforced Concrete Adjustment Rings: Comply with ASTM C 478. Provide rings free from cracks, voids, and other defects. (ADD) Concrete adjustment rings will be sealed with a butyl mastic seal between each ring installed and

between rings and casting.

2. High Density Polyethylene Adjustment Rings: Comply with ASTM D 1248 for recycled plastic.

   d. Install adjustment rings on clean, flat surfaces according to the manufacturer's recommendations with the proper butyl rubber sealant/adhesive (ADD) between each ring and manhole structure/casting.

3. Expanded Polypropylene Adjustment Rings: Comply with ASTM D 4819 for expanded polypropylene when tested according to ASTM D 2375.

   d. (ADD) EPP adjustment rings shall be sealed with a moisture curing, polyether adhesive/sealant approved by the manufacturer between each ring and manhole structure/casting.

2.10 CASTINGS (Ring, Cover, Grate, and Extensions)

D. Casting Types:

4. (ADD) Manhole castings shall be provided with a minimum 24-inches clear opening.

5. (ADD) Standard sanitary manhole castings shall meet the requirements of MP-7.2, Type A. Manhole covers shall be provided with a rubber gasket to provide a self-sealing water tight lid when installed. Lids will be furnished with concealed pick holes. Floating castings shall be Type B and may be used with paving projects. Pre-Approved Type A castings are Neenah Foundry Company R-1642, R-1796-E, and R-1900-C; Deeter Foundry Inc. 1247; and East Jordan Iron Works 1040. Pre-Approved Type B castings are Neenah Foundry Company R-1673-B; Deeter Foundry Inc. 1185; and East Jordan Iron Works 1795 and Selflevel 1205 and 3025.

6. (ADD) Castings for manholes in waterways and flood plain locations shall meet the requirements of MP-7.2, Type C. Pre-Approved Type C castings are Neenah Foundry Company R-1916-F, Deeter Foundry Inc. 1247-B, and East Jordan Iron Works 1040 bolted.

2.11 ADDITIONAL MATERIALS FOR SANITARY SEWER MANHOLES

A. Infiltration Barrier:

5. (ADD) Manhole castings with EPP and HDPE adjustment rings properly assembled and sealed will not be required to have a separate casting seal. Manhole castings with concrete adjustment rings will require a separate casting seal.

2.13 STEPS

A. (DELETE) ~~Provide steps in all circular, precast manholes unless otherwise specified in the contract documents~~ (ADD) Manhole steps will not be installed unless specifically called for on the detailed drawings. When called out on the plans, steps shall conform to the requirements shown thereon and as supplemented herein.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS FOR INSTALLATION OF MANHOLES AND INTAKES

F. Joint Sealant:

1. Sanitary Sewer Manholes:

   a. Install rubber O-ring or profile gasket (precast structures) (ADD) or a double layer of a cold-applied mastic joint sealing compound.

3.08 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

1. MP-5 Typical Sanitary Sewer Manhole Detail
2. MP-6 Typical Sanitary Sewer Drop Manhole Detail
3. MP-7.2 Typical Sanitary Sewer Manhole Casting Seal Detail

3.09 (ADD) DELETED SUDAS FIGURES

A. 6010.306 Chimney Seals for Sanitary Sewer Manholes

B. 6010.307 Drop Connection for Sanitary Sewer Manholes

C. 6010.513 Open-sided Area Intake (**Note: May be used with preapproval of Engineer if capacity cannot be matched by another inle**t)

MARSHALLTOWN SPECIAL PROVISIONS
FINAL ACCEPTANCE CHECKLIST

A. Manhole Vacuum testing – for Sanitary Sewers

B. Warranty Bond – Storm Sewers (See Specifications Part I)

C. TV Inspection – For Storm Sewer Pipe.

D. As-Built Drawings – For Storm Sewers

E. Engineering Certificate of Completion in accordance with the Plans and Specifications – Storm Sewers

F. Contractors Cost of Construction Report - This is to meet the financial reporting requirements of the city (GASB 34)

LOW PRESSURE/VACUUM TESTING OF SANITARY MANHOLES

PROJECT NAME: _____

LOCATION: _____

CONTRACTOR: _____

LIST MANHOLE TESTED: DATE _____

_____

Manhole No.: _____ Station: _____
Barrel Size: _____ or Dia.: _____
Depth: _____ (Rim to F/L)
Poured in Place ____ or Precast _____
No. of adjusting rings: _____
Manufacturer of Test Device: _____
Manufacturer's test procedure recommendations

TEST INFORMATION:

Low Pressure Method:
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Sec(s)
CONCLUSION: Complies: Yes _____ No _____

Vacuum Method
Initial Vacuum: _____ Hg
Starting Test Vacuum: _____ Hg
Ending Test Vacuum: _____ Hg
Test Duration: Sec(s)
CONCLUSION: Complies: Yes _____ No _____

LIST MANHOLE TESTED: DATE _____

_____

Manhole No.: _____ Station: _____
Barrel Size: _____ or Dia.: _____
Depth: _____ (Rim to F/L)
Poured in Place ____ or Precast _____
No. of adjusting rings: _____
Manufacturer of Test Device: _____
Manufacturer's test procedure recommendations

TEST INFORMATION:

Low Pressure Method:
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Sec(s)
CONCLUSION: Complies: Yes _____ No _____

Vacuum Method
Initial Vacuum: _____ Hg
Starting Test Vacuum: _____ Hg
Ending Test Vacuum: _____ Hg
Test Duration: Sec(s)
CONCLUSION: Complies: Yes _____ No _____

LIST MANHOLE TESTED: DATE _____

_____

Manhole No.: _____ Station: _____
Barrel Size: _____ or Dia.: _____
Depth: _____ (Rim to F/L)
Poured in Place ____ or Precast _____
No. of adjusting rings: _____
Manufacturer of Test Device: _____
Manufacturer's test procedure recommendations

TEST INFORMATION:

Low Pressure Method:
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Sec(s)
CONCLUSION: Complies: Yes _____ No _____

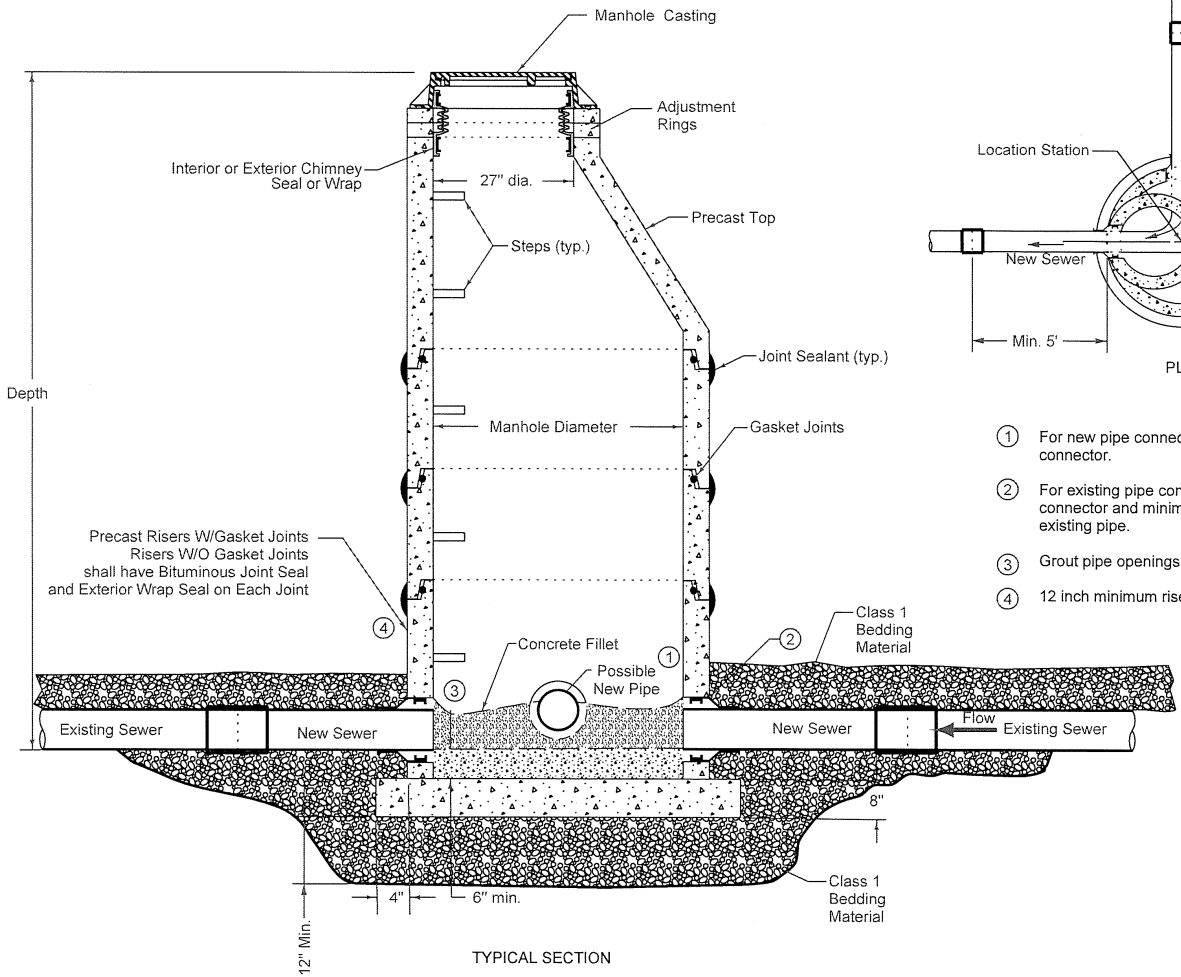
Vacuum Method
Initial Vacuum: _____ Hg
Starting Test Vacuum: _____ Hg
Ending Test Vacuum: _____ Hg
Test Duration: Sec(s)
CONCLUSION: Complies: Yes _____ No _____

Testing procedures observed and Information recorded by:

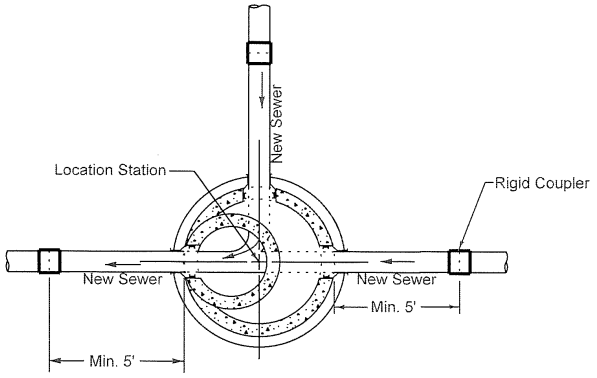
_____
Project Representative

Results reviewed and affirmed by:

_____
Project Engineer
City of Marshalltown, Iowa



TYPICAL SECTION



PLAN

1. For new pipe connections, provide cored opening with flexible pipe connector.
2. For existing pipe connections, provide cored opening with flexible pipe connector and minimum 5-feet of new pipe with rigid coupler to existing pipe.
3. Grout pipe openings to slope into flow line with fillet.
4. 12 inch minimum riser height above all pipe openings.

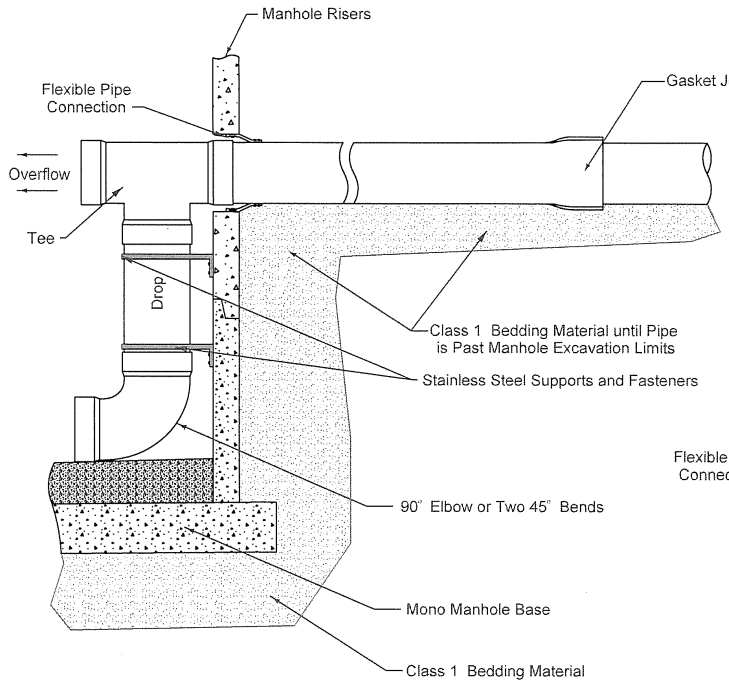
Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes (3)	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER MANHOLE DETAIL

DATE: 07/24/19

MP-5



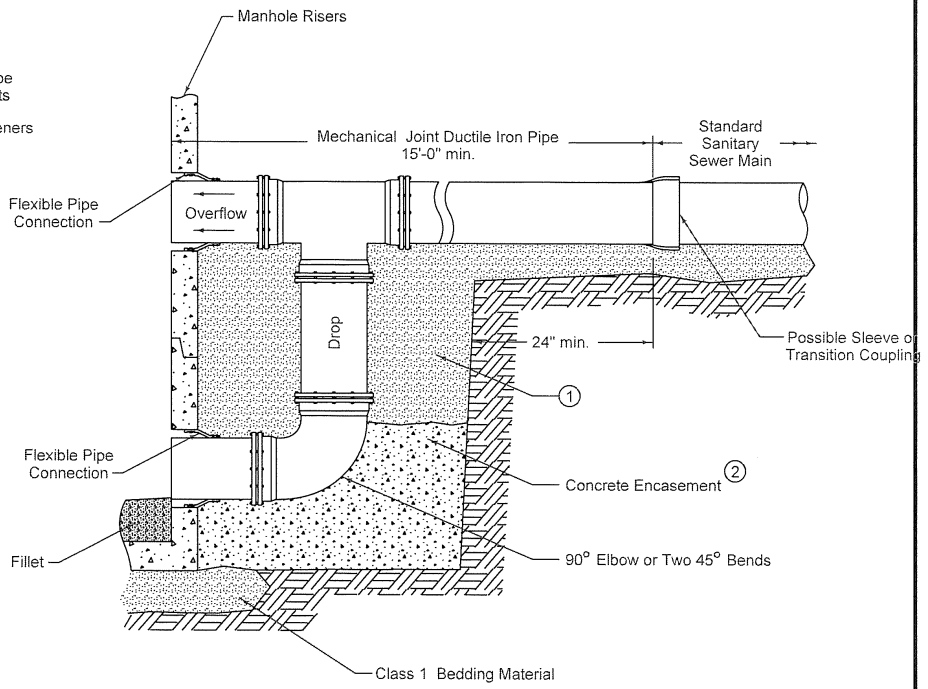
INSIDE DROP

Construct outside drop and overflow from ductile iron pipe of same diameter specified for sewer main. Provide mechanical joints for all ductile iron pipe and fittings.

Construct inside drop and overflow from same material and diameter specified for sewer main. All joints will be gasketed.

(1) Place Class 1 bedding material, CLSM, flowable mortar, or concrete from top of elbow to bottom of sewer main.

(2) Encase elbow in concrete. 12 inches minimum on all sides.



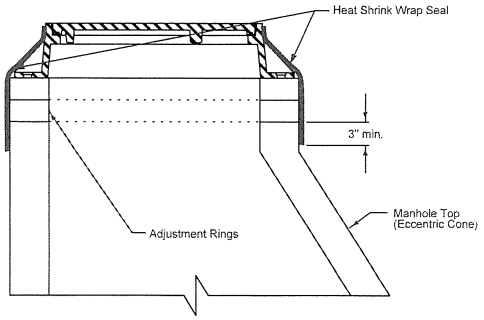
OUTSIDE DROP

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

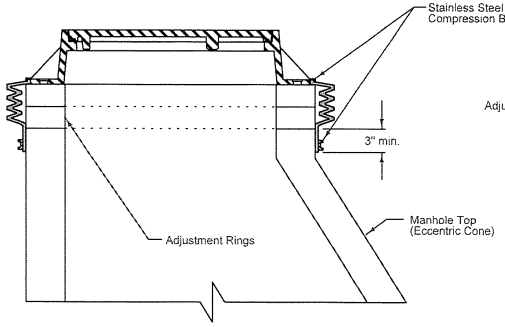
TYPICAL SANITARY SEWER DROP MANHOLE DETAILS

DATE: 07/24/19

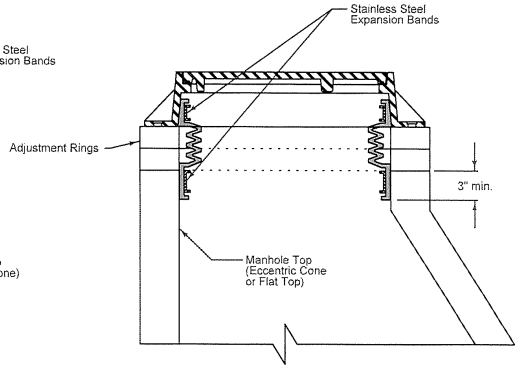
MP-6



EXTERNAL WRAP SEAL

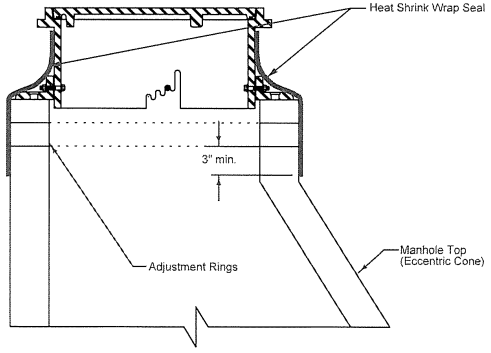


EXTERNAL CHIMNEY SEAL

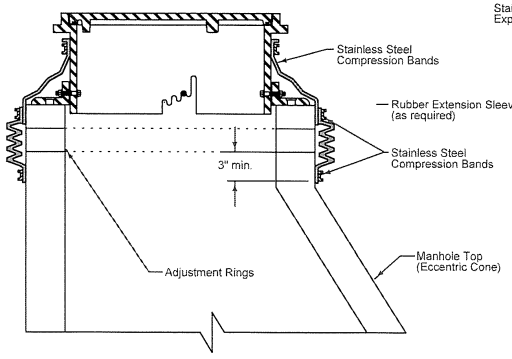


INTERNAL CHIMNEY SEAL

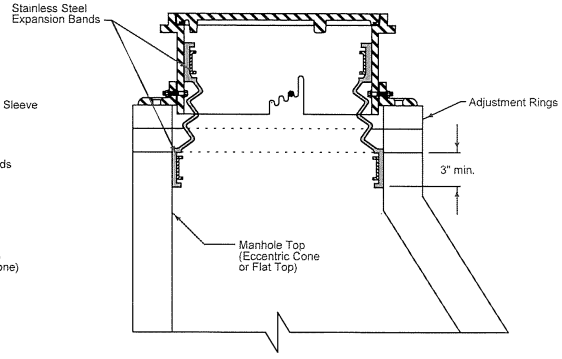
CASTING SEALS FOR 2-PIECE CASTINGS



EXTERNAL WRAP SEAL



EXTERNAL CHIMNEY SEAL



INTERNAL CHIMNEY SEAL

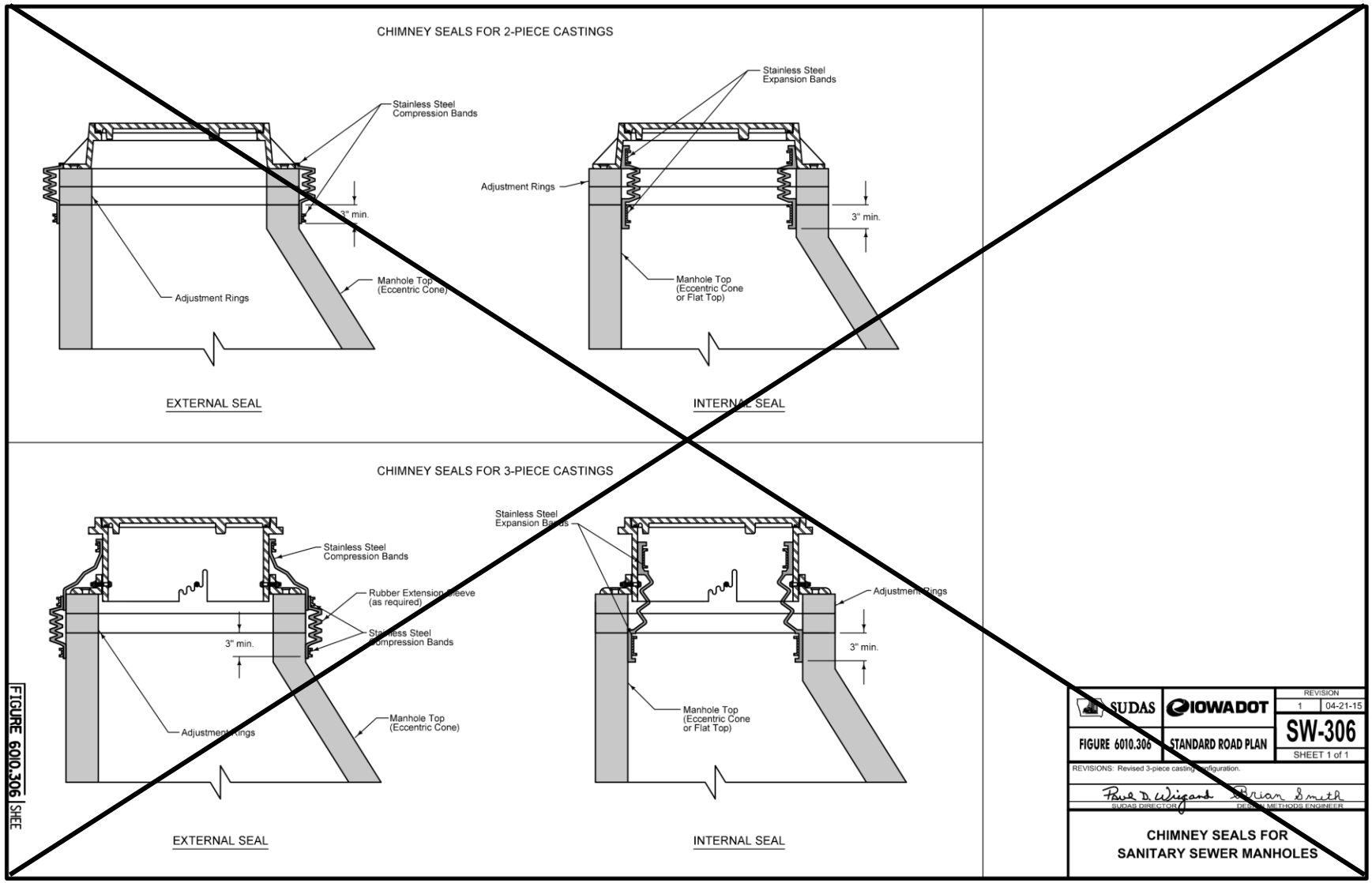
CASTING SEALS FOR 3-PIECE CASTINGS

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER MANHOLE CASTING SEAL DETAILS

DATE: 05/20/19

MP-7.2


CHIMNEY SEALS FOR 2-PIECE CASTINGS
Stainless Steel Compression Bands
3" min.
Adjustment Rings
Manhole Top (Eccentric Cone)
EXTERNAL SEAL
Stainless Steel Expansion Bands
Adjustment Rings
3" min.
Manhole Top (Eccentric Cone or Flat Top)
INTERNAL SEAL
CHIMNEY SEALS FOR 3-PIECE CASTINGS
Stainless Steel Compression Bands
Rubber Extension Sleeve (as required)
Stainless Steel Compression Bands
3" min.
Adjustment Rings
Manhole Top (Eccentric Cone)
EXTERNAL SEAL
Stainless Steel Expansion Bands
Adjustment Rings
3" min.
Manhole Top (Eccentric Cone or Flat Top)
INTERNAL SEAL
FIGURE 6010.306 SHEE
SUDAS
IOWA DOT
REVISION
1 04-21-15
FIGURE 6010.306
STANDARD ROAD PLAN
SW-306
SHEET 1 of 1
REVISIONS: Revised 3-piece casting configuration.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
CHIMNEY SEALS FOR SANITARY SEWER MANHOLES

Construct drop and overflow from ductile iron pipe of same diameter specified for sewer main. Provide mechanical joints for all ductile iron pipe and fittings.

(1) Place Class 1 bedding material, CLSM, flowable mortar, or concrete from top of elbow to bottom of sewer main.

(2) Encase elbow in concrete. 12 inches minimum on all sides.

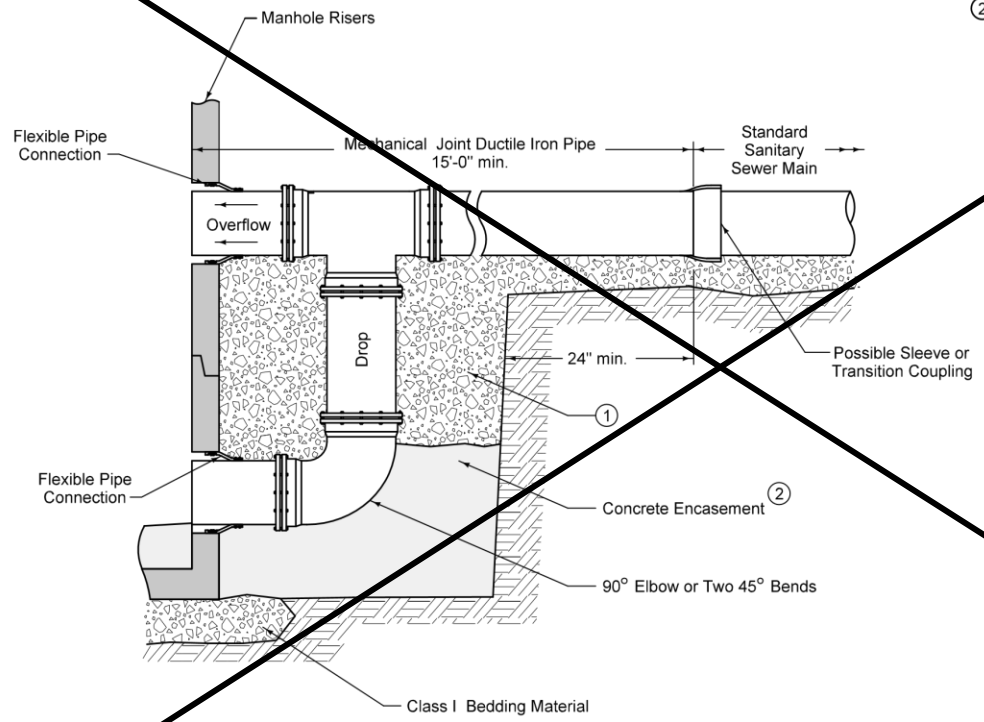


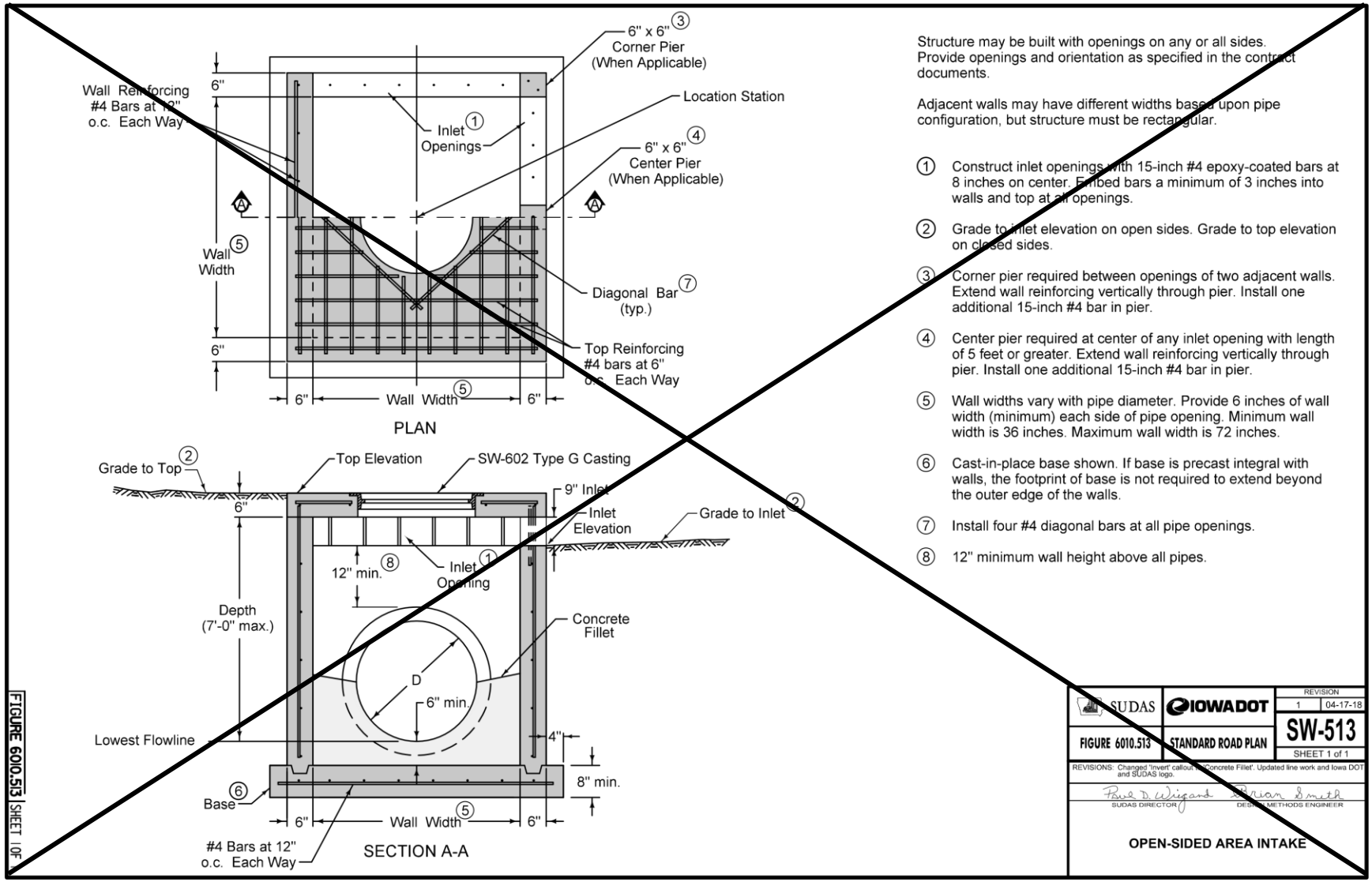
FIGURE 6010.307 SHEET

SUDAS	IOWA DOT	REVISION 1 04-17-18
FIGURE 6010.307	STANDARD ROAD PLAN	SW-307
		SHEET 1 of 1

REVISIONS: Replaced Iowa DOT and SUDAS logos.

Rud D. Wigant — SUDAS DIRECTOR
Brian Smith — DESIGN METHODS ENGINEER

DROP CONNECTION FOR SANITARY SEWER MANHOLE



Structure may be built with openings on any or all sides. Provide openings and orientation as specified in the contract documents.

Adjacent walls may have different widths based upon pipe configuration, but structure must be rectangular.

① Construct inlet openings with 15-inch #4 epoxy-coated bars at 8 inches on center. Embed bars a minimum of 3 inches into walls and top at all openings.

② Grade to inlet elevation on open sides. Grade to top elevation on closed sides.

③ Corner pier required between openings of two adjacent walls. Extend wall reinforcing vertically through pier. Install one additional 15-inch #4 bar in pier.

④ Center pier required at center of any inlet opening with length of 5 feet or greater. Extend wall reinforcing vertically through pier. Install one additional 15-inch #4 bar in pier.

⑤ Wall widths vary with pipe diameter. Provide 6 inches of wall width (minimum) each side of pipe opening. Minimum wall width is 36 inches. Maximum wall width is 72 inches.

⑥ Cast-in-place base shown. If base is precast integral with walls, the footprint of base is not required to extend beyond the outer edge of the walls.

⑦ Install four #4 diagonal bars at all pipe openings.

⑧ 12" minimum wall height above all pipes.

SUDAS	IOWA DOT	REVISION 1 04-17-18
FIGURE 6010.513	STANDARD ROAD PLAN	SW-513
		SHEET 1 of 1

REVISIONS: Changed 'invert' callout to 'Concrete Fillet'. Updated line work and Iowa DOT and SUDAS logo.

Paul D. Wigant — SUDAS DIRECTOR
Brian Smith — DESIGN METHODS ENGINEER

OPEN-SIDED AREA INTAKE

FIGURE 6010.513 SHEET 1 OF 1

SECTION 6020 - REHABILITATION OF EXISTING MANHOLES

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 6030 - CLEANING, INSPECTION, AND TESTING OF STRUCTURES

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 7 - STREETS AND RELATED WORK

SECTION 7010 -PORTLAND CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

2.01 (ADD) MATERIALS

P. Fiber Reinforcement – See Section 7011, 2.01. E.

PART 3 - EXECUTION

3.02 PAVEMENT CONSTRUCTION

C. Surface Fixture Adjustment:

1. Adjust manhole frames and other fixtures within area to be paved to conform to finished surface. Comply with Section 6010 (DELETE)~~, 3.04~~ (ADD) and 6020 for manhole adjustments (DELETE)~~ and Section 5020, 3.04 for water fixture adjustment~~s.

E. (ADD) Bar and Reinforcement Placement:

5. If noted on the plans, fiber mesh reinforcing shall be used with all concrete sidewalk and pavement. The fiber mesh shall be added at the rate of 1 bag per cubic yard or as otherwise recommended by the manufacturer. The fiber shall be added directly to the truck at the time of mixing.

I. Finishing:

5. Surface Treatment:

b. **(DELETE) ~~Surface Tining:~~** ~~When surface tining is specified, use a longitudinal tining. Under special circumstances, when specified in the contract documents, transverse tining may be required.~~

~~1) Longitudinal:~~

~~a) Complete longitudinal surface tining using a machine with a wire broom or comb. For small or irregular areas, or during equipment breakdown, hand methods may be used. Use a broom or comb with a single row of tines 1/8 inch (+/- 1/64 inch) in width and uniformly spaced at 3/4 inch intervals. The depth of the grooves must be a minimum of 1/8 inch to a maximum of 3/16 inch in the plastic concrete.~~

~~b) Use equipment with horizontal and vertical string line controls to ensure straight grooves.~~

~~c) Conduct this operation at such time and in such manner that the desired surface texture will be achieved while minimizing displacement of the larger aggregate particles and before the surface permanently sets.~~

~~d) At longitudinal joints, leave a 2 to 3 inch wide strip of pavement surface (centered along the joint) that is not grooved for the length of the joint.~~

~~2) Transverse:~~

~~a) If transverse surface tining is required or allowed, use a machine with a wire broom or comb. For small or irregular areas, or during equipment breakdown, hand methods may be used. Use a broom or comb with a single row of tines 1/8 inch (+/- 1/64 inch) in width and randomly spaced from 3/8 inch to 1 5/8 inch with no more than 50% of the spacing exceeding 1 inch. The depth of the grooves must be a minimum of 1/8 inch to a maximum of approximately 3/16 inch in the plastic concrete.~~

~~b) Conduct this operation at such time and in such manner that the desired surface texture will be achieved while minimizing displacement of the larger aggregate particles and before the surface permanently sets.~~

~~c) Where abutting pavement is to be placed, the tining should extend as close to the edge as possible without damaging the edge.~~

~~d) If abutting pavement is not to be placed, do not tine the 6 inch area nearest the edge or 1 foot from the face of the curb.~~

3.03 CURB AND GUTTER CONSTRUCTION (DELETE) (~~See Figure 7010.102~~ (ADD) MD-2 Curb and Gutter Details.)

B. Use a paving machine for curb and gutter. For curb and gutter sections less than 250 feet, hand finish methods may be used (ADD) if approved by the City Engineer.

3.04 PAVEMENT PROTECTION

A. Weather Conditions: Do not place concrete when stormy or inclement weather or temperature prevents good workmanship. Temperature restrictions and protection requirements may be modified by the Engineer under unusual conditions.

1. Cold Weather:

2) Stop mixing and placing when the air temperature is 38ºF or less and falling or if the temperature stops rising and does not reach 38ºF.

a) (ADD) When air temperature falls below 38°F, paving may continue if Contractor follows the requirements set forth in ACI 306 for cold weather concrete.

b) (ADD) ACI 306 will require specific temperatures of the concrete mixture for placement and curing. If these minimum temperatures cannot be maintained, concrete placement will not be allowed to continue.

c) (ADD) For reference, the temperature requirements are provided in the following table from ACI 306R-10:

(ADD) Table 5.1—Recommended Concrete Temperatures

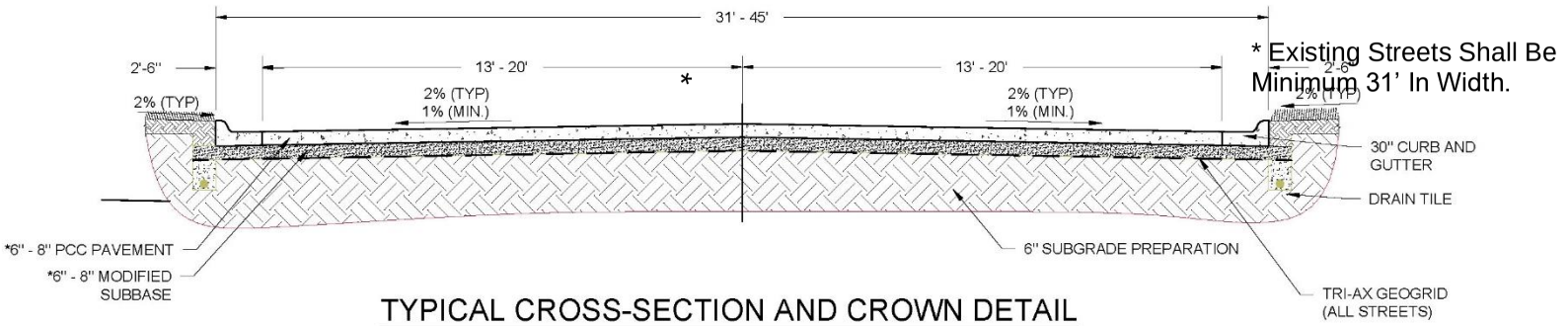
		Section size, minimum dimension			
		< 12 in. (300 mm)	12 to 36 in. (300 to 900 mm)	36 to 72 in. (900 to 1800 mm)	> 72 in. (1800 mm)
Line	**Air Temperature**	**Minimum concrete temperature as placed and maintained**			
1		55°F (13°C)	50°F (10°C)	45°F (7°C)	40°F (5°C)
		Minimum concrete temperature as mixed for indicated air temperature *			
2	Above 30°F (-1°C)	60°F (16°C)	55°F (13°C)	50°F (10°C)	45°F (7°C)
3	0 to 30°F (-18 to -1°C)	65°F (18°C)	60°F (16°C)	55°F (13°C)	50°F (10°C)
4	Below 0°F (-18°C)	70°F (21°C)	65°F (18°C)	60°F (16°C)	55°F (13°C)
5		**Maximum allowable gradual temperature drop in first 24 hours after end of protection**			
		50°F (28°C)	40° (22°C)	30°F (17°C)	20°F (11°C)

* For colder weather, a greater margin in temperature is provided between concrete as mixed and required minimum temperature of fresh concrete in place.

3.08 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

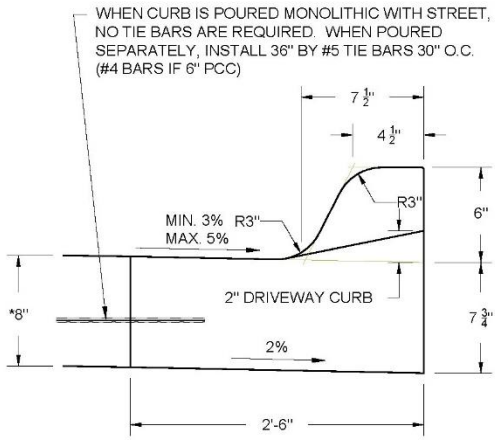
1. MR-1 PCC Pavement Typical Cross Sections
2. MR-3 Typical Residential Street Layout
3. MR-4 Typical Arterial/Collector Street Layout
4. MD-2 Typical Curb and Gutter Details
5. MR-5 Typical Street Utility Section Detail
6. MR-6 Typical Street Intersection Detail



* Existing Streets Shall Be Minimum 31' In Width.

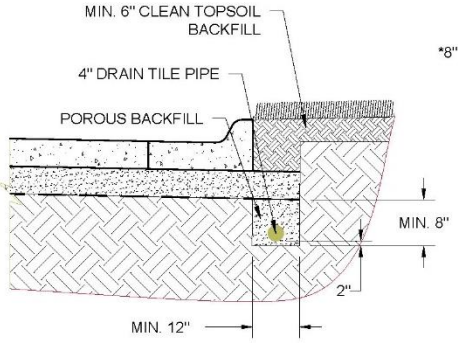
TYPICAL CROSS-SECTION AND CROWN DETAIL

NO SCALE



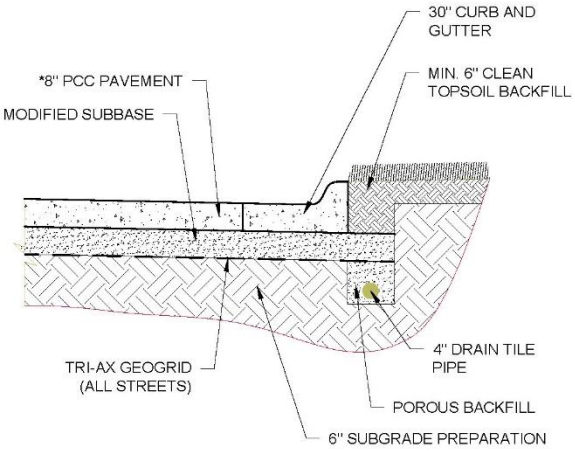
30" CURB AND GUTTER DETAIL

NO SCALE



SUBDRAIN DETAIL

NO SCALE



SUB-BASE AND SUBDRAIN DETAIL

NO SCALE

* RESIDENTIAL STREETS <1500 AADT 6" FIBER REINFORCED PCC & 6" SUBBASE

* ARTERIAL/COLLECTOR STREETS >1500 AADT 8" PCC & 8" SUBBASE.

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No. | Revisions | By | App. | Date

the City of Marshalltown

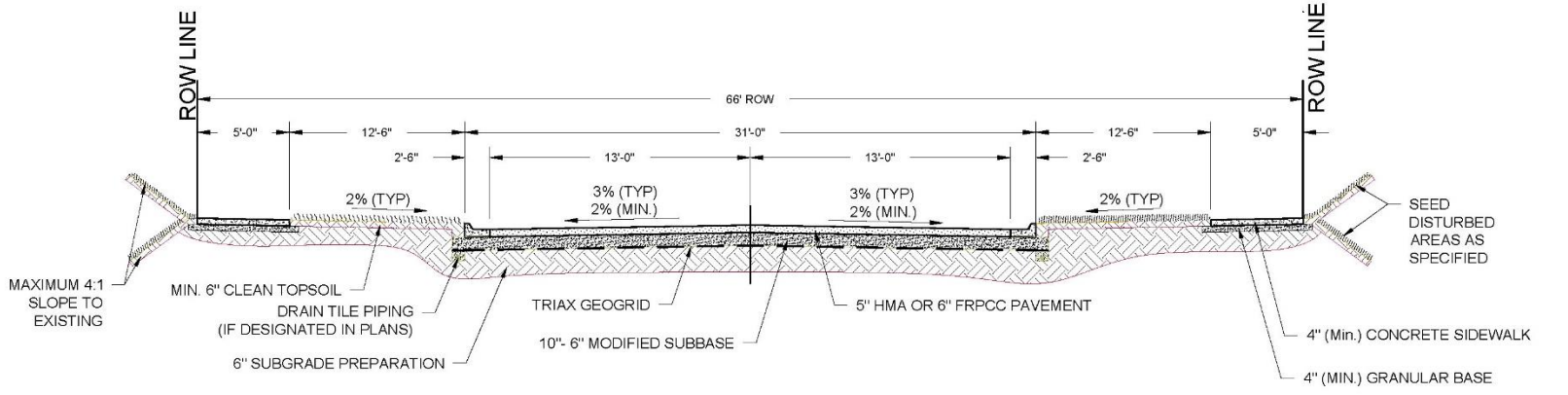
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCE | Scale: NONE | Proj. No: 103 | Dwg. No: 2015SPEC | Ver. No: MR-1 | Date: 2/5/03

MR-1 PCC PAVEMENT TYPICAL CROSS SECTIONS

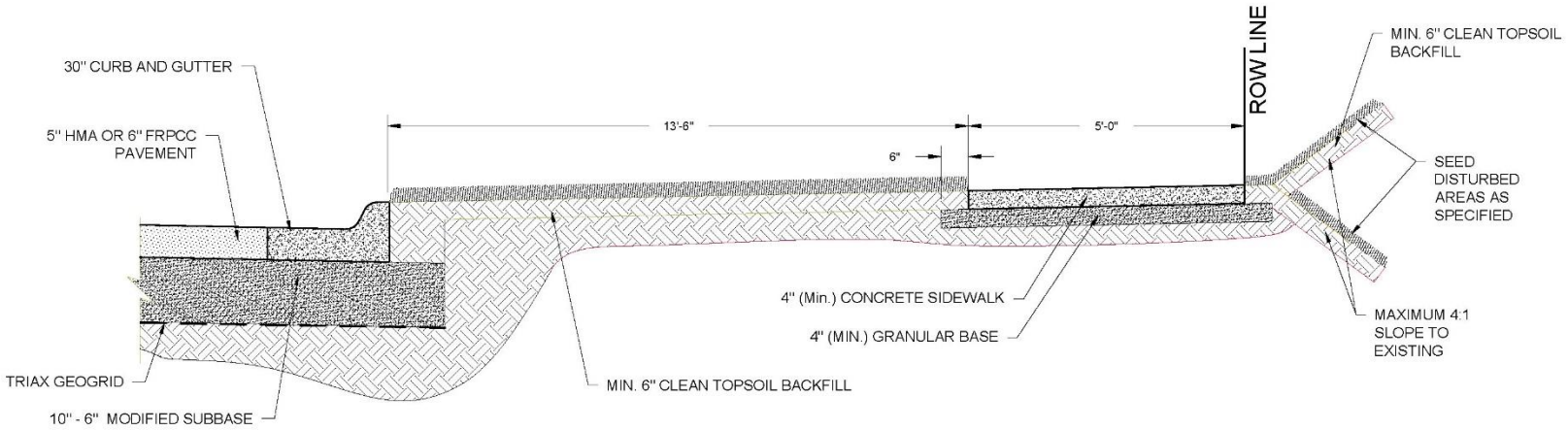
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

1 OF 4



TYPICAL RESIDENTIAL STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No. | Revisions | By | Appr. | Date

The City of Marshalltown

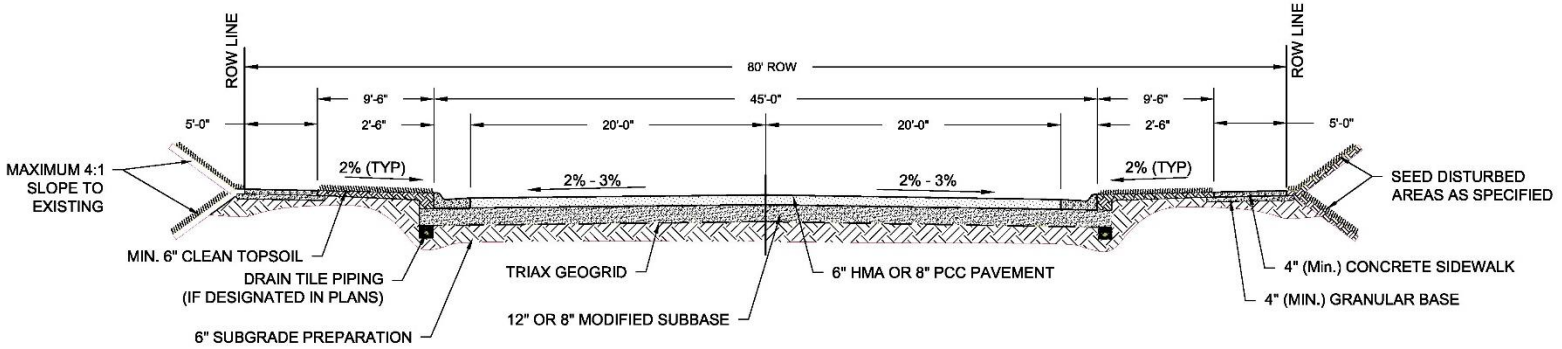
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCE | Scale: NONE | Proj. No.: 103 | Dwg. No.: MR-3 | VP. No.: | Date: 2/24/21

MR-3 TYPICAL RESIDENTIAL STREET LAYOUT

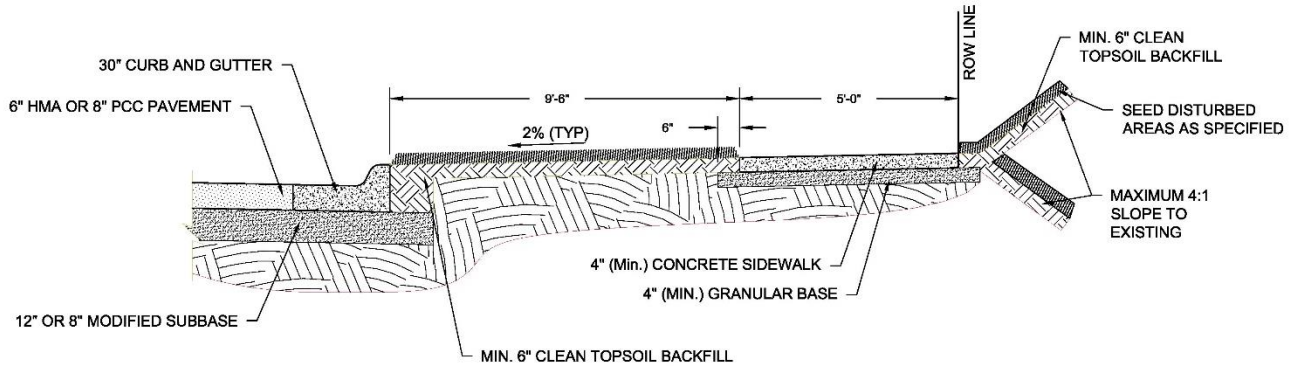
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

3 OF 4



TYPICAL ARTERIAL/COLLECTOR STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

No. | Revisions | By | App. | Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of Iowa.

Registration No.

The City of Marshalltown

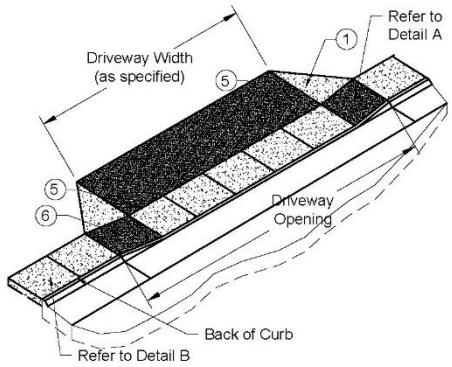
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK | Scale: NONE | Proj. No: 1900 | Dwg. No: SU2SSSSSS | Vr. No: MR-4 | Date: 2/24/21

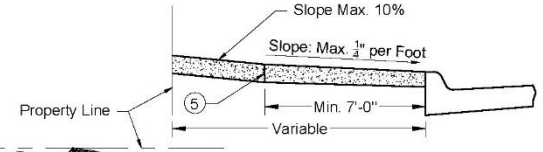
MR-4 TYPICAL ARTERIAL/ COLLECTOR STREET LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

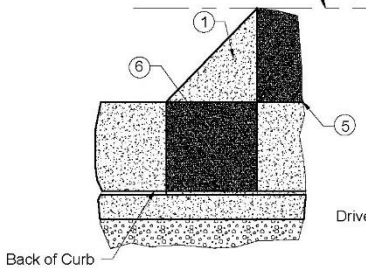
4 OF 4



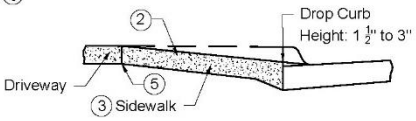
1. Flared back to driveway at property line. Match driveway thickness.
2. Driveway Thickness: Residential - 6 Inches Minimum
   Commercial/Industrial - 8 Inches Minimum
3. Sidewalk thickness through driveway to match thickness of the driveway
4. Match thickness of adjacent roadway, 8 inches minimum
5. 1/2 inch Pre Molded Expansion
6. Slope up at ~6.5% slope. Sloped section of the sidewalk/driveway will be min. 6 inches thick for residential areas and 8 inches for commercial areas.



DETAIL B - TYPICAL SECTION

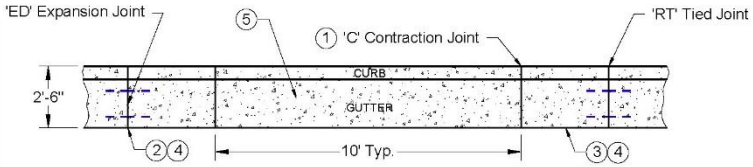


DETAIL A

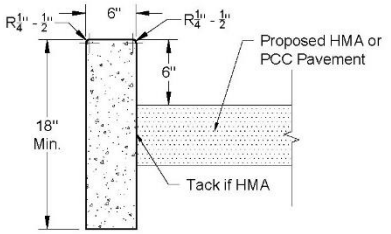


DETAIL C - DRIVEWAY SECTION

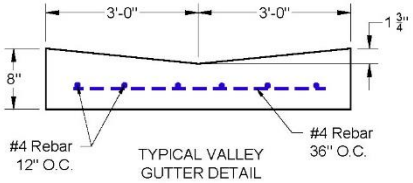
MD-1 DRIVEWAY WITH SIDEWALK ADJACENT TO CURB LAYOUT



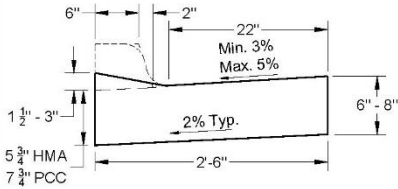
1. Type 'C' Contraction Joints to be at intervals of 10'.
2. Expansion Joints to be constructed at points of tangency of all curves
3. 'BT-5' , 'KT-1', or 'L' joint if Proposed Pavement is PCC. 'B' joint if Proposed Pavement is HMA.
4. If proposed pavement is PCC, match joint spacing for proposed pavement.
5. New driveways shall require the removal of curb and guttter and replacement with driveway curb and gutter as shown below. Grinding curb for driveway is not be allowed. Removal of curb back for driveway is not allowed.



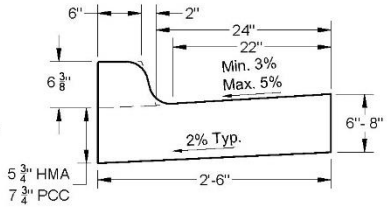
TYPICAL BEAM CURB DETAIL



TYPICAL VALLEY GUTTER DETAIL



DRIVEWAY DROP CURB



TYPICAL CURB SECTION

MD-2 CURB & GUTTER DETAILS

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Registration No.

The City of Marshalltown

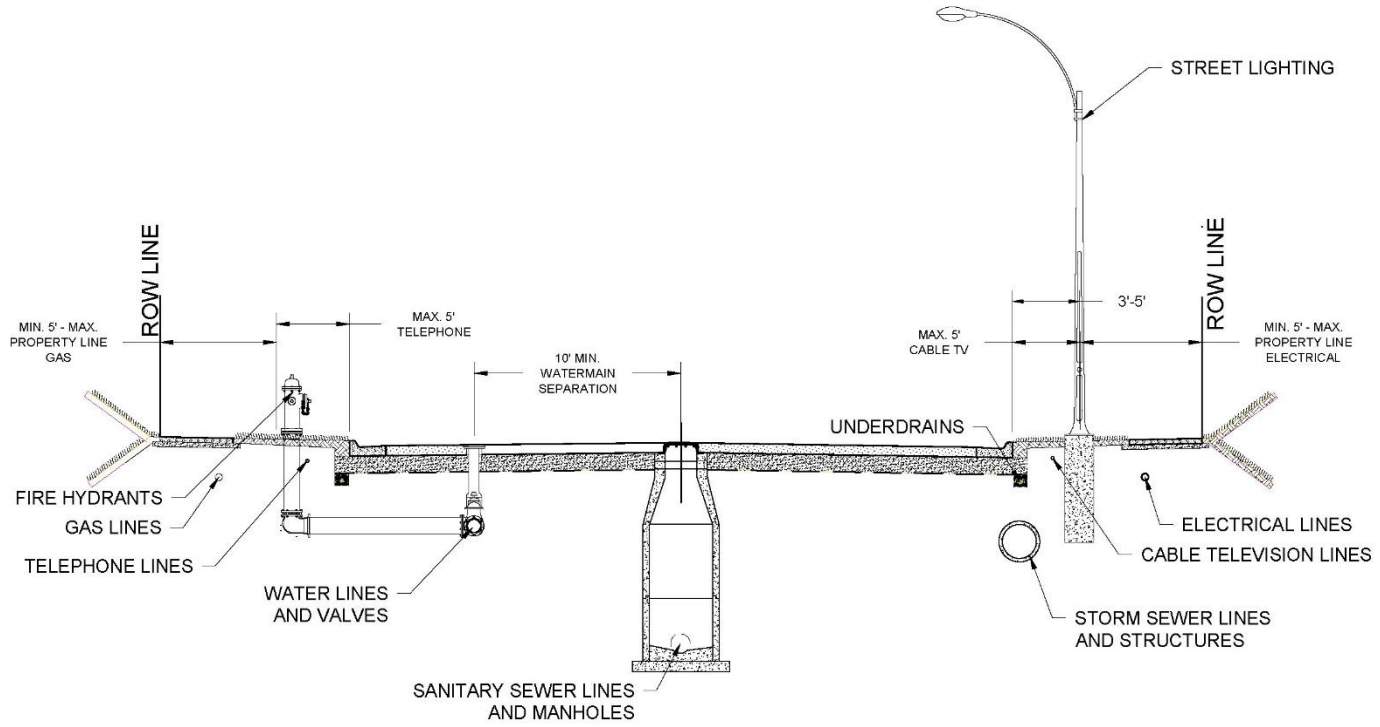
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

Drawn By: JCK | Scale: NONE | Proj. No.: | Dwg. No.: MD-1 & MD-2 | Typ. No.: | Date: 2/24/21

MD-1 & MD-2 STANDARD CITY DETAILS

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

1 OF 2



TYPICAL STREET UTILITY SECTION DETAIL

NO SCALE

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Registration No.

the City of Marshalltown

PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1030
Dwg. No: [illegible]
VP. No: MR-3
Date: 2/24/21

MR-5 TYPICAL STREET UTILITY LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

3 OF 4

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA
MR-6 TYPICAL STREET
INTERSECTION LAYOUT
3 OF 4
Drawn By: JOS
Scale: NONE
Proj. No: 1000
Dwg. No: MR-3
Date: 2/24/21
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734
ROW LINE
R12.5' MIN.
6' WIDE VALLEY
GUTTERS (IF NEEDED)
REINFORCED CONCRETE
FILLET SECTIONS
STORM SEWER
STRUCTURES
5' SIDEWALK
15'
MIN.
10' MIN.
WATERMAIN
SEPARATION
SANITARY SEWER
MANHOLES
WATER LINES
AND VALVES
STORM SEWER
PIPING
CAST-IRON
DETECTABLE
WARNING PANELS
SANITARY
SEWER PIPING
30" CURB
AND GUTTER

SECTION 7011 - PORTLAND CEMENT CONCRETE OVERLAYS

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7020 - HOT MIX ASPHALT PAVEMENT

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

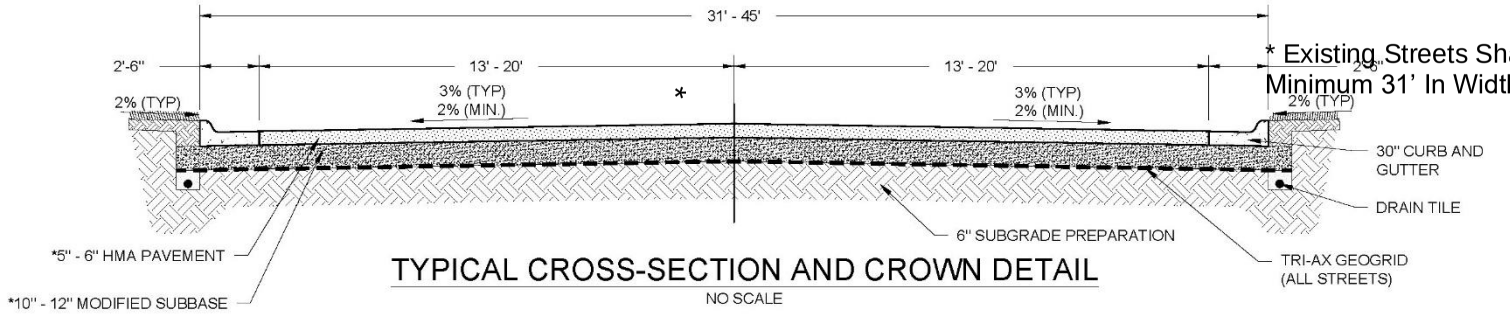
NO REVISIONS

PART 3 - EXECUTION

3.09 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

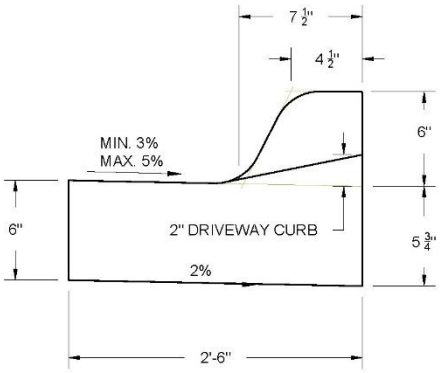
1. MR-2 HMA Pavement Typical Cross Sections
2. MR-3 Typical Residential Street Layout
3. MR-4 Typical Arterial/Collector Street Layout
4. MR-6 Typical Street Intersection Detail



* Existing Streets Shall Be Minimum 31' In Width.

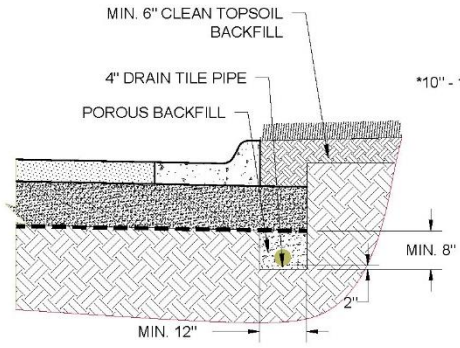
TYPICAL CROSS-SECTION AND CROWN DETAIL

NO SCALE



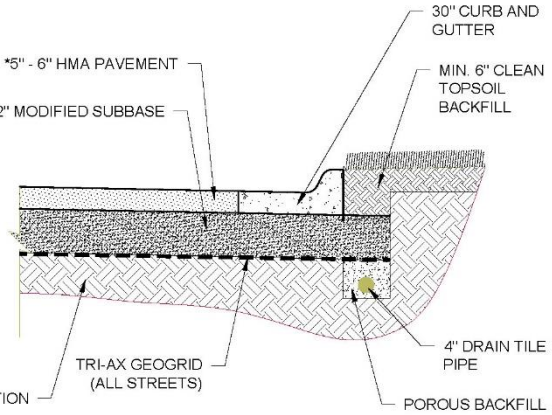
30" CURB AND GUTTER DETAIL

NO SCALE



SUBDRAIN DETAIL

NO SCALE



SUB-BASE AND SUBDRAIN DETAIL

NO SCALE

*RESIDENTIAL STREETS <1500 AADT 5" HMA & 10" SUBBASE

*ARTERIAL/COLLECTOR STREETS >1500 AADT 6" HMA & 12" SUBBASE.

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Registration No.

No. | Revision | By | Appr. | Date

The City of Marshalltown

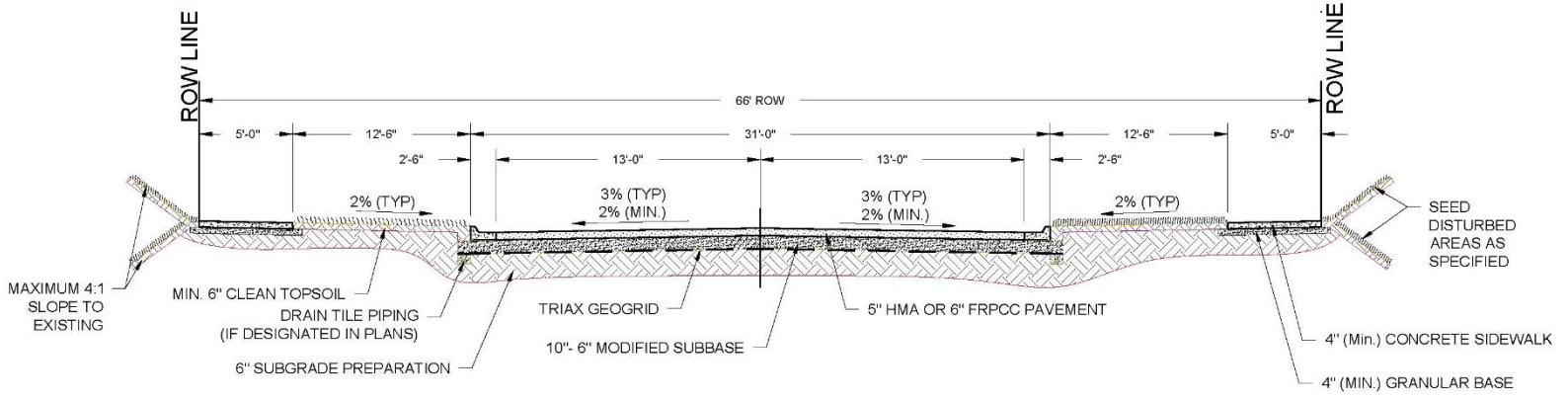
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK | Scale: NONE | Proj. No.: 103 | Dwg. No.: MR-2 | VP. No.: | Date: 2/2/21

MR-2 HMA PAVEMENT
TYPICAL CROSS SECTIONS

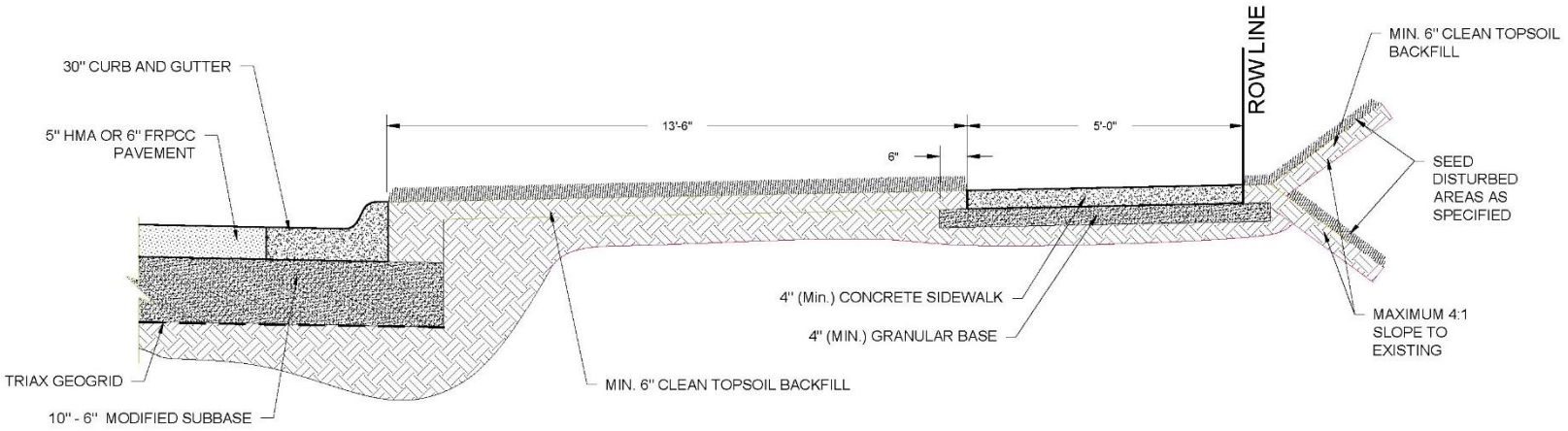
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

2 OF 4



TYPICAL RESIDENTIAL STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

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Registration No.

The City of Marshalltown

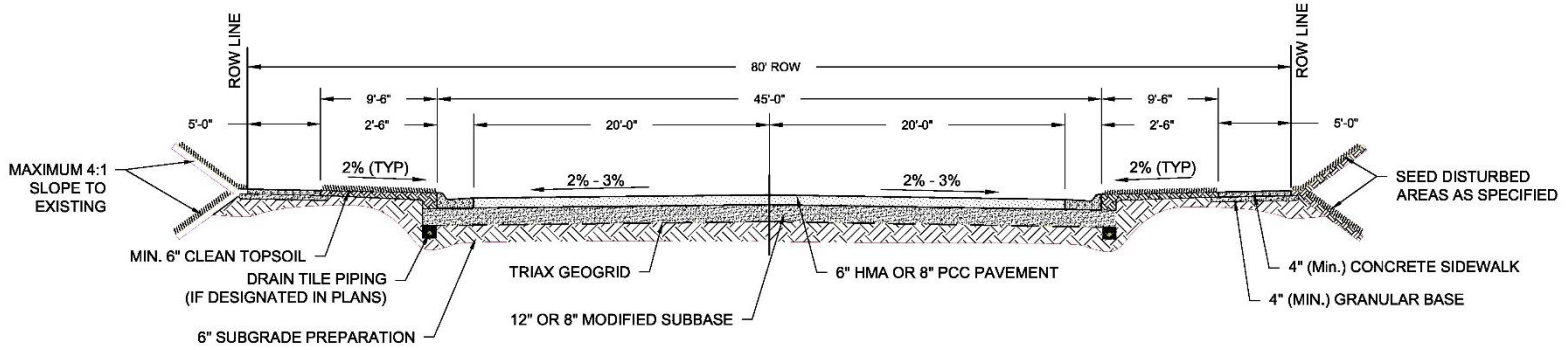
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1039
Dwg. No: MR-3
Date: 2/24/20

MR-3 TYPICAL RESIDENTIAL STREET LAYOUT

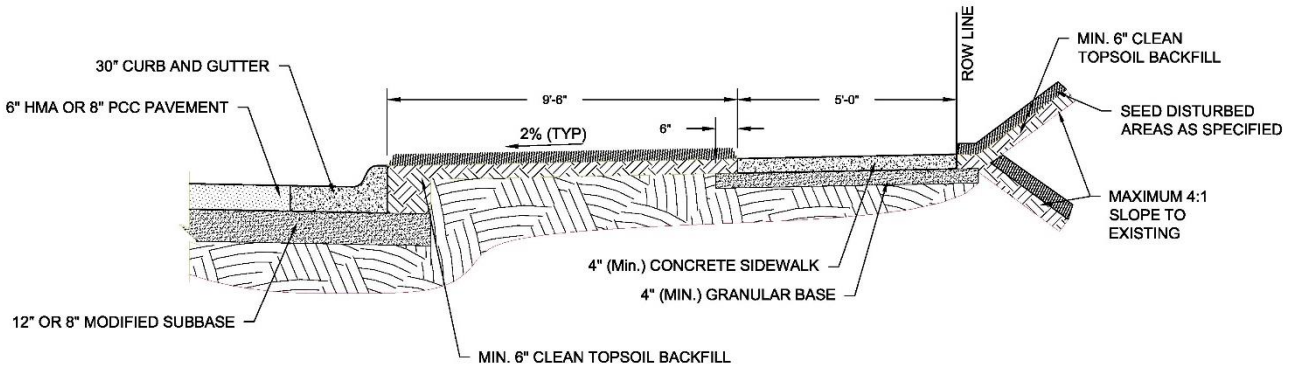
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

3 OF 4



TYPICAL ARTERIAL/COLLECTOR STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

No.	Revisions	By	App.	Date

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the City of Marshalltown

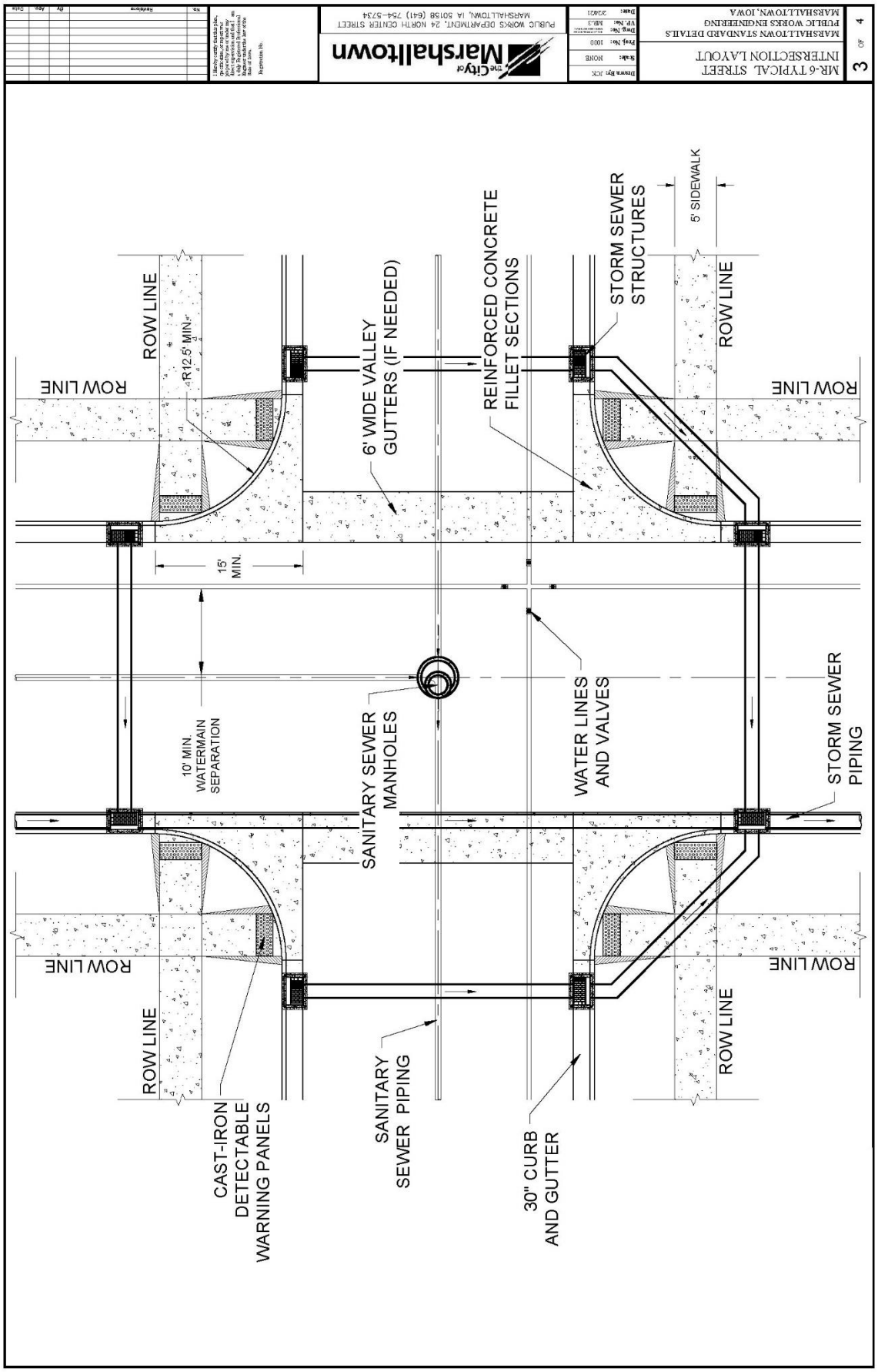
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1000
Dwg. No: [illegible]
VP. No: MR-4
Date: 2/24/21

MR-4 TYPICAL ARTERIAL/ COLLECTOR STREET LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

4 OF 4


MR-6 TYPICAL STREET
INTERSECTION LAYOUT
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA
3 OF 4
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734
the City of Marshalltown
ROW LINE
R12.5' MIN.
6' WIDE VALLEY GUTTERS (IF NEEDED)
REINFORCED CONCRETE FILLET SECTIONS
STORM SEWER STRUCTURES
5' SIDEWALK
15' MIN.
10' MIN. WATERMAIN SEPARATION
SANITARY SEWER MANHOLES
WATER LINES AND VALVES
STORM SEWER PIPING
CAST-IRON DETECTABLE WARNING PANELS
SANITARY SEWER PIPING
30" CURB AND GUTTER

SECTION 7021 - HOT MIX ASPHALT OVERLAYS

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7030 - SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

PART 1 - GENERAL

NO REVISIONS

PART 2 -PRODUCTS

2.01 PORTLAND CEMENT CONCRETE

A. Class (DELETE) ~~B or~~ C concrete with materials complying with Section 7010. Use coarse aggregate of Class 2 durability or better.

B. Comply with the following for PCC mixes for sidewalks, shared use paths, and driveways unless otherwise approved by the Engineer.

Table 7030.01: PCC Mixes

Type of Concrete	Machine Finish Class (DELETE) ~~B or~~ C	Hand Finish Class(DELETE) ~~B or~~ C
Slump Minimum	1/2 in.	1/2 in.
Slump Maximum	2 1/2 in.	4 in.
Percent Air Content		
• Target	7%	7%
• Minimum	6%	6%
• Maximum	8 1/2%	8 1/2%

C. (ADD) Fiber Reinforcement – See Section 7011, 2.01. E.

2.07 DETECTABLE WARNINGS

A. (DELETE) ~~Use manufactured detectable warning panels with a non-slip surface and raised truncated domes. Comply with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (also known as PROWAG) for~~

~~contrast and dimension requirements. Also comply with Iowa DOT Materials I.M. 411.~~

A. (ADD) Detectable warning surfaces are a requirement of the Americans with Disabilities Act (ADA) and required when construction and altering curb ramps and street pavement. The Truncated domes are the only detectable warnings allowed by ADA.

B. (ADD) Detectable warnings shall consist of cast-iron or steel panels with a minimum width of 24-inches and lengths of 24-inches and/or 30-inches. The panels shall be slip resistant and extend the full width of the curb ramp.

C. (ADD) Panels shall be provided with anchors for casting into concrete surfacing.

D. (ADD) Per ADA guidelines, the truncated domes shall be aligned in a square pattern and have a maximum 1.4-inch base diameter and a height of 0.2-inch. They shall be spaced 2.4-inches apart from one another and have a base-to-base spacing of at least 0.65-inch.

E. (ADD) The visual contrast between adjoining surfaces shall be satisfied with a natural patina.

2.10 (ADD) CONCRETE CURING COMPOUND

A. General:

1. Comply with ASTM C 309. White pigmented compounds are typically used for most construction. However, clear compounds may be used adjacent to businesses and homes to reduce tracking problems.

B. Sprayability:

1. Use compounds of a consistency that they can be readily applied by spraying to a uniform coating at a material temperature above 40°F.

2. Moisture Retention:

3. White pigmented liquid curing compounds, when tested in accordance with ASTM C156 using an application rate of 200 square feet per gallon shall restrict the loss of water to not more than 0.20 kg/m2 in 24 hours or 0.40 kg/m2 in 72 hours.

C. Drying Time:

1. Use liquid curing compounds that:

a. Dry to the touch in no more than 4 hours, and

b. Do not track off the concrete when walked upon after 12 hours.

D. White Pigmented Compounds.

1. Use compounds consisting of finely ground white pigment and vehicle, ready mixed for use without alteration.

2. Ensure the pigment does not settle excessively or cake in the container, and thicken in storage to cause a change in consistency which may result in a

non-uniform spray.

3. Use a compound that after being sprayed on a test slab and drying has an apparent daylight reflectance no less than 60% relative to magnesium oxide.

4. Agitate the compound just prior to it being removed from the container. Agitate it continuously during application.

E. Clear Compounds:

1. Apply the following in lieu of other requirements of this section:

2. Use clear liquid membrane curing compounds complying with the requirements of ASTM C309, Type 1-D, Class A. Use only one type of compound on a structure. Do not use different compounds on the same structure.

3. Agitate the compound just prior to it being removed from the container. Agitate it continuously during application.

2.11 (ADD) GRANULAR SUBBASE MATERIAL

A. Aggregate of the following types:

1. Crushed stone,

2. Gravels of which 30% or more of the particles retained on the 3/8-inch sieve have at least one fractured face as specified in Iowa DOT Materials I.M. 305,

3. Crushed PCC pavement meeting the requirements specified in Iowa DOT Materials I.M. 210, or

4. Uniformly blended combinations of these materials.

B. Gradation:

1. Crushed material: Meet the requirements for Gradation No. 12a of the Aggregate Gradation Table, specified in Iowa DOT Article 4109.02.

2. Gravel: Meet the requirements for Gradation No. 12b of the Aggregate Gradation Table, specified in Iowa DOT Article 4109.02.

C. Quality:

1. The requirements of the following table apply to the individual virgin aggregates before combining:

(ADD) Coarse Aggregate Quality (Virgin Material)

Coarse Aggregate Quality	Maximum Percent Allowed	Test Method
Abrasion	50	AASHTO T 96
Alumina[(a)]	1.5	Office of Materials Test Method No. Iowa 222
A Freeze	25	Office of Materials Test Method No. Iowa 211, Method A

(ADD) Coarse Aggregate Quality (Virgin Material)

Coarse Aggregate Quality	Maximum Percent Allowed	Test Method
(a) If the Alumina value fails, determine the A Freeze value for specification compliance. Office of Materials Test Method No. Iowa 222 does not apply to gravel.		

PART 3 - EXECUTION

3.04 PCC SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

A. Form Setting: Comply with Section 7010 with the following additional requirements and exceptions.

2. Wood forms are allowed. (ADD) Wood forms shall be full height of concrete depth, i.e., wood forms for 4-inches depth sidewalk shall not be a standard industry 1x4 or 2x4.

5. Measure or stake as required to construct project elements. If either of the following is met and construction survey is not a bid item, the Contracting Authority will verify that form work complies with the design requirements:

c. (ADD) The design cross slope of the sidewalk, turning space, or shared use path shall not exceed 2.0% or be less than 1.0%.

d. (ADD) The design cross slope of any driveway crossing a sidewalk or shared use path shall not exceed 2.0% or be less than 1.0%.

e. (ADD) The design cross slope of driveways located between the street and the sidewalk shall not be more than 10% nor less than 1.0%.

B. Concrete Pavement Placement:

3. Driveways: Comply with Figures (ADD) MD-1, MD-2, 7030.101 and 7030.102 and Section 7010. The use of a paving machine is not required.

E. Form Removal: Comply with Section 7010 (ADD) and.

1. (ADD) Timing:

a. Remove forms after the initial set of the concrete has taken place.

b. Remove stakes and forms with care to prevent cracking, spalling, or over stressing concrete. If damage does occur, repairs will be made as required by the Engineer.

2. (ADD) Honeycomb Repair:

a. When the forms are removed, fill honeycombs with mortar composed of one (1) part cement and two (2) parts fine aggregate by weight.

b. If the honeycombing is to the degree and nature that it is considered by the Engineer as defective work, remove and replace at no additional cost to the City.

3. (ADD) Remove all excess concrete from areas along forms and/or backfill area. No excess concrete shall be allowed along edges of sidewalks, trails or curbing.

4. (ADD) In the area adjacent to the new concrete, immediately place backfill after the forms are removed. Construct dams or other protection to ensure that no saturation or erosion of the subgrade under or near the surfacing occurs. This may include check dams, pumping, etc.

5. (ADD) Material used for backfilling shall be free from spongy or vegetative substances, rocks, asphalt, broken concrete, frozen material or any other debris. The top six (6) inches shall be a soil suitable for growing grass.

F. Jointing:

2. Transverse Contraction Joints:

a. Shared Use Paths (ADD) and Sidewalks:

1) Space transverse joints equal to the width of the shared use path, or as specified in the contract documents.

2) (DELETE) Saw contraction joints according to Section 7010.

2) Saw contraction joints within 12-hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness.

3) Use a straightedge if joints are sawed with a hand-held saw.

b. (DELETE) Sidewalks and Driveways:

1) (DELETE) Space sidewalk contraction joints equal to the width of the sidewalk. (ADD) Space driveway contraction joints to match sidewalk joints whenever possible. Joints shall be spaced to form rectangular panels where the long dimension does not exceed 1-½ times the short dimension. In no case will the panel length exceed 9-feet for 6-inches of concrete or 12-feet for 8-inches of concrete.

2) (DELETE) Space driveway contraction joints so panel length does not exceed 12 feet. (ADD) Contraction joints shall be sawn within 12-hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness.

3) (DELETE) Form transverse contraction joints to a depth of 1 1/4 inches with a pointed trowel or jointing tool. In lieu of forming, joints may be sawed within 12 hours of placement with a 1/8 inch blade saw to a depth of 1/3 the pavement thickness. (ADD) Use a straightedge if joints are sawn with a hand-held saw.

3. Longitudinal Contraction Joints:

a. Shared Use Paths and Sidewalks: Saw joint to 1/8 inch wide and to a depth of 1/3 the pavement thickness.

1) (ADD) Longitudinal contraction joints will be placed when the width of the path/sidewalk exceeds 6-feet for 4-inches concrete or 9-feet for 6-inches concrete.

2) (ADD) Contraction joints shall be sawn within 12-hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawn with a hand-held saw.

b. Driveways:

1) (DELETE) ~~Space longitudinal contraction joints so panel width does not exceed 12 feet.~~ (ADD) Space longitudinal contraction joints so panel length or width does not exceed 9-feet for 6-inches of concrete or 12-feet for 8-inches of concrete.

2) (DELETE) ~~Form longitudinal contraction joints to a depth of 1 1/4 inches with a pointed trowel or jointing tool. In lieu of forming, joints may be sawed with a 1/8 inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawed with a hand-held saw~~. (ADD) Contraction joints shall be sawn within 12 hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawn with a hand-held saw.

G. (ADD) Granular Base:

1. (ADD) Shared Use Paths and Sidewalks will be placed on a minimum of 4-inches of compacted granular base.

2. (ADD) Driveways shall be placed on a minimum of 6-inches of compacted granular base.

3. (ADD) Granular Base shall be compacted to a minimum 98% Standard proctor density at a moisture content of ±3% of optimum moisture as determined by ASTM D698.

3.13 (ADD) SIDEWALK GRADES

A. All staking for sidewalk grades, grading subgrade preparation and form installation will be the full responsibility of the contractor. The City Engineers office will inspect the forms and subgrade preparation prior to concrete placement.

B. When a new sidewalk is being constructed and the grade is different than the present adjoining sidewalks, the following shall apply:

C. Beginning at the property line the slope of the sidewalk shall be a maximum 8.3% from the adjoining sidewalk to the grade of the new sidewalk. When the existing sidewalk cross slope does not meet requirements, a transition segment shall be installed to match existing slope. See SUDAS Figures 7030.204, 7030.206, 7030.207, 7030.208 and 7030.209.

3.14 (ADD) SIDEWALK ALIGNMENT:

A. Unless otherwise approved by the City Engineer the back of the sidewalk shall match the adjoining property line.

B. All private sidewalks joining the City Sidewalk will be built to the new sidewalk grade. Driveway sidewalks may remain at the present grade unless they are being replaced, and if they are being replaced they will be built to the proper grade.

C. The Standard City Sidewalk grade is a quarter (¼) inch per foot maximum across the sidewalk and half (½) inch per foot across the terrace to the street. Deviations from this standard grade will be allowed only with the approval of the City Engineer and only in areas where existing walks are at a nonstandard grade or where a standard grade will cause a severe hardship to the adjacent property owners.

3.15 (ADD) INSPECTIONS

When the Contractor is ready to pour the sidewalk, an inspection shall be requested from the City Engineer's office. Enough advance notice shall be given to provide ample time for the inspector to get to the job site and inspect the work so the contractor can make any changes required, before the concrete arrives.

3.16 (ADD) CURB CUTS

A. It shall be unlawful for any person, firm, or corporation to cut or remove any curbing for any purpose without first securing a written permit from the City Engineer.

B. Grinding of curbs for driveway entrances are not allowed. Removal of back of curb and extending driveway to gutter pan is not allowed.

C. All curb cuts shall be made by removal of existing curb (if required) and replacement with either driveway curb (and gutter) or handicap curb (and gutter) as provided in the City of Marshalltown MD-1, MD-2 Details and SUDAS Figures 730.101R, 7030.102R, 7030.204, 7030.205, 7030.206, 7030.207, 7030.208 and 7030.209.

3.17 (ADD) CURB AND GUTTER CONSTRUCTION

Comply with Section 7010, 3.03 and MD-2.

3.18 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

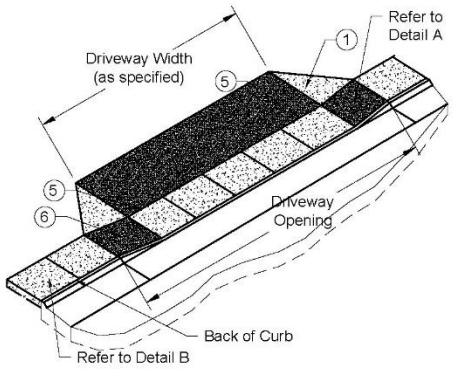
1. MD-1 Driveway with Sidewalk Adjacent to Curb Detailsl
2. MD-2 Curb & Gutter Details
3. MD-3 Sidewalk over Utility Trench Detail
4. MD-5 Sidewalk Trench Drain with Cover Plate

B. See modifications to SUDAS Standard Details as listed on each detail and provided below:

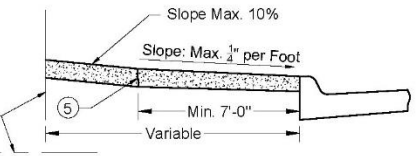
1. Figure 7030.101 – Revised sidewalk adjacent to driveway to add section for

transition. Added curb replacement for new driveways.

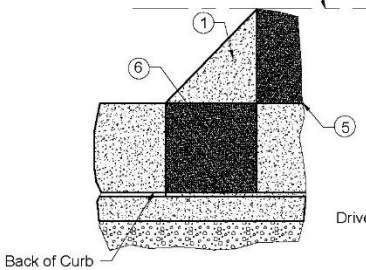
2. Figure 7030.102 - Revised sidewalk adjacent to driveway to add section for transition. Added curb replacement for new driveways.
3. Figure 7030.103 – Revision to sidewalk location and property line. Added target slope to sidewalk.
4. Figure 7030.201 – Revised Class A sidewalk layout and added premolded expansion material.
5. Figure 7030.202 – Removed Detail 1 and Revised Detail 2.
6. Figure 7030.206 – Change sidewalk/ramp width to 5’-0” min. Changed curb side sidewalk to min. 7’-0” width.
7. Figure 7030.207 – Added detail for preformed expansion joints.
8. Figure 7030.2.08 - Added detail for preformed expansion joints.
9. Figure 7030.209 – Changed minimum ramp and turning width to 5’-0”.



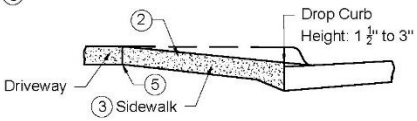
1. Flared back to driveway at property line. Match driveway thickness.
2. Driveway Thickness: Residential - 6 Inches Minimum
   Commercial/Industrial - 8 Inches Minimum
3. Sidewalk thickness through driveway to match thickness of the driveway
4. Match thickness of adjacent roadway, 8 inches minimum
5. 1/2 inch Pre Molded Expansion
6. Slope up at ~6.5% slope. Sloped section of the sidewalk/driveway will be min. 6 inches thick for residential areas and 8 inches for commercial areas.



DETAIL B - TYPICAL SECTION

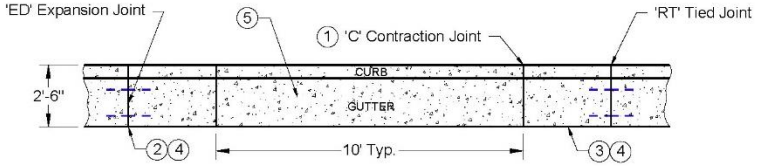


DETAIL A

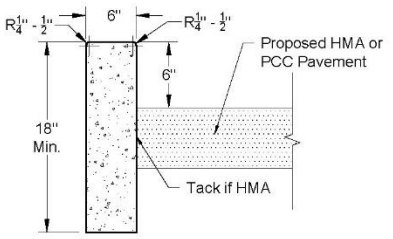


DETAIL C - DRIVEWAY SECTION

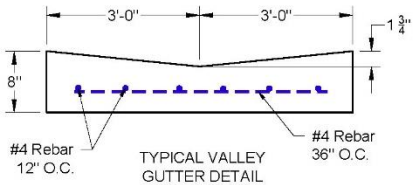
MD-1 DRIVEWAY WITH SIDEWALK ADJACENT TO CURB LAYOUT



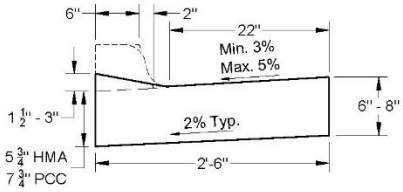
1. Type 'C' Contraction Joints to be at intervals of 10'.
2. Expansion Joints to be constructed at points of tangency of all curves
3. 'BT-5' , 'KT-1', or 'L' joint if Proposed Pavement is PCC. 'B' joint if Proposed Pavement is HMA.
4. If proposed pavement is PCC, match joint spacing for proposed pavement.
5. New driveways shall require the removal of curb and guttter and replacement with driveway curb and gutter as shown below. Grinding curb for driveway is not be allowed. Removal of curb back for driveway is not allowed.



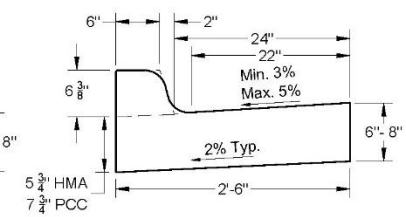
TYPICAL BEAM CURB DETAIL



TYPICAL VALLEY GUTTER DETAIL



DRIVEWAY DROP CURB



TYPICAL CURB SECTION

MD-2 CURB & GUTTER DETAILS

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Hawaii.

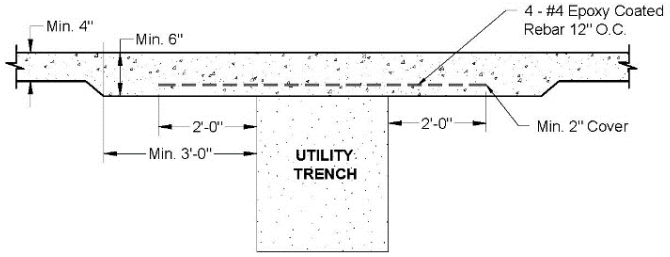
Registration No.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

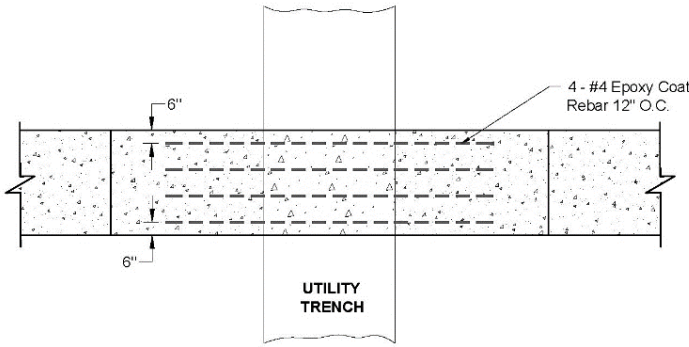
Drawn By: JCK
Scale: NONE
Proj. No.: 1001
Dwg. No.: SIDEWALK
VP. No.: 2024-02-2
Date: 2/24/21

MD-1 & MD-2 STANDARD CITY DETAILS
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

1 OF 2



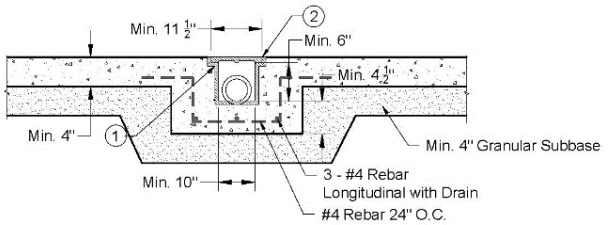
SIDE VIEW

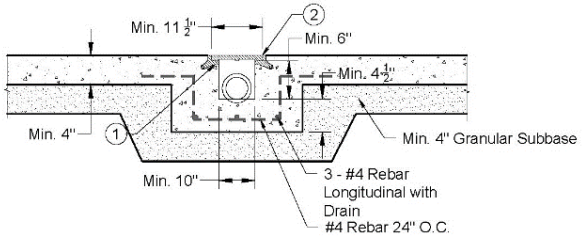


TOP VIEW

NOTE:
All sidewalk over utility trenches shall be reinforced with #4 bars at 12 inch centers starting 6 inches from the edge of the sidewalk and extending across the utility trench and 2 feet into the abutting sections.

MD-3 SIDEWALK OVER UTILITY TRENCH





NOTES:
1.) Trench casting shall be a Neenah R-4995-B1, R-4999-DX or an Engineer approved equal.

2.) Trench cover shall be Nenah Type D solid lid or Type E vented lid. Trench cover shall be anchored/bolted to prevent displacement during snow removal operations.

MD-4 SIDEWALK TRENCH DRAIN WITH COVER PLATE

No.	Revisions	By	Appr.	Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Hawaii.

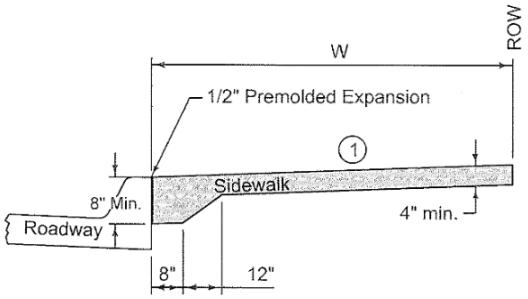
Registration No.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

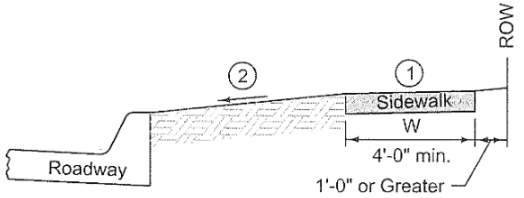
Drawn By: JCK
Scale: NONE
Proj. No: 1000
Dwg. No: MD-4
VP. No: MD3/4 & 4
Date: 5/24/15

MD - 3 & MD-4 STANDARD CITY DETAILS
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

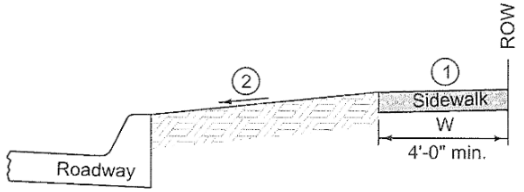
2 OF 2



CLASS A SIDEWALK
(Sidewalk extends from back of curb to ROW)



CLASS B SIDEWALK



CLASS C SIDEWALK

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0% (including sidewalk through driveway).

(2) Parking Slopes:
If parking width is less than 10 feet wide, slope at ¼ inch per foot.

If parking width is 10 feet wide and greater, slope at ½ inch per foot.

Special grade may be specified in the contract documents.

W = Sidewalk width as specified in the contract documents.

FIGURE 7030.201R	STANDARD ROAD PLAN	REVISION 2 10-20-15 7030.201 SHEET 1 of 1

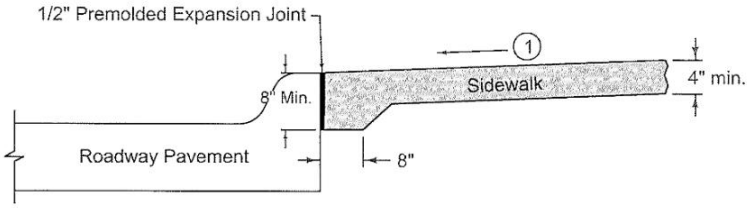
REVISIONS: Revised Class A sidewalk layout and added premolded expansion material. (City of Marshalltown)

CLASSES OF SIDEWALKS

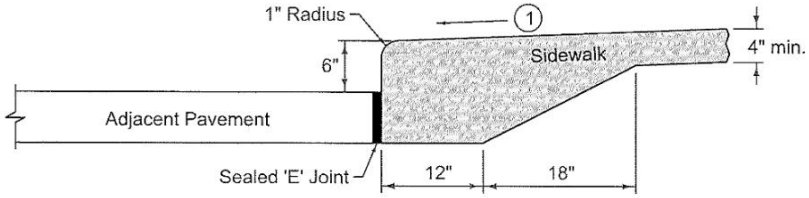
FIGURE 7030.201 SHEET 1 OF 1

For new sidewalk with new curb and gutter, comply with Detail 2. Comply with Detail 3 for new sidewalk adjacent to existing pavement or when specified in the contract documents.

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0%.



DETAIL 2



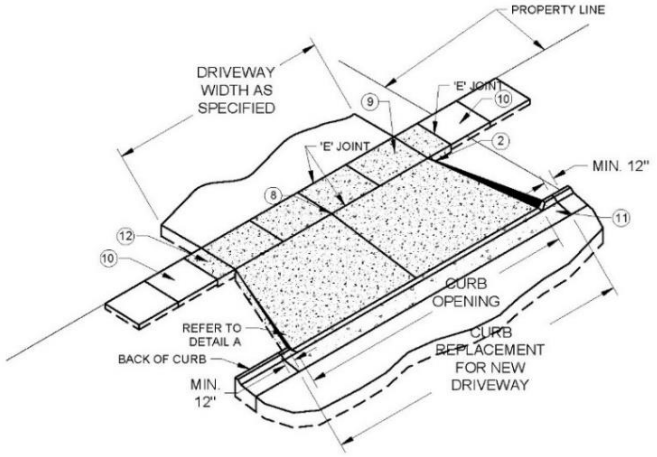
DETAIL 3

		REVISION
FIGURE 7030.202R	STANDARD ROAD PLAN	3 10-20-15
		7030.202
		SHEET 1 of 1

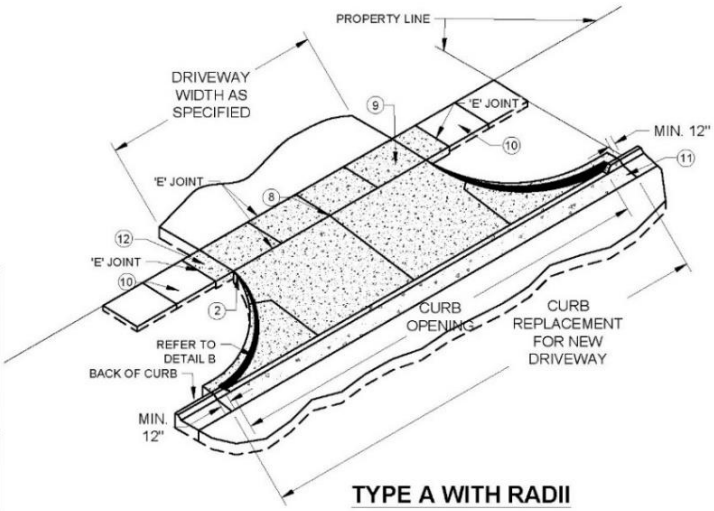
REVISIONS: Removed Detail 1. Revised Detail 2. (City of Marshalltown)

CURB DETAILS FOR CLASS A SIDEWALK

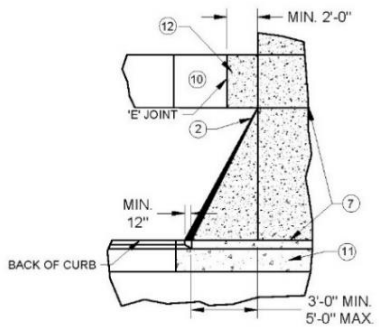
FIGURE 7030.202 | SHEET 1 OF 1



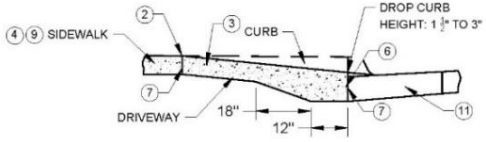
TYPE A WITH FLARES



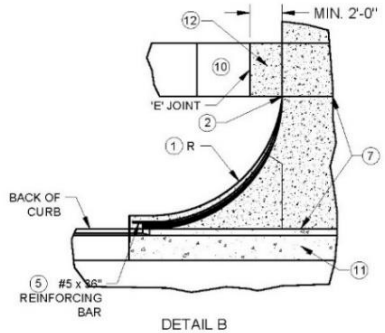
TYPE A WITH RADII



DETAIL A



TYPICAL SECTION



DETAIL B

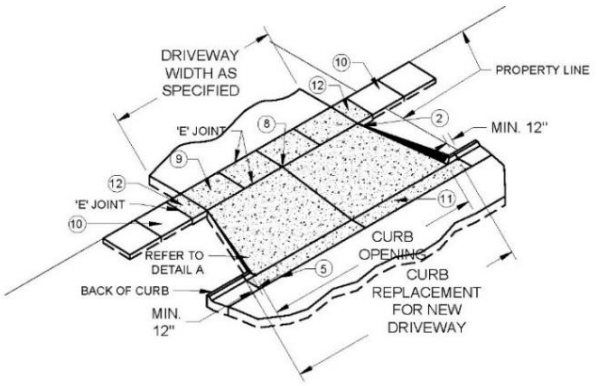
1. Driveway radius (R).
   Residential: 10 foot minimum,15 foot maximum.
   Commercial and industrial: As specified in the contract documents.
2. Transition the curb height to 0 inches at end of taper/radius or at the front edge of sidewalk. Do not extend raised curb across sidewalk.
3. Pavement thickness.
   Residential: 6 inches minimum.
   Commercial and industrial: 8 inches minimum.
4. Sidewalk thickness through driveway to match thickness of driveway.
5. Center reinforcing bar vertically in the pavement.
6. Match thickness of adjacent roadway, 8 inches minimum.
7. Provide 'E' joint at sidewalk. Provide 'B' joint at back of curb unless 'E' joint is specified.
8. For alleys, invert the pavement crown 2% toward center of alley.
9. Target cross slope of 1.5% with a maximum cross slope of 2.0%. If specified in the contract documents, construct the sidewalk through the driveway 5 feet wide to serve as a passing space.
10. If cross slope of adjacent sidewalk panel exceeds 2.0%,remove and replace to transition from existing sidewalk to sidewalk through driveway. If elevation change requires a curb ramp, comply with Figure 7030.205; verify need for detectable warning panel with Engineer.
11. Replace curb & gutter with drop curb for new driveways or expansion of existing driveways. Grinding of curb or removal of curb back is not allowed.
12. Extend driveway sidewalk a minimum of 2' past driveway edge.

FIGURE 7030.101R	STANDARD ROAD PLAN	REVISION 2 10-20-15
		7030.101
		SHEET 1 of 1

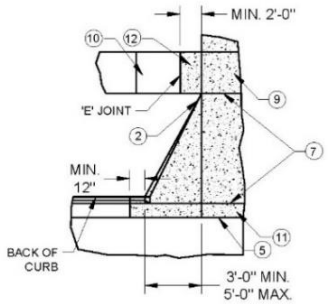
REVISIONS: Revised sidewalk adjacent to driveway to add section for transition. Added curb replacement for new driveways. (City of Marshalltown)

CONCRETE DRIVEWAY, TYPE A

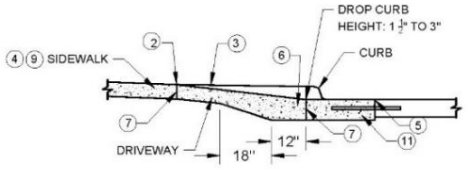
FIGURE 7030.101 | SHEET 1 OF 1



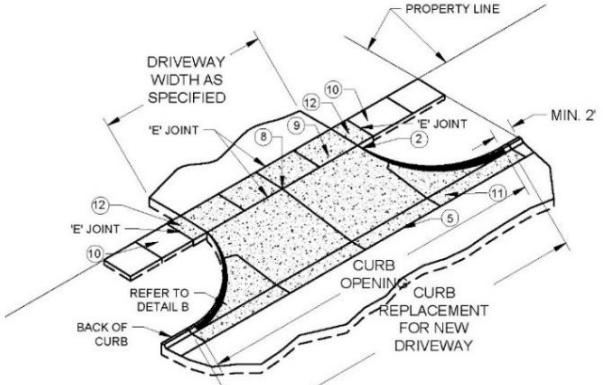
TYPE A WITH FLARES



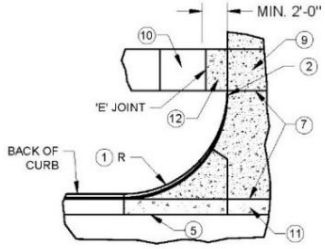
DETAIL A



TYPICAL SECTION



TYPE A WITH RADII



DETAIL B

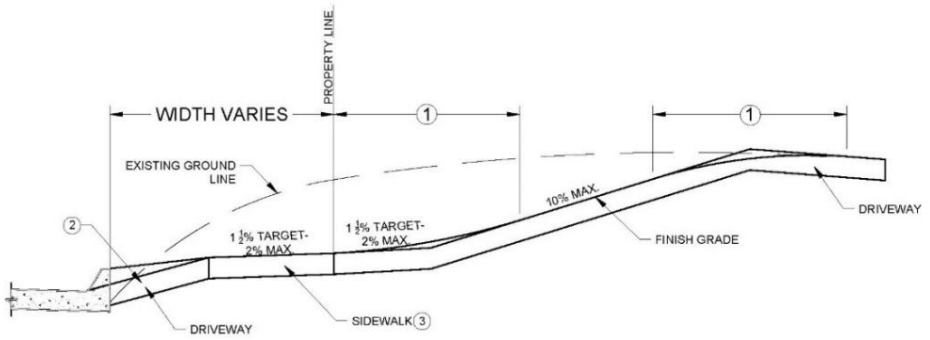
1. Driveway radius (R).
   Residential: 10 foot minimum,15 foot maximum.
   Commercial and industrial: As specified in the contract documents.
2. Transition the curb height to 0 inches at end of taper/radius or at the front edge of sidewalk. Do not extend raised curb cross sidewalk.
3. Pavement thickness.
   Residential: 6 inches minimum.
   Commercial and industrial: 8 inches minimum.
4. Sidewalk thickness through driveway to match thickness of driveway.
5. If longitudinal joint is located 48 inches or less from the back of curb, extend curb and gutter to joint line. Full depth saw cut is still required.
6. Match thickness of adjacent roadway, 8 inches minimum.
7. Provide 'E' joint at sidewalk. Provide 'B' joint at back of curb unless 'E' joint is specified.
8. For alleys, invert the pavement crown 2% toward the center of the alley.
9. Target cross slope of 1.5% with a maximum cross slope of 2.0%. If specified in the contract documents, construct the sidewalk through the driveway 5 feet wide to serve as a passing space.
10. If cross slope of adjacent sidewalk panel exceeds 2.0%, remove and replace to transition from existing sidewalk to sidewalk through driveway. If the elevation change requires a curb ramp, comply with Figure 7030.205; verify need for detectable warning panel with Engineer.
11. Replace curb & gutter with drop curb for new driveways or expansion of existing driveways. Grinding of curb or removal of curb back is not allowed.
12. Extend driveway sidewalk a minimum of 2' past driveway edge.

FIGURE 7030.102R	STANDARD ROAD PLAN	REVISION 2 10-20-15
		7030.102
		SHEET 1 of 1

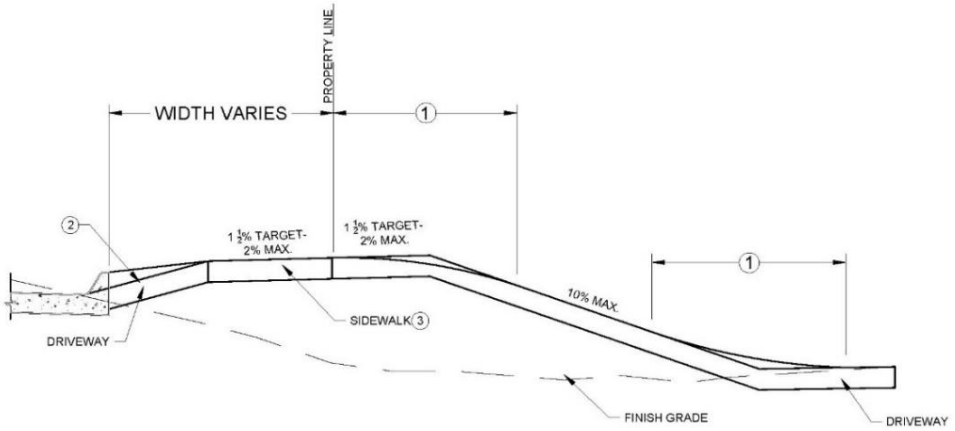
REVISIONS: Revised sidewalk adjacent to driveway to add section for transition. Added curb and gutter removal and repalcement. (City of Marshalltown)

CONCRETE DRIVEWAY, TYPE B

FIGURE 7030.102 | SHEET 1 OF 1



TYPICAL CUT SECTION



TYPICAL FILL SECTION

(1) 10 foot vertical curve required for 5% or greater change in grade.

(2) Slope varies. See contract documents.

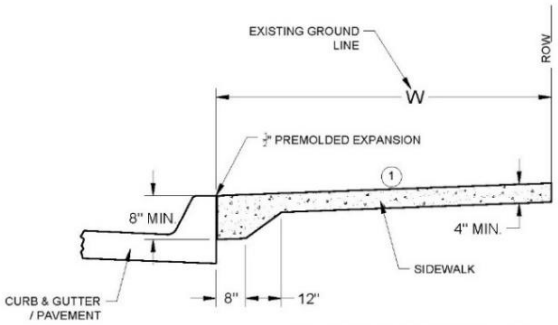
(3) Target cross slope of 1.5% with a maximum cross slope of 2.0%.

FIGURE 7030.103R	STANDARD ROAD PLAN	REVISION 2 10-20-15
		7030.103
		SHEET 1 of 1

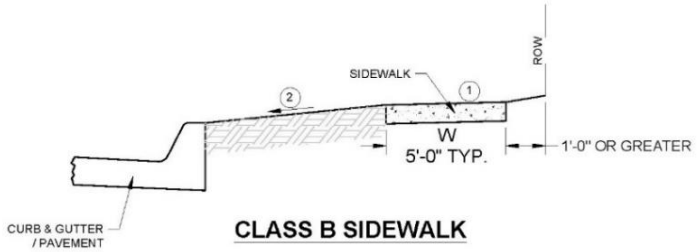
REVISIONS: Revision to sidewalk location and property line. Added target slope to sidewalk. (City of Marshalltown)

DRIVEWAY GRADING

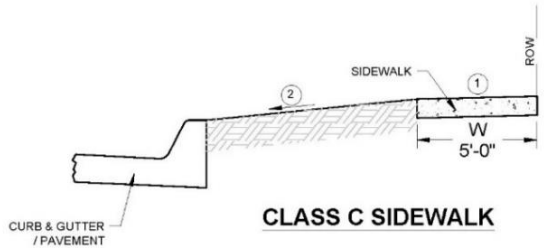
FIGURE 7030.103 | SHEET 1 OF 1



CLASS A SIDEWALK
(Sidewalk extends from back of curb to ROW)



CLASS B SIDEWALK



CLASS C SIDEWALK

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0% (including sidewalk through driveway).

(2) Parking Slopes:
If parking width is less than 10 feet wide, slope at ¼ inch per foot.

If parking width is 10 feet wide and greater, slope at ½ inch per foot.

Special grade may be specified in the contract documents.

W = Sidewalk width as specified In the contract documents.

FIGURE 7030.201R	STANDARD ROAD PLAN	REVISION 1 10-20-15
		7030.201
		SHEET 1 of 1

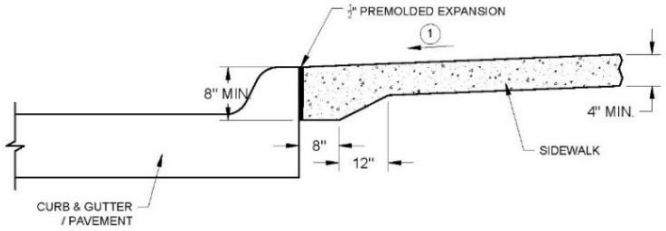
REVISIONS: Revised Class A sidewalk layout and added premolded expansion material. (City of Marshalltown)

CLASSES OF SIDEWALKS

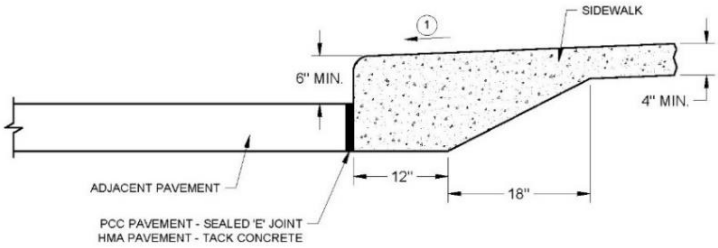
FIGURE 7030.201 | SHEET 1 OF 1

For new sidewalk with new curb and gutter, comply with Detail 2. Comply with Detail 3 for new sidewalk adjacent to existing pavement or when specified in the contract documents.

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0%.



DETAIL 2



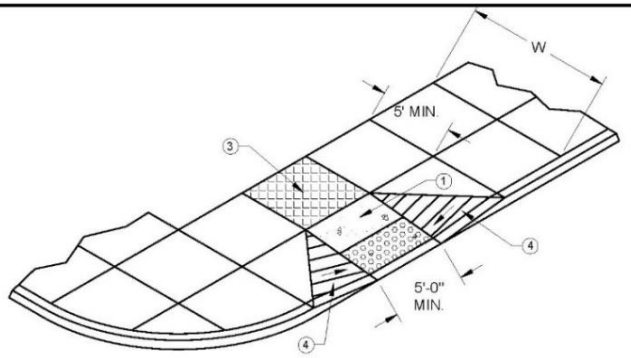
DETAIL 3

FIGURE 7030.202R	STANDARD ROAD PLAN	REVISION 3 10-20-15 7030.202 SHEET 1 of 1

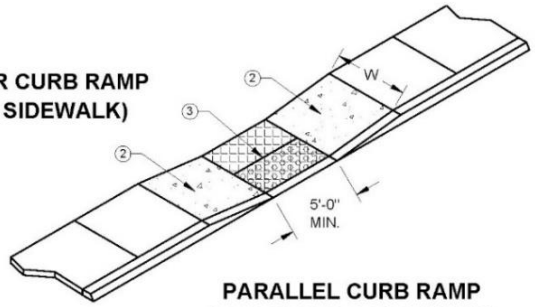
REVISIONS: Removed Detail 1. Revised Detail 2. (City of Marshalltown)

CURB DETAILS FOR CLASS A SIDEWALK

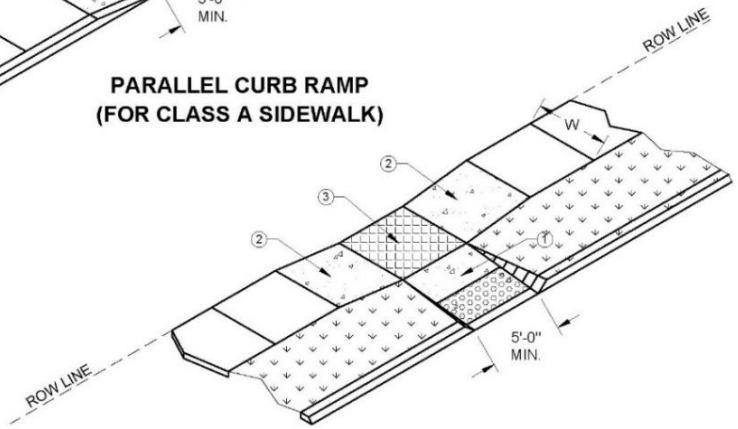
FIGURE 7030.203 | SHEET 1 OF 1



PERPENDICULAR CURB RAMP
(FOR CLASS A SIDEWALK)



PARALLEL CURB RAMP
(FOR CLASS A SIDEWALK)



PERPENDICULAR AND
PARALLEL CURB RAMP
(FOR CLASS B OR C SIDEWALK)

KEY

- CURB RAMP
- TURNING SPACE
- DETECTABLE WARNING
- GRASS

(1) PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%. MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE AT BACK OF CURB. AT MID-BLOCK CROSSINGS, CROSS SLOPE MAY EXCEED 2.0% TO MATCH ROADWAY GRADE.

(2) PARALLEL CURB RAMP: TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

(3) TURNING SPACE: TARGET SLOPE OF 1.5%, WITH A MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. AT MID-BLOCK CROSSINGS, CROSS SLOPE OF LANDING MAY EXCEED 2.0% TO MATCH ROADWAY GRADE. MINIMUM 4 FEET BY 4 FEET.

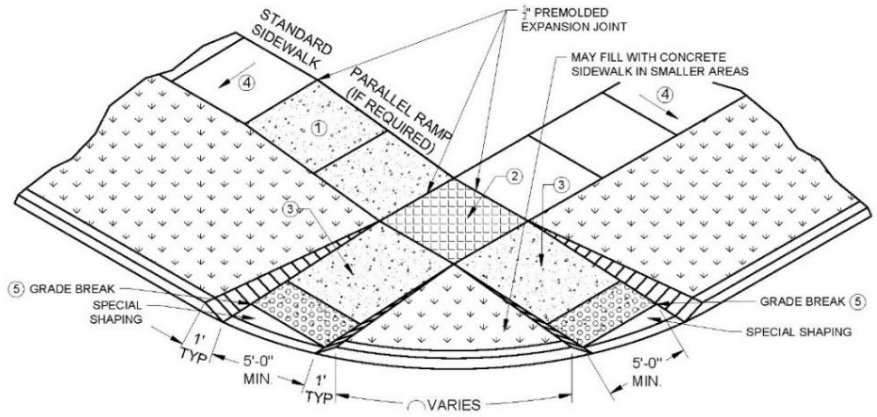
(4) FLARE (10:1 MAX.) REQUIRED IF RAMP IS CONTIGUOUS WITH SIDEWALK.

FIGURE 7030.206R	STANDARD ROAD PLAN	REVISION: NEW 10-16-12
		7030.206
		SHEET 1 of 1

REVISIONS. Change sidewalk/ramp width to 5'-0" min. Change curb side sidewalk to min. 7'-0" width. (City of Marshalltown)

CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

FIGURE 7030.206 | SHEET 1 OF 1



1. PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE LANDING AND THE STANDARD SIDEWALK.

   THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

2. TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. MINIMUM 4 FEET BY 4 FEET.

3. PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.

4. TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.

5. MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE OR FLATTER.

KEY

- CURB RAMP
- TURNING SPACE
- DETECTABLE WARNING
- GRASS

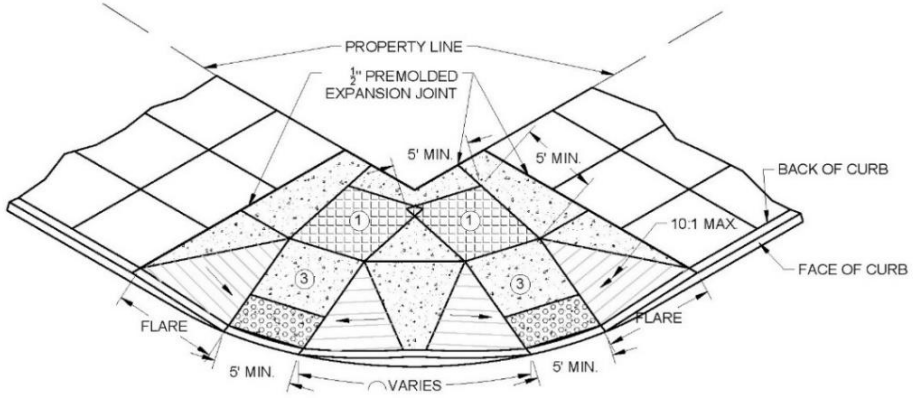
FIGURE 7030.207R	STANDARD ROAD PLAN	REVISION: NEW 10-16-12
		7030.207
		SHEET 1 of 1

REVISIONS. Added detail for preformed expansion joints. (City of Marshalltown)

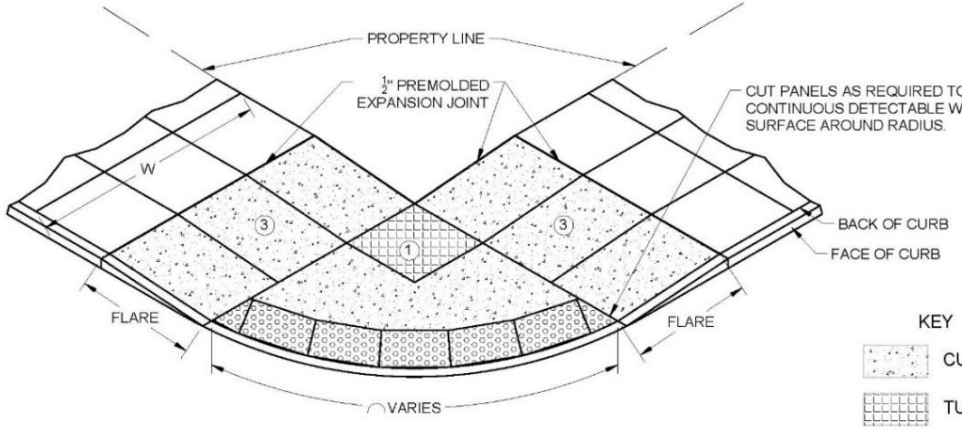
CURB RAMP FOR CLASS B OR C SIDEWALK

FIGURE 7030.207 | SHEET 1 OF 1

(1) PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE LANDING AND THE STANDARD SIDEWALK.
THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.
(2) TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE DIRECTION OF TRAVEL OF 2.0%. MINIMUM 5 FEET BY 5 FEET.
(3) TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.
KEY
CURB RAMP
TURNING SPACE
DETECTABLE WARNING
GRASS
FACE OF CURB
BACK OF CURB
STANDARD SIDEWALK
PARALLEL RAMP (IF REQUIRED) (1)
CUT PANELS AS REQUIRED TO PROVIDE CONTINUOUS DETECTABLE WARNING SURFACE AROUND RADIUS
1' TYP
1' TYP
VARIES
½" PREMOLDED EXPANSION JOINT
W
(2)
(3)
FIGURE 7030.208R
STANDARD ROAD PLAN
REVISION
NEW 10-16-12
7030.208
SHEET 1 of 1
REVISIONS: Added detail for preformed expansion joints. (City of Marshalltown)
ALTERNATIVE CURB RAMP FOR CLASS B OR C SIDEWALK
FIGURE 7030.208
SHEET 1 OF 1



CLASS A SIDEWALK CURB RAMP



CLASS A SIDEWALK CURB RAMP ALTERNATIVE

KEY

CURB RAMP

TURNING SPACE

DETECTABLE WARNING

(1) TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTION OF 2.0%. MINIMUM 5 FEET BY 5 FEET (TURNING SPACES MAY OVERLAP).

(2) PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.

(3) PARALLEL CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

FIGURE 7030.209R	STANDARD ROAD PLAN	REVISION NEW 10-16-12
		7030.209
		SHEET 1 of 1

REVISIONS. Changed minimum ramp and turning width to 5'. (City of Marshalltown)

CURB RAMPS FOR CLASS A SIDEWALK

FIGURE 7030.209 | SHEET 1 OF 1

SECTION 7040 - PAVEMENT REHABILITATION

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

B. **Subbase Over-excavation:**

1. **Measurement:** Measurement will be in tons of subbase material placed for authorized over-excavation. (ADD) Measurement for geogrid shall be per 2010.1.08.H.
2. **Payment:** Payment will be made at the unit price per ton of subbase material. (ADD) Payment for geogrid shall be per 2010.1.08.H.

PART 2 - PRODUCTS

2.01 MATERIALS

A. PCC:

2. High Early Strength Patching: Use Class M mix complying with Section 7010. Do not use calcium chloride unless (DELETE) ~~otherwise specified in the contract documents~~ (ADD) approved by the City Engineer.

G. Subbase Material: Unless otherwise specified in the contract documents (DELETE) ~~, use modified subbase complying with Section 2010~~. (ADD) See MS-4 Pavement Restoration for Subbase requirements.

PART 3 – EXECUTION

3.02 FULL DEPTH PATCHING

B. Restoring Subgrade or Subbase:

1. Excavate (DELETE) ~~2~~ (ADD) 12 to 18 inches below the bottom of the existing pavement. (DELETE) ~~If more than 2 inches is excavated,~~ (ADD) Install geogrid on subgrade and place and compact new subbase material as required to bring the subbase to (DELETE) ~~a level 2 inches below~~ the bottom of the existing pavement. Correct unauthorized over excavation at no additional cost to the Contracting Authority.
5. Place and compact new subbase material as required to bring the subbase to (DELETE) ~~a level 2 inches belo~~w the bottom of the existing pavement.

C. Placing PCC Patches:

2. **Tie Bars and Dowel Bars:** Comply with Section 7010 (ADD), Figures MS-1 and MS-2 in this section, and the figures in Sections 7010 and 7040.

3.11 (ADD) MARSHALLTOWN STANDARD DETAILS

Added the following details:

A. MS-1 & MS-2 Pavement Restoration Joint Layout

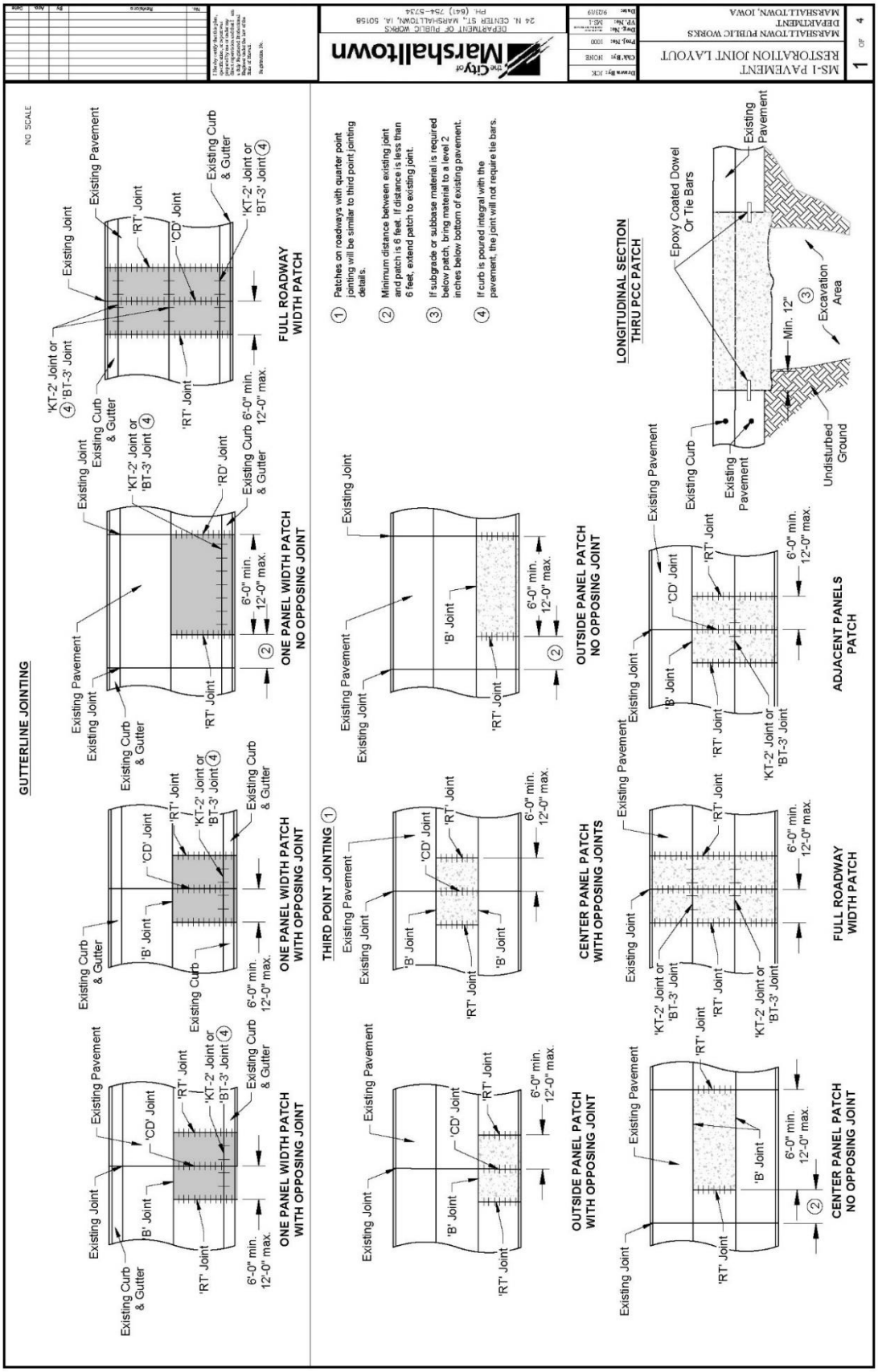
B. MS-3 Manhole Boxout Details

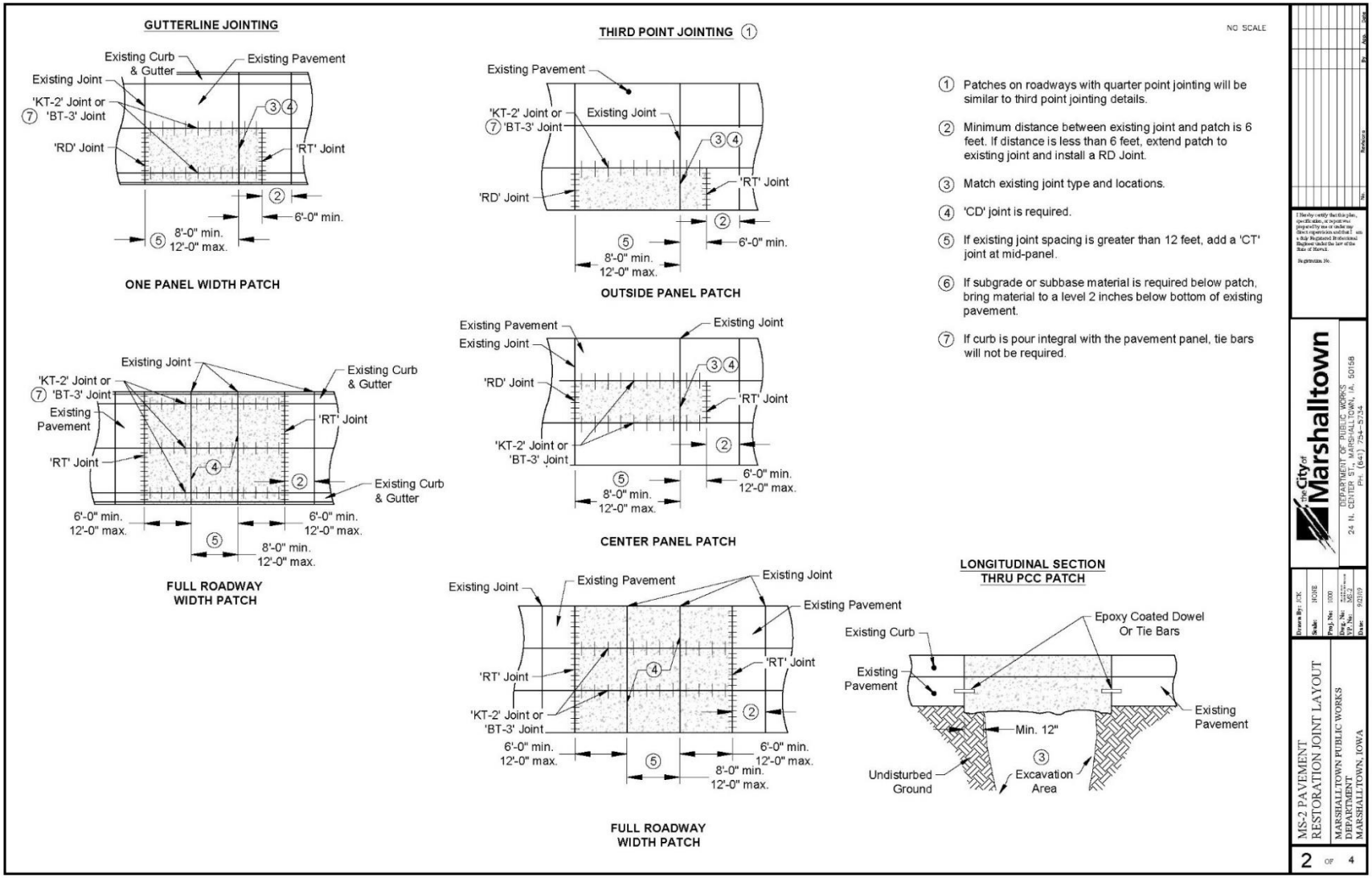
C. MS-4 Pavement Restoration Details

3.12 (ADD) DELETED SUDAS STANDARD DETAILS

A. 7040.101 Full Depth PCC Patches Less Than or Equal to 15’ Long

B. 7040.102 Full Depth PCC Patches Greater Than 15’ Long

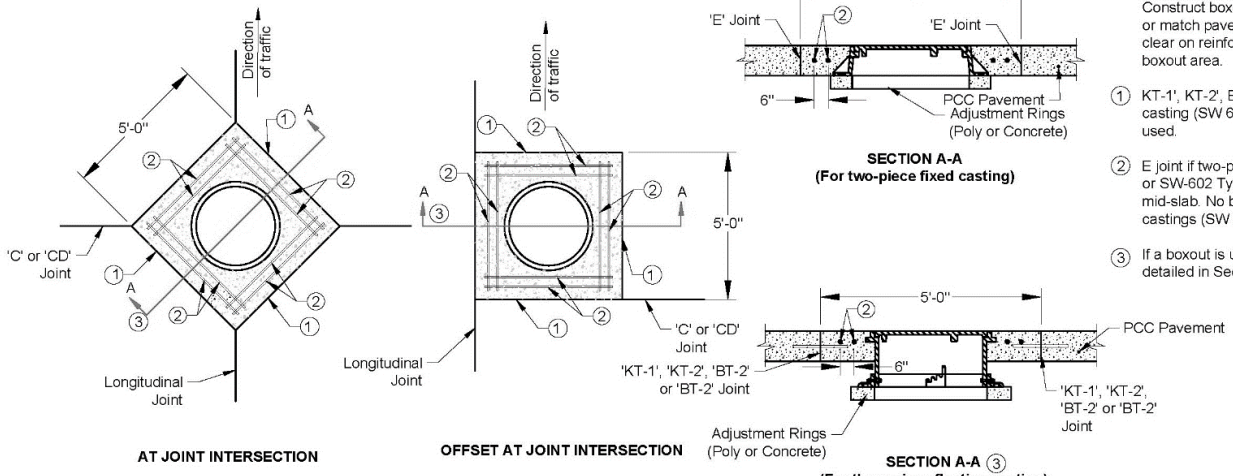

GUTTERLINE JOINTING
NO SCALE
ONE PANEL WIDTH PATCH WITH OPPOSING JOINT
ONE PANEL WIDTH PATCH NO OPPOSING JOINT
FULL ROADWAY WIDTH PATCH
THIRD POINT JOINTING
OUTSIDE PANEL PATCH WITH OPPOSING JOINT
CENTER PANEL PATCH WITH OPPOSING JOINTS
OUTSIDE PANEL PATCH NO OPPOSING JOINT
CENTER PANEL PATCH NO OPPOSING JOINT
FULL ROADWAY WIDTH PATCH
ADJACENT PANELS PATCH
LONGITUDINAL SECTION THRU PCC PATCH
Existing Pavement
Existing Joint
Existing Curb & Gutter
'RT' Joint
'CD' Joint
'B' Joint
'KT-2' Joint or 'BT-3' Joint
'RD' Joint
6'-0" min. 12'-0" max.
Epoxy Coated Dowel Or Tie Bars
Min. 12"
Excavation Area
Undisturbed Ground
1 Patches on roadways with quarter point jointing will be similar to third point jointing details.
2 Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
3 If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
4 If curb is poured integral with the pavement, the joint will not require tie bars.
The City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734
MS-1 PAVEMENT RESTORATION JOINT LAYOUT
MARSHALLTOWN PUBLIC WORKS
DEPARTMENT
MARSHALLTOWN, IOWA
1 OF 4


GUTTERLINE JOINTING
Existing Curb & Gutter
Existing Pavement
Existing Joint
'KT-2' Joint or
7 'BT-3' Joint
'RD' Joint
'RT' Joint
6'-0" min.
8'-0" min.
12'-0" max.
ONE PANEL WIDTH PATCH
Existing Joint
Existing Curb & Gutter
'KT-2' Joint or
7 'BT-3' Joint
Existing Pavement
'RT' Joint
'RT' Joint
Existing Curb & Gutter
6'-0" min.
12'-0" max.
6'-0" min.
12'-0" max.
8'-0" min.
12'-0" max.
FULL ROADWAY WIDTH PATCH
THIRD POINT JOINTING 1
Existing Pavement
'KT-2' Joint or
7 'BT-3' Joint
Existing Joint
'RD' Joint
'RT' Joint
6'-0" min.
8'-0" min.
12'-0" max.
OUTSIDE PANEL PATCH
Existing Pavement
Existing Joint
Existing Joint
'RD' Joint
'RT' Joint
'KT-2' Joint or
'BT-3' Joint
6'-0" min.
12'-0" max.
8'-0" min.
12'-0" max.
CENTER PANEL PATCH
Existing Joint
Existing Pavement
Existing Joint
Existing Pavement
'RT' Joint
'RT' Joint
'KT-2' Joint or
'BT-3' Joint
6'-0" min.
12'-0" max.
6'-0" min.
12'-0" max.
8'-0" min.
12'-0" max.
FULL ROADWAY WIDTH PATCH
NO SCALE
1 Patches on roadways with quarter point jointing will be similar to third point jointing details.
2 Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint and install a RD Joint.
3 Match existing joint type and locations.
4 'CD' joint is required.
5 If existing joint spacing is greater than 12 feet, add a 'CT' joint at mid-panel.
6 If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
7 If curb is pour integral with the pavement panel, tie bars will not be required.
LONGITUDINAL SECTION THRU PCC PATCH
Existing Curb
Epoxy Coated Dowel Or Tie Bars
Existing Pavement
Existing Pavement
Min. 12"
Undisturbed Ground
Excavation Area
the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH: (641) 754-5734
MS-2 PAVEMENT RESTORATION JOINT LAYOUT
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA
2 OF 4

GUTTERLINE JOINTING

THIRD POINT JOINTING (1)

NO SCALE

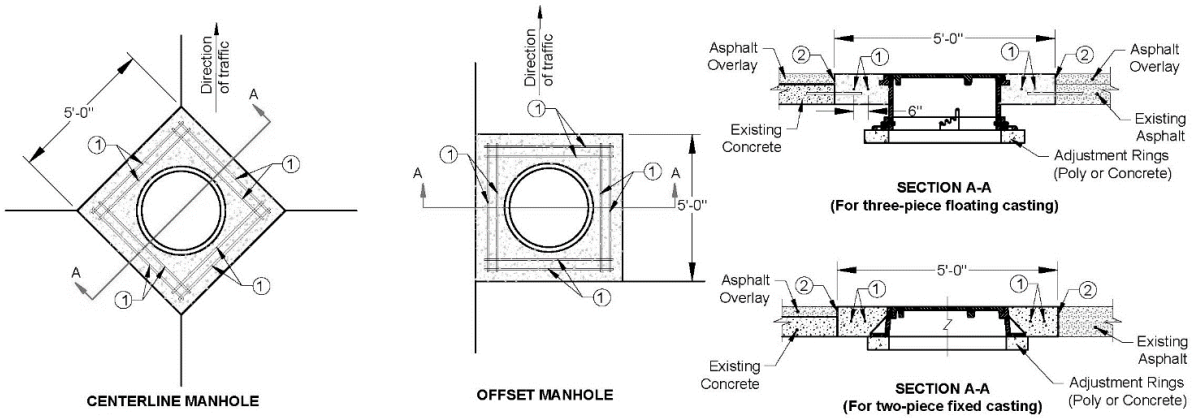


Construct boxout with 8" PCC, Class M or C concrete or match pavement class. Minimum 2-inches clear on reinforcement. Center casting within boxout area.

(1) KT-1', KT-2', BT-1', or BT-2' joint if three-piece floating casting (SW 601 Type B and D or SW-602 Type F) is used.

(2) E joint if two-piece fixed casting (SW 601 Type A and C or SW-602 Type E) is used. 4'-8" (typ.) #4 bar. Place at mid-slab. No boxout is required for three-piece floating castings (SW 601 Type B and D or SW-602 Type F).

(3) If a boxout is used with a three-piece casting, construct as detailed in Section A-A for three-piece floating casting.



Construct boxout with 8" PCC, Class M or C concrete. Minimum 2-inches clear on reinforcement. Center casting within boxout area.

(1) 4'-8" (typ.) #4 bar. Place at mid-slab.

(2) Apply tack coat.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No.	Revisions	By	App.	Date

The City of Marshalltown

DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

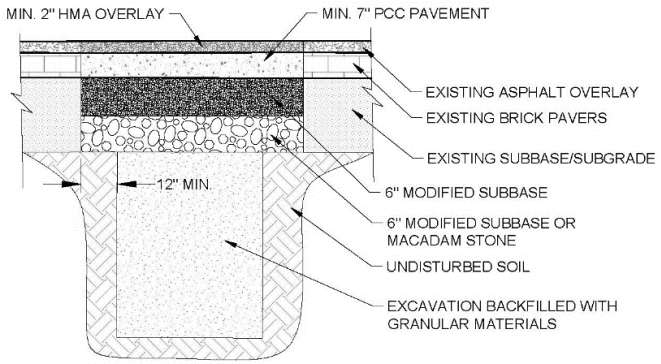
Drawn By:	JCE
Scale:	NONE
Proj. No:	1103
Dwg. No:	MS-3
Dwg. File:	
Upt. Dte:	
Date:	9/23/13

MS-3 MANHOLE BOXOUT DETAILS

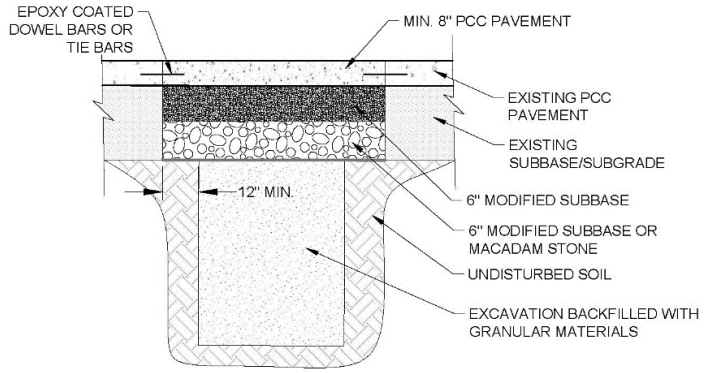
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

3 OF 4

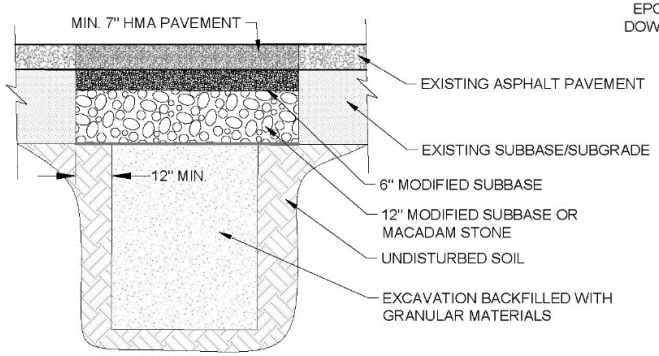
NO SCALE



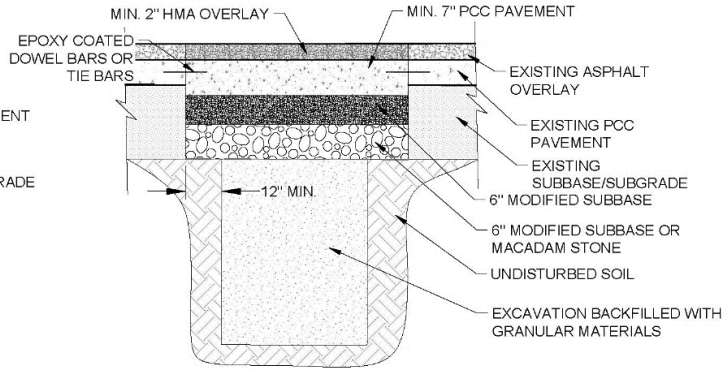
TYPICAL BRICK PAVER STREET REPAIR



TYPICAL CONCRETE STREET REPAIR



TYPICAL ASPHALT STREET REPAIR



TYPICAL ASPHALT OVERLAY ON CONCRETE STREET REPAIR

No. | Revisions | By | App. | Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Hawaii.

Registration No.

The City of Marshalltown

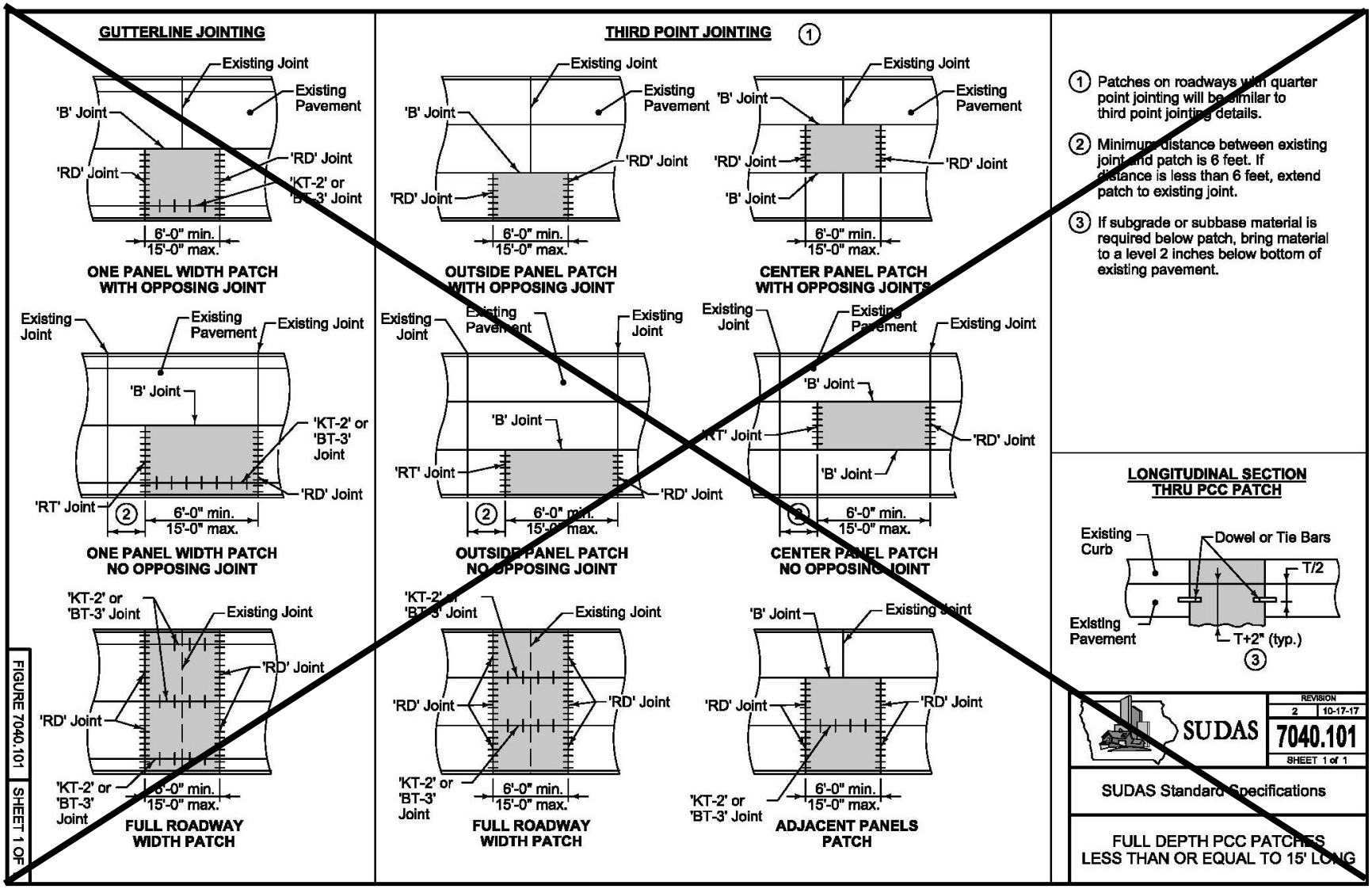
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

Drawn By: JCE | Scale: NONE | Proj. No: 1103 | Dwg. No: MS-4 | Ver. No: | Date: 9/2013

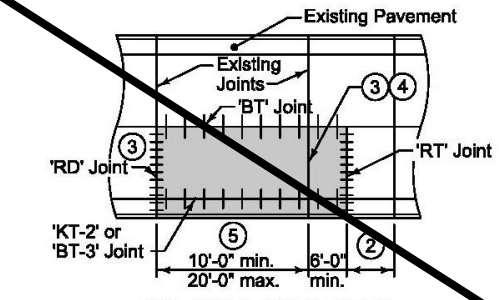
MS-4 PAVEMENT RESTORATION DETAILS

MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

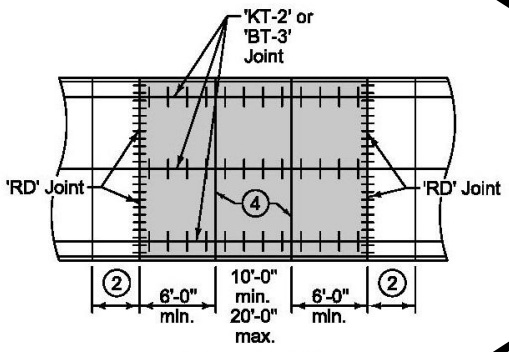
4 OF 4


GUTTERLINE JOINTING
Existing Joint
Existing Pavement
'B' Joint
'RD' Joint
'KT-2' or 'BT-3' Joint
6'-0" min. 15'-0" max.
ONE PANEL WIDTH PATCH WITH OPPOSING JOINT
'RT' Joint
ONE PANEL WIDTH PATCH NO OPPOSING JOINT
FULL ROADWAY WIDTH PATCH
THIRD POINT JOINTING (1)
OUTSIDE PANEL PATCH WITH OPPOSING JOINT
CENTER PANEL PATCH WITH OPPOSING JOINTS
OUTSIDE PANEL PATCH NO OPPOSING JOINT
CENTER PANEL PATCH NO OPPOSING JOINT
ADJACENT PANELS PATCH
(1) Patches on roadways with quarter point jointing will be similar to third point jointing details.
(2) Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
(3) If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
LONGITUDINAL SECTION THRU PCC PATCH
Existing Curb
Dowel or Tie Bars
T/2
Existing Pavement
T+2" (typ.)
SUDAS
REVISION 2 10-17-17
7040.101
SHEET 1 of 1
SUDAS Standard Specifications
FULL DEPTH PCC PATCHES LESS THAN OR EQUAL TO 15' LONG
FIGURE 7040.101
SHEET 1 OF

GUTTERLINE JOINTING

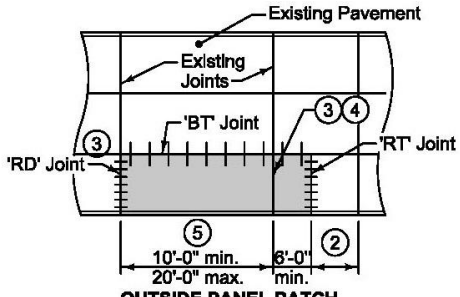


ONE PANEL WIDTH PATCH

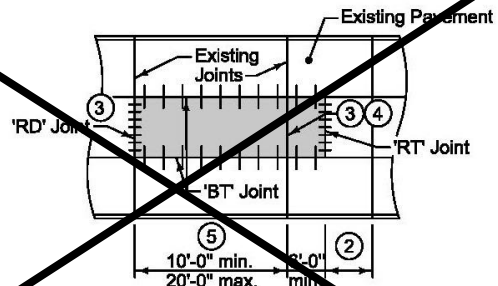


FULL ROADWAY WIDTH PATCH

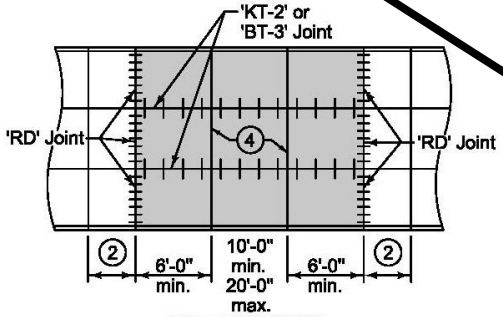
THIRD POINT JOINTING (1)



OUTSIDE PANEL PATCH



CENTER PANEL PATCH



FULL ROADWAY WIDTH PATCH

1. Patches on roadways with quarter point jointing will be similar to third point jointing details.
2. Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
3. Match existing joint type and locations.
4. 'C' joint unless 'CD' joint is specified.
5. If existing joint spacing is greater than 20 feet, add a 'CT' joint at mid-panel.
6. If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.

LONGITUDINAL SECTION THRU PCC PATCH

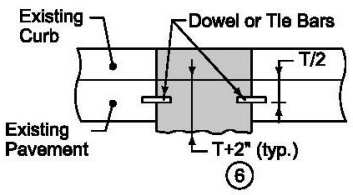


FIGURE 7040.102 SHEET 1 OF 1

SUDAS

REVISION 3 10-17-17

7040.102

SHEET 1 of 1

SUDAS Standard Specifications

FULL DEPTH PCC PATCHES GREATER THAN 15' LONG

SECTION 7050 - ASPHALT STABILIZATION

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

B. Fixture Adjustment: Comply with Section 6010 (ADD) and 6020 for adjustment of manholes and intakes and (DELETE) ~~Section 5020~~ (ADD) Marshalltown Water Works Requirements for adjustment of water valves and fire hydrants.

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7060 - BITUMINOUS SEAL COAT

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

A. **Bituminous Seal Coat by Area:**

3. Includes: Unit price includes, but is not limited to, surface preparation including protection of street fixtures; furnishing and placing of materials, including fillets at intersecting streets, driveways, and turnouts; (ADD) sweeping; fog seal; and final clean up.

C. (ADD) Bituminous Material Fog Seal: Unless the Engineer directs otherwise, use asphalt emulsion grade CQS-1, CQS-1H, CSS-1, or SS-1.

1. Dilute the asphalt emulsion with water prior to application to the pavement surface. The dilution rate is one part of asphalt emulsion to four parts water.
2. Dilute the asphalt emulsion with water prior to application to the pavement surface. The dilution rate is one part of asphalt emulsion to four parts water.
3. Uniformly apply dilute asphalt emulsion at the rate of 0.12 gallon per square yard of pavement surface.

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

3.01 EQUIPMENT

C. Brooms: A power-driven (DELETE) ~~rotary or~~ pick-up broom is required for cleaning surfaces before the bitumen is applied (ADD), in between applications, and after final application.

3.06 TWO COURSE SEAL COATS

B. Second Course Construction:

4. (ADD) Complete rolling operations as specified in 3.05.
5. (ADD) After a minimum of 24 hours, lightly broom surface with power sweeper to remove excess aggregate. All aggregate shall be removed with a vacuum machine.

3.08 (ADD) BITUMINOUS FOG SEAL

A. A bituminous fog seal shall be applied to all sealed streets after completion of the final seal coat layer.

B. Immediately prior to placing the emulsion, clean the entire pavement surface. Use scrapers, compressed air, or other approved methods.

C. Uniformly apply dilute asphalt emulsion at the rate of 0.12 gallon per square yard of pavement surface. The application rate may be reduced if directed by the Engineer. For excessive application rates, the Engineer may require a light coat of sand. The Engineer may require brooming of ponded areas prior to placing traffic on the pavement.

SECTION 7070 - EMULSIFIED ASPHALT SLURRY SEAL

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7080 - PERMEABLE INTERLOCKING PAVERS

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7090 - COLD-IN-PLACE PAVEMENT RECYCLING

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7091 - FULL DEPTH RECLAMATION

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 7092 - CRACK AND SEAT EXISTING PCC PAVEMENT

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 8 – TRAFFIC CONTROL

SECTION 8010 - TRAFFIC SIGNALS

PART 1 - GENERAL

1.07 SPECIAL REQUIREMENTS

B. (ADD) Coordinate all design and construction work with the City of Marshalltown's Public Works Electrical Superintendent.

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 8020 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.06 SCHEDULING AND CONFLICTS

B. (ADD) Schedule and coordinate all line markings with the Public Works Street Superintendent.

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

3.02 CONSTRUCTION

C. **Painted Pavement Markings:**

5. (ADD) Coordinate all painted pavement markings with Marshalltown's Public Works Street Department. Paint markings shall be calibrated to the City's standard marking spacing and widths.

SECTION 8030 - TEMPORARY TRAFFIC CONTROL

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 9 – SITE WORK AND LANDSCAPING

SECTION 9010 - SEEDING

PART 1 - GENERAL

1.08 MEASUREMENT AND PAYMENT

A. Conventional Seeding:

1. Seeding:
    a. Measurement: Measurement will be in acres (ADD) or square yards for each type of seed.
    b. Payment: Payment will be in unit price per acre (ADD) or square yards for each type of seed.
2. Fertilizing:
    a. Measurement: Measurement will be in acres (ADD) or square yards of fertilizer.
    b. Payment: Payment will be at unit price per acre (ADD) or square yards of fertilizer.
3. Mulching:
    a. Measurement: Measurement will be in acres (ADD) or square yards of mulch.
    b. Payment: Payment will be in unit price per acre (ADD) or square yards of mulch.

B. Seeding, Fertilizing, and Mulching for Hydraulic Seeding:

1. Measurement: Measurement will be in acres (ADD) or square yards for each type of seed.
2. Payment: Payment will be in unit price per acre (ADD) or square yards for each type of seed.

C. Seeding, Fertilizing, and Mulching for Pneumatic Seeding:

1. Measurement: Measurement will be in acres (ADD) or square yards for each type of seed.
2. Payment: Payment will be in unit price per acre (ADD) or square yards for each type of seed.

PART 2 - PRODUCTS

2.02 SEED MIXTURES AND SEEDING DATES

A. Type 1 (Permanent Lawn Mixture): Used for residential and commercial turf site, fertilized, and typically mowed. Use between March 1 and May 31 and between August 10 and September 30. (ADD) Dormant seeding from September 30 to freeze-up will be allowed if approved by City Engineer. Type 1 seed mixture will be used in all terrace or boulevard areas within the City of Marshalltown.

PART 3 - EXECUTION

3.05 HYDRAULIC SEEDING

A. **Seed Application, Fertilizing, and Mulching:**

8. Hydromulching (ADD) is required (DELETE) ~~may be done~~ over conventional seeding and/or fertilizing, (ADD) unless straw mulch is (DELETE) ~~if~~ approved by the Engineer.

SECTION 9020 - SODDING

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 9030 - PLANT MATERIAL AND PLANTING

PART 1 - GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

3.06 PLANTING

A. Bare Root Plants: (ADD) Not allowed without written approval of the City Engineer.

SECTION 9040 - EROSION AND SEDIMENT CONTROL

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

3.13 RIP RAP (Figures 9040.110 and 9040.111)

B. (ADD) Contractor shall construct an anchor trench along the toe of the slope prior to placement of riprap. Anchor trench shall be 2’ deep, 4’ wide, and extend along the entire length of slope.

SECTION 9050 - GABIONS AND REVET MATTRESSES

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 9060 - CHAIN LINK FENCE

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 9070 - LANDSCAPE RETAINING WALLS

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

3.02 INSTALLATION

B. Modular Block Retaining Wall:

3. Tieback Reinforcement Installation: Install tieback reinforcement (ADD) every 24" of elevation. Geogrid shall conform to the manufacturer's requirements and be installed according to the manufacturer's requirements.

3.03 (ADD) NOTES ADDED TO FIGURES

A. SUDAS 9070.101 - Tie backs will be required for each 2-feet of vertical wall elevation constructed.

B. SUDAS 9070.102 - Geogrid reinforcement will be required for each 2-feet of vertical wall elevation constructed.

C. SUDAS 9070.103 - Geogrid reinforcement will be required for each 2-feet of vertical wall elevation constructed.

SECTION 9071 - SEGMENTAL BLOCK RETAINING WALLS

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 9072 - COMBINED CONCRETE SIDEWALK AND RETAINING WALL

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 9080 - CONCRETE STEPS, HANDRAILS, AND SAFETY RAIL

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 10 – DEMOLITION

SECTION 10,010 - DEMOLITION OF BUILDING STRUCTURES

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SUPPLEMENTAL DIVISION 11 – MISCELLANEOUS

SECTION 11,010 - CONSTRUCTION SURVEY

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 11,020 – MOBILIZATION

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 11,030 - TEMPORARY SERVICES DURING CONSTRUCTION

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 11,040 - TEMPORARY SIDEWALK ACCESS

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

SECTION 11,050 - CONCRETE WASHOUT

PART 1 – GENERAL

NO REVISIONS

PART 2 - PRODUCTS

NO REVISIONS

PART 3 - EXECUTION

NO REVISIONS

PART III – TECHNICAL SPECIFICATIONS

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MARSHALLTOWN WATER WORKS TECHNICAL SPECIFICATIONS

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STANDARD SPECIFICATIONS

FOR

WATER MAIN INSTALLATION

MARSHALLTOWN WATER WORKS

FEBRUARY 2013

STEVEN M. SINCOX LICENSED 15073 IOWA PROFESSIONAL ENGINEER

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the state of Iowa.

2-19-13

Steven M. Sincox, P.E. Date

My license renewal date is December 31, 2013

Pages or sheets covered by this seal: Supplementary Specifications, Figures 1-16

MARSHALLTOWN WATER WORKS
QUALITY ♦ AFFORDABLE ♦ RELIABLE
SINCE 1876

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Figure 16	VALVE BOX INSTALLATION, BUTTERFLY VALVES
WM-101	THRUSTBLOCKS
WM-102	TRACER SYSTEM

SUPPLEMENTARY SPECIFICATIONS

The intent of these Supplementary Specifications is to modify the Statewide Urban Design and Specifications (SUDAS) in order to meet the regulations of the Marshalltown Water Works. The following items will modify the portion of the SUDAS Specifications indicated. The Supplementary Specifications only modify the sections indicated. All other sections of the SUDAS Specification that are not modified will remain in full force and effect.

SS-1 PIPE BEDDING AND BACKFILL

Modify Section 3010 Paragraph 3.05 A. by adding the following:

6. All backfill within the paved portion of the street right of way shall meet the requirements of the City of Marshalltown Standard Specifications for Street Excavation and Restoration

SS-2 PVC Pipe

Delete Section 5010 Paragraph 2.01 A. 1. in its entirety and replace with the following in its place

1. **Minimum Wall Thickness:**
   - **a. 4 inch through 12 inch sizes:** DR14
   - **b. Sizes over 12 inch:** As specified in the contract documents.

SS-3 Pipe Coupling

Add the following to Section 5010 Paragraph 2.03 D. after the words pipe coupling: "Comply with AWWA C219"

SS-4 Center Sleeve

Delete Section 5010 Paragraph 2.03 D. 1. in its entirety and replace with the following:

1. **Center Sleeve (Center Ring):**
   - a. Ductile iron complying with ASTM A536 for sizes 4 inch through 16 inch.
   - b. Sizes over 16 inch: As specified in the contract documents.

SS-5 Polyethylene Wrap

Add the following to Section 5010 Paragraph 2.05 A. after the words Polyethylene Wrap

"Polyethylene wrap will only be required if it is noted on the detailed plan sheets."

SS-6 Tracer Wire Station

Delete Section 5010 Paragraph 2.05 B. 5. in its entirety and replace with the following:

5. Tracer Wire Termination: Comply with Marshalltown Water Works Figure #9 for the proper termination of tracer wire at fire hydrants.

SS-7 ADDITIONAL REQUIREMENT FOR PVC PIPE INSTALLATION

Add the following to Section 5010 Paragraph 3.03:

C. The use of butterfly valves on DR14 pipe requires the inside diameter of the pipe to be chamfered in order to provide clearance for the valve disc. Refer to the valve manufacturer's instruction manual for the chamfer details.

SS-8 POLYETHYLENE ENCASEMENT

Delete Section 5010 Paragraph 3.05 in its entirety.

SS-9 TRACER SYSTEM INSTALLATION

Section 5010 Paragraph 3.06 F.: Delete the words "(comply with Figure 5010.102)" and replace with the following words: "(comply with Marshalltown Water Works Figure #9)"

SS-10 Gate Valves

Delete the following words from Section 5020 Paragraph 2.01 B. "or AWWA C515 (ductile iron)"

SS-11 Butterfly Valves

Delete Section 5020 Paragraph 2.01 C. 4. in its entirety.

SS-12 Tapping Valve Assemblies

Delete the following words from Section 5020 Paragraph 2.01 D. 1. "or AWWA C515"

SS-13 FIRE HYDRANT ASSEMBLY

Section 5020 Paragraph 2.02: Add the following:

H. **Fire Hydrants shall meet the requirements of the Marshalltown Water Works**

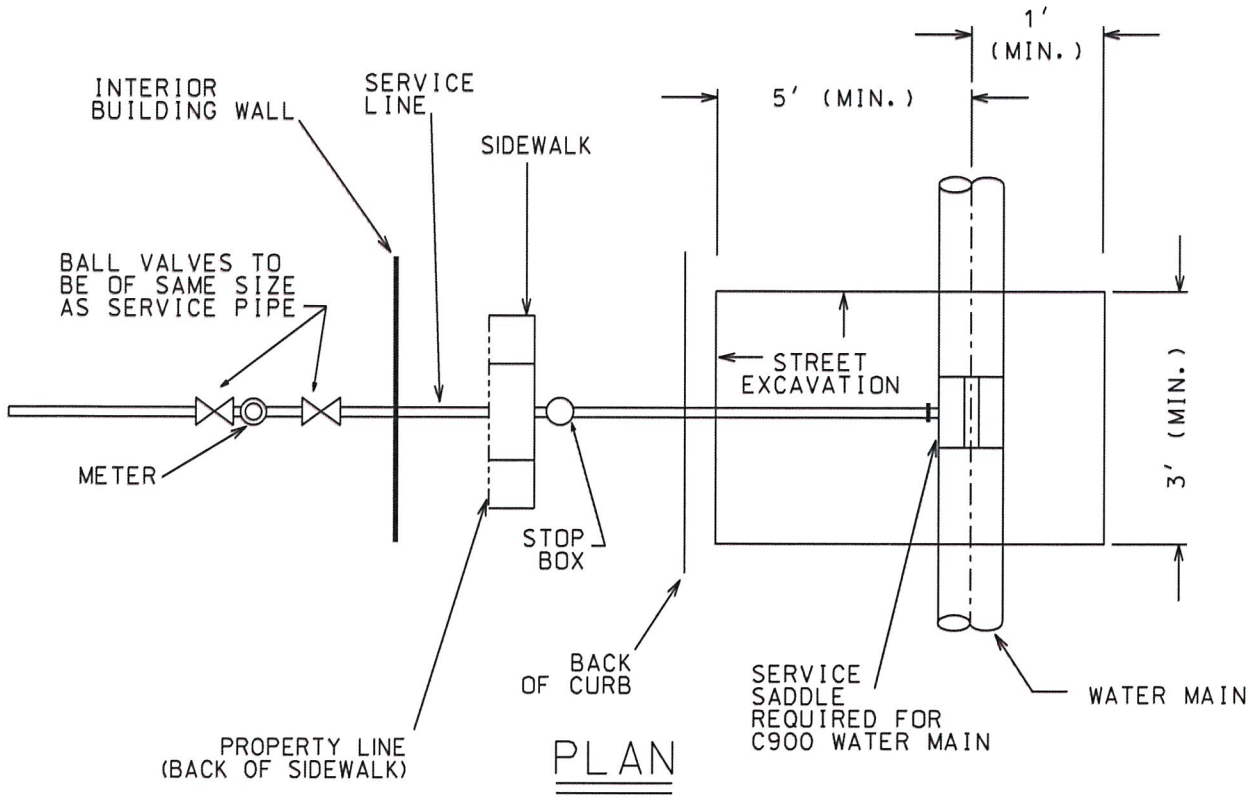
SS-14 Valve Stem Extension:

Delete Section 5020 Paragraph 2.03 C. in its entirety.

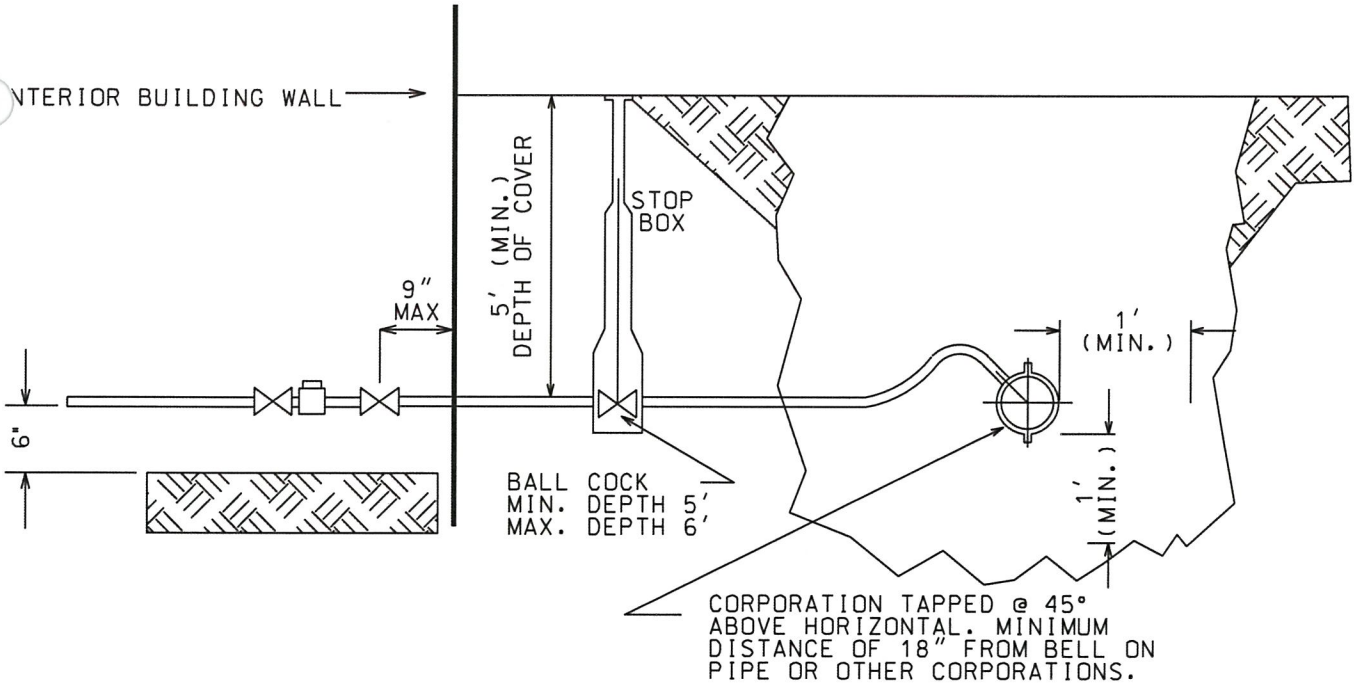
SS-15 FIRE HYDRANT

Delete the following words from Section 5020 Paragraph 3.03 A. "Figure 5020.201" and replace with the following words "Marshalltown Water Works Figure #9"

STANDARD DETAILS



PLAN



SECTION

MARSHALLTOWN WATER WORKS
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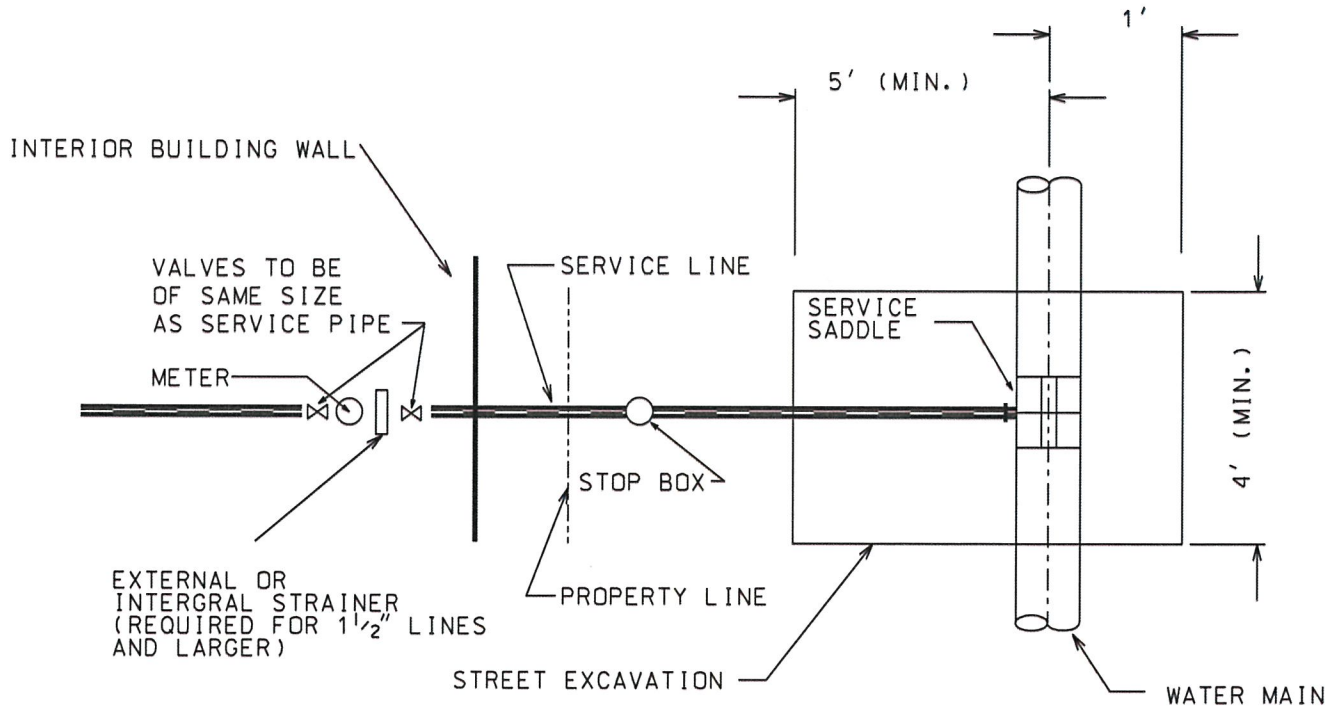
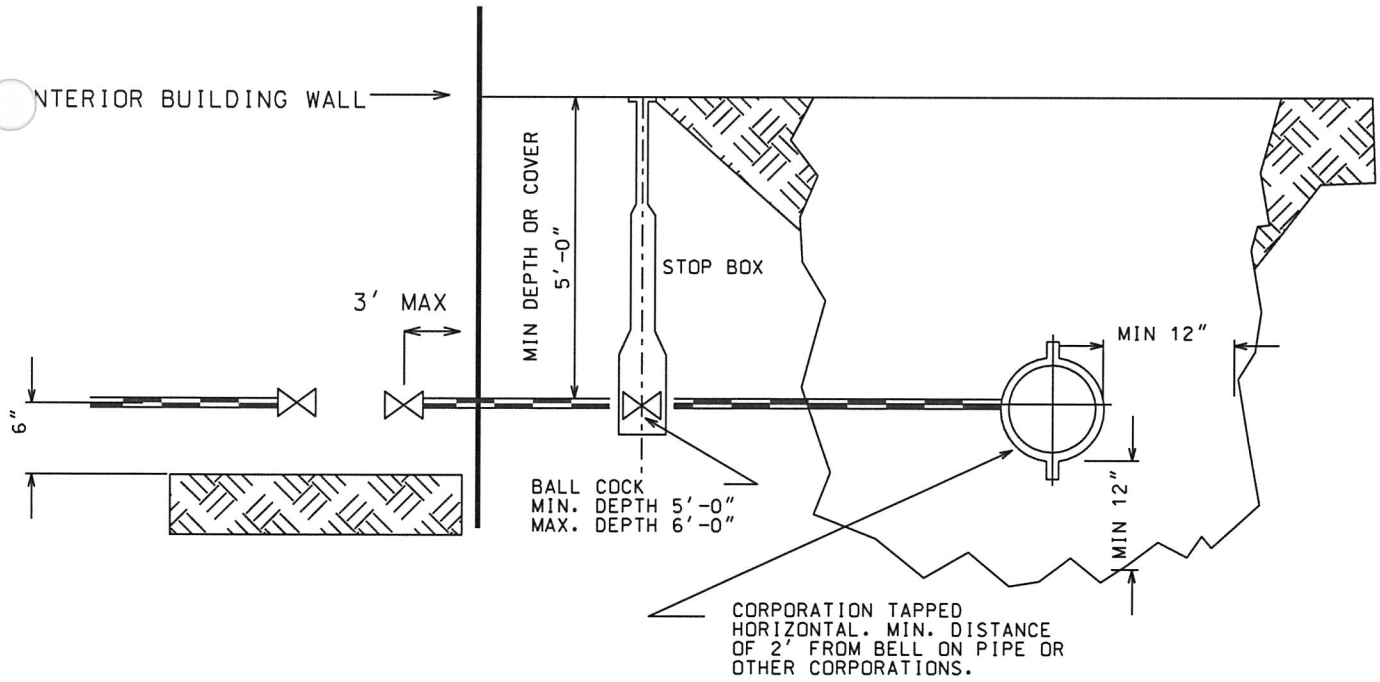
FIGURE #1
DETAIL OF $^{3}/_{4}$″ – 1″
SERVICE INSTALLATION

REVISED
11-18-96



PLAN

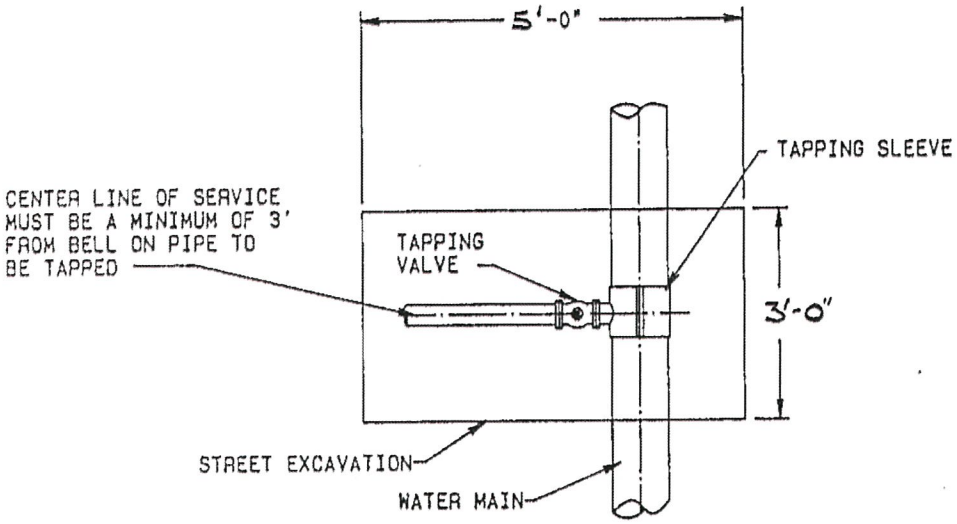


SECTION

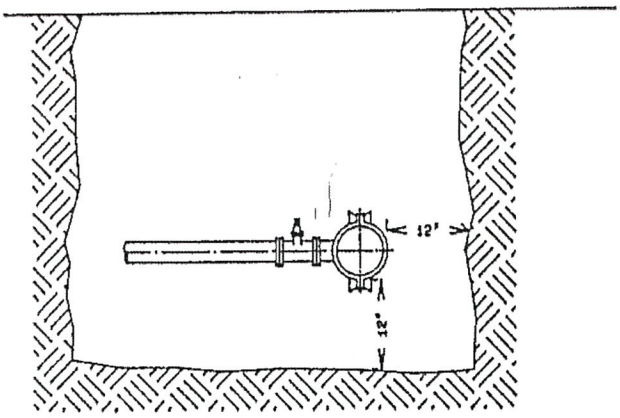
MARSHALLTOWN WATER WORKS
QUALITY ♦ AFFORDABLE ♦ RELIABLE
SINCE 1876

FIGURE #3
DETAIL OF 1" - 2" SERVICE INSTALLATION

REVISED 7-2-96



PLAN



SECTION

MARSHALLTOWN WATER WORKS
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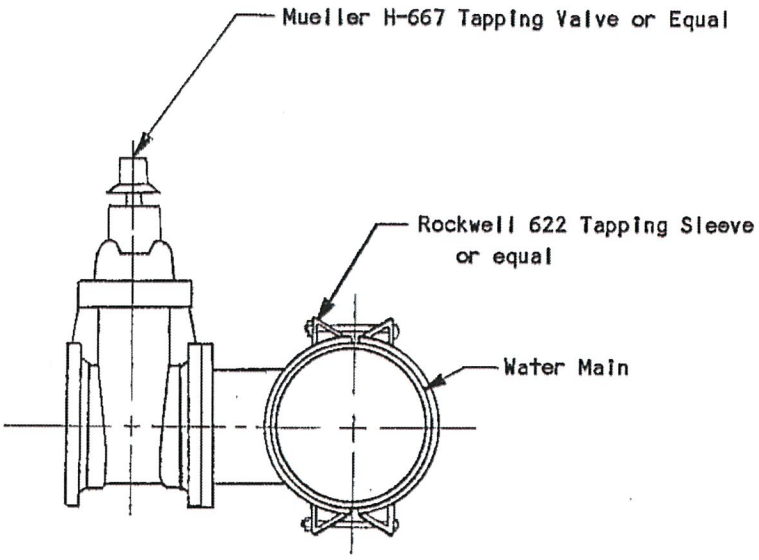
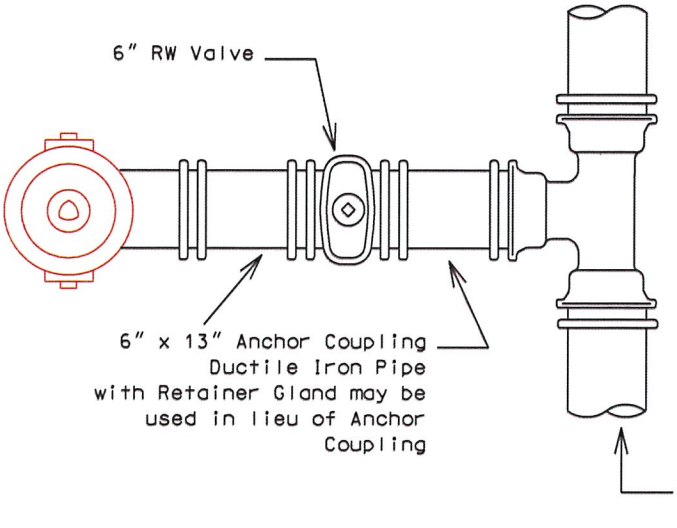
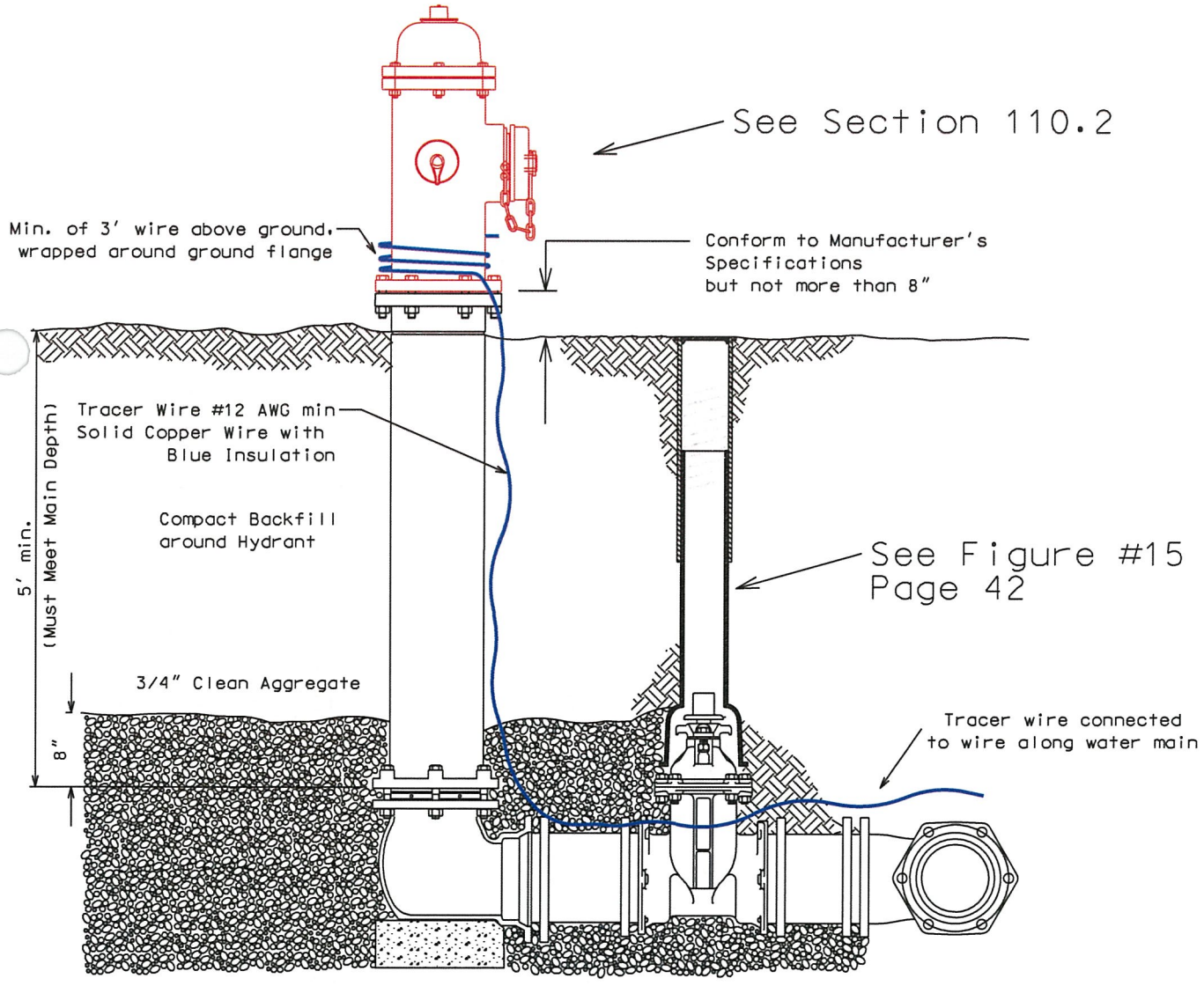
FIGURE #4

EXCAVATION DETAIL FOR TAPPING SERVICES LARGER THAN 2"



All taps in excess of 2" will be performed
by utility and billed to contractor.
Contractor will furnish all materials.





Provide concrete base and maintain hydrant drain openings

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Figure #9

Detail of Standard Hydrant Installation

Revised
4-21-2003

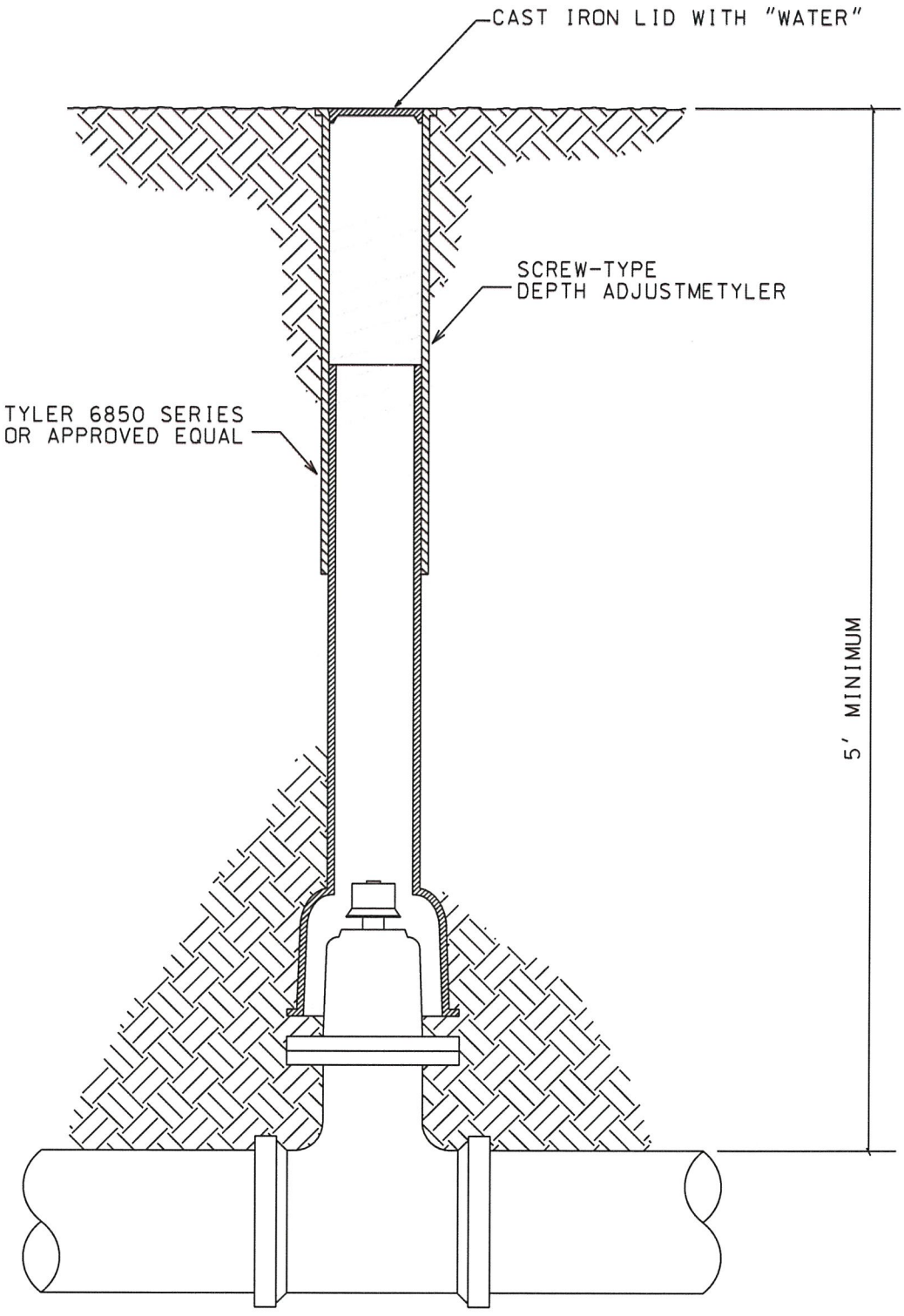

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FIGURE # 15
DETAIL OF STANDARD
VALVE BOX INSTALLATION
FOR RESILIENT WEDGE VALVES

5-19-97

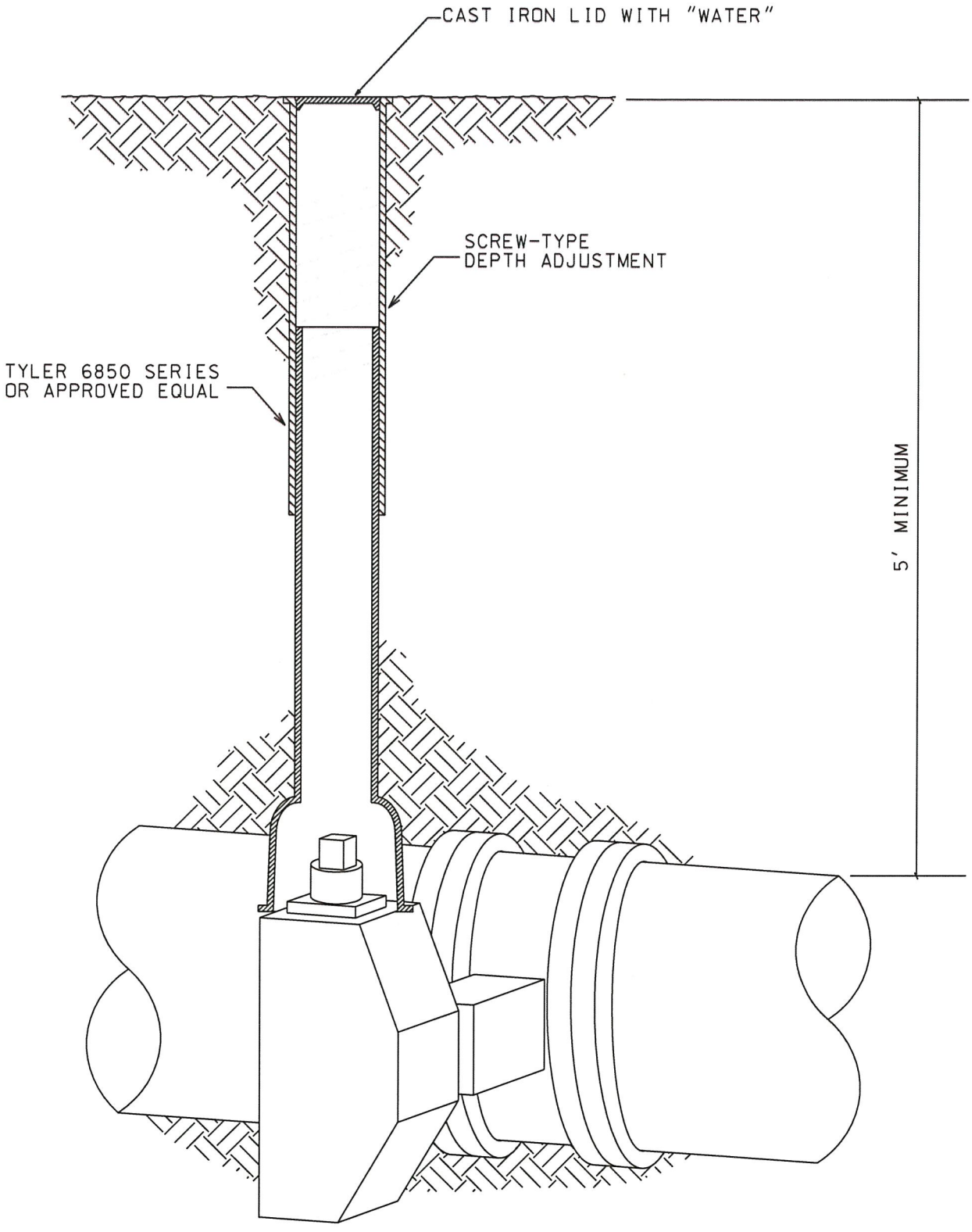

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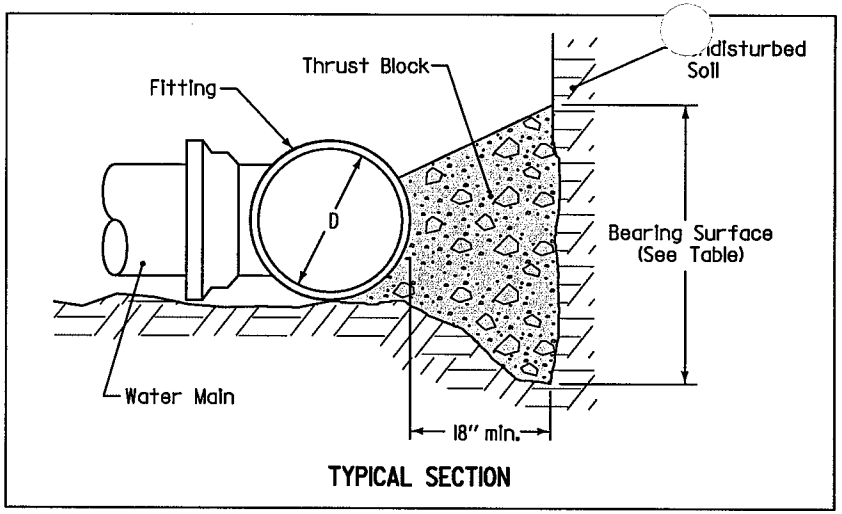
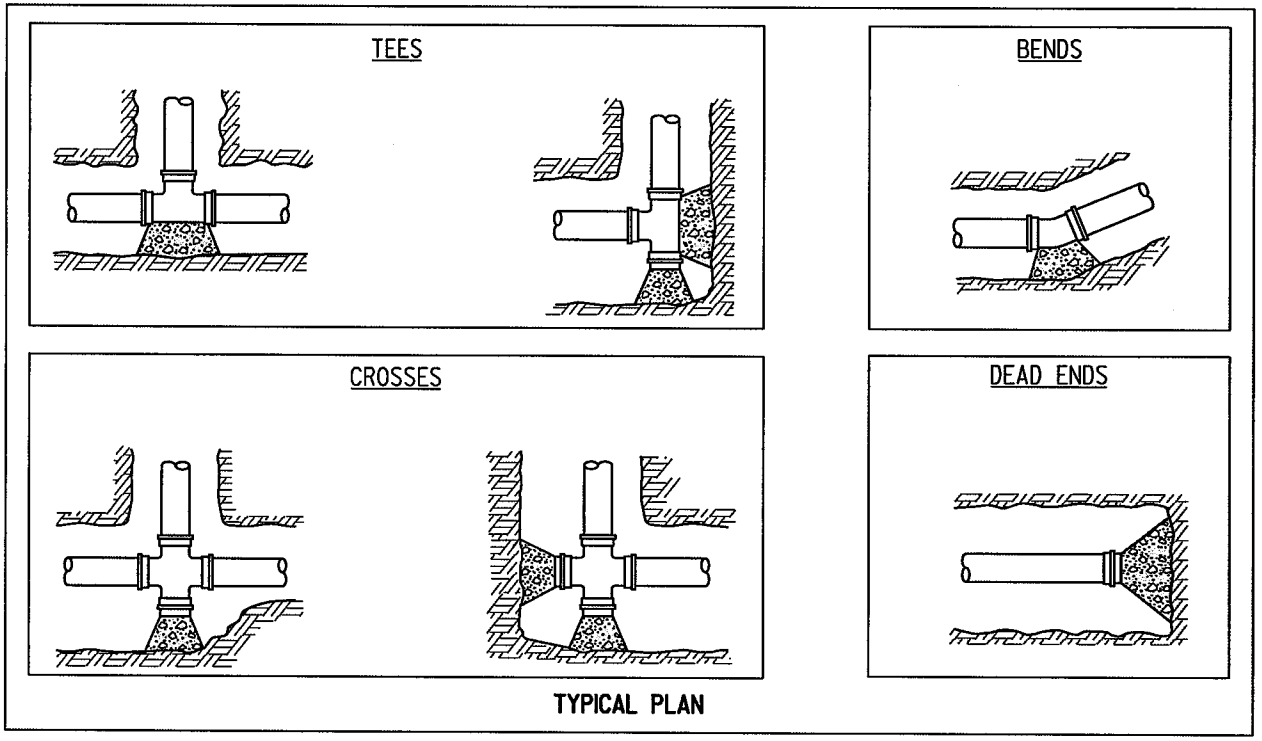
FIGURE # 16
DETAIL OF STANDARD
VALVE BOX INSTALLATION
FOR BUTTERFLY VALVES

5-19-97



TYPICAL SECTION



TYPICAL PLAN

Extend thrust blocks to undisturbed soil. Excavation into trench wall may be necessary.

Form vertical surfaces of poured concrete thrust blocks except on bearing surface.

Encase all fittings in polyethylene wrap. Do not allow concrete to directly contact joints or fitting bolts.

Diameter of Pipe, D (inches)	MINIMUM BEARING SURFACE (sf)				
	Bends				Tees and Dead Ends
	11¼°	22½°	45°	90°	
4	1	1	2	4	3
6	1	2	4	8	6
8	2	4	7	14	10
10	3	6	11	21	15
12	4	8	16	29	21
14	5	11	21	39	28
16	7	14	27	50	36
18	9	17	34	63	45
20	11	21	42	78	55
24	15	31	60	111	78
30	24	47	92	171	120
36	34	67	132	244	173

Minimum surface area based on water pressure of 150 psi and allowable soil pressure of 1,000 psf.

SUDAS | Iowa Department of Transportation

REVISION: NEW 04-21-09

FIGURE 5010.101 | STANDARD ROAD PLAN | WM-101

SHEET 1 of 2

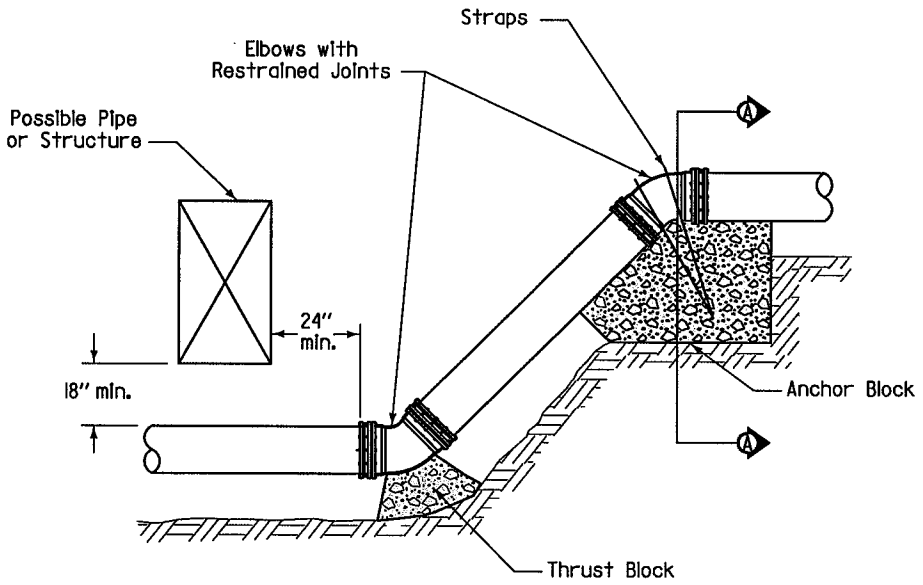
REVISIONS: New. Replaces SUDAS Figure 5010.1

SUDAS DIRECTOR | Deanna Maifield, DESIGN METHODS ENGINEER

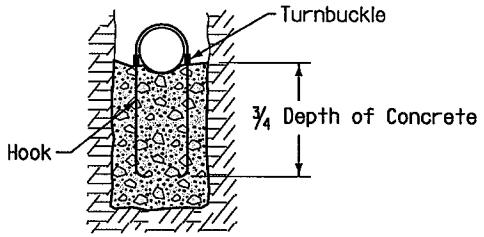
THRUST BLOCKS

FIGURE 5010.101 | SHEET 1 OF 2

CHANGES IN PIPE DEPTH



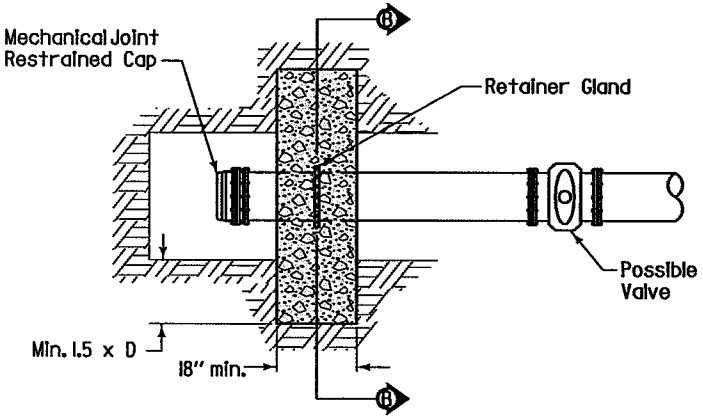
ELEVATION



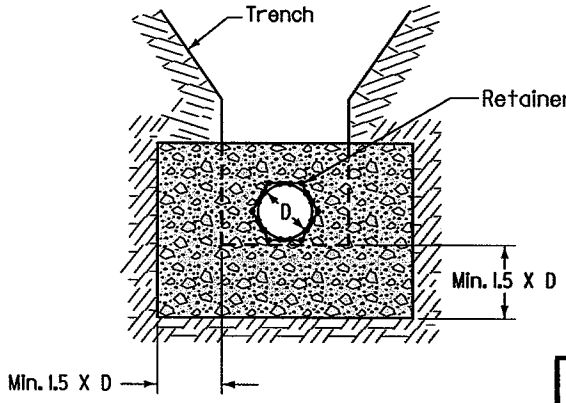
SECTION A-A

DEAD ENDS (ALTERNATE METHOD)

Use only when allowed by the Engineer, or when specified in the contract documents.



PLAN



SECTION B-B

SUDAS	Iowa Department of Transportation	REVISION NEW 04-21-09
FIGURE 5010.101	STANDARD ROAD PLAN	WM-101 SHEET 2 of 2

REVISIONS: New. Replaces SUDAS Figure 5010.1.

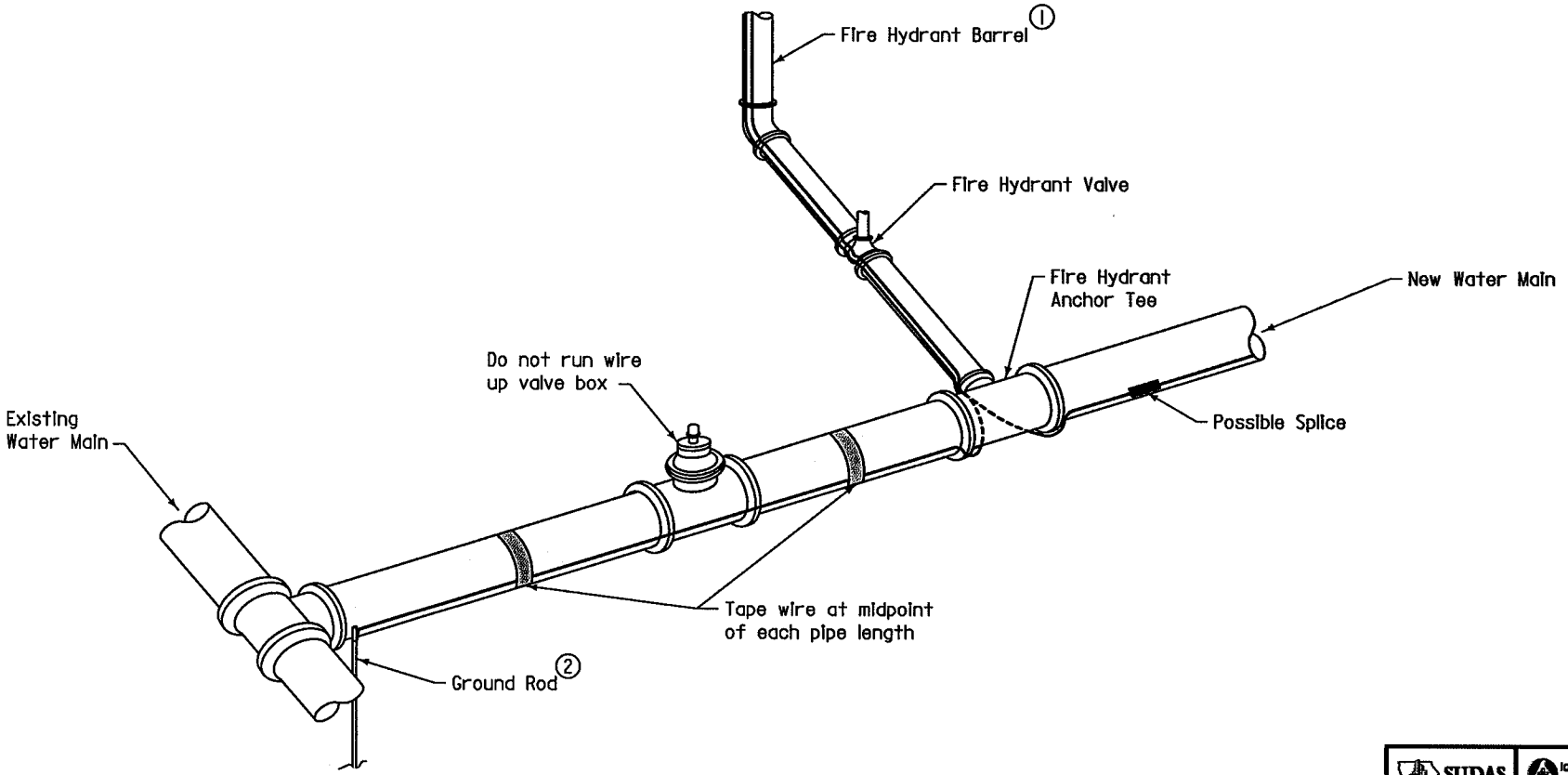
SUDAS DIRECTOR — DESIGN METHODS ENGINEER

THRUST BLOCKS

FIGURE 5010.101 SHEET 2 OF 2

① Extend tracer wire up fire hydrant barrel to internal terminals of tracer wire station and back down. Refer to WM-201 for details of fire hydrant assembly.

② Clamp tracer wire to ground rod at system termination points.



TYPICAL INSTALLATION

FIGURE 5010.102 SHEET 1 OF 1

SUDAS	Iowa Department of Transportation	REVISION NEW 04-21-09
FIGURE 5010.102	STANDARD ROAD PLAN	WM-102 SHEET 1 of 1

REVISIONS: New. Replaces SUDAS Figure 5010.3

SUDAS DIRECTOR — Deanna Maifield, DESIGN METHODS ENGINEER

TRACER SYSTEM

PROJECT TECHNICAL SPECIFICATIONS

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AMENDING SUDAS SECTION 7030 – SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

The following language amends SUDAS Section 7030 – Sidewalks, Shared Use Paths, and Driveways. Unless otherwise indicated, all other specification information from Section 7030 remains unchanged.

This technical specification amends Section 7030 as it pertains to the following bid items:

i) Sidewalk Unit Paver w/ PCC Base

Section 7030: Sidewalks, Shared Use Paths, and Driveways

1.03 Submittals

Add F: Concrete unit paver types and source, manufacturer specifications, samples of each type of paver showing color and texture, and polymeric sand joint filler.

1.08 Measurement and Payment

F. Brick/Paver Sidewalk with Pavement Base: Delete and replace with the following

F. Concrete Unit Pavers with Concrete Base:

1. **Measurement:** Measurement will be in square foot (SF) for the area of concrete unit pavers placed on a concrete base. The area of the concrete base will not be measured separately.
2. **Payment:** Payment will be at the unit price per square foot (SF) for the area of concrete unit pavers placed on concrete base.
3. **Includes:** Unit price includes, but is not limited to, subgrade preparation, concrete base, sand setting bed, rebar, weep holes, concrete unit pavers and polymeric sand joint filler.

2.03 Bricks/Pavers

Add C. Concrete Unit Pavers: Refer to B Sheet Series of the contract documents for details and product info for concrete unit paver types, color and manufacturer information. Contractor shall furnish an additional 5% of each paver type to Owner at completion of project, palletized and delivered to City yard. Cost is incidental to paver unit bid price.

2.06 Brick/Paver Joint Filler

Delete and Replace with the following: Joint filler for concrete unit pavers shall consist of polymeric sand. Acceptable products are Alliance – Gator Maxx or Techniseal NextGel, color to be approved by Engineer. Contractor shall furnish two (2) additional bags of joint filler to Owner at completion of project, delivered to City yard. Cost is incidental to paver unit bid price.

END OF SECTION

AMENDING SUDAS SECTION 9030 – PLANT MATERIAL AND PLANTING

The following language amends SUDAS Section 9030 – Plant Material and Planting. Unless otherwise indicated, all other specification information from Section 9030 remains unchanged.

This technical specification amends Section 9030 as it pertains to the following bid items:

i) Perennials/Grasses (1 Gal.)
ii) Deciduous Shrubs
iii) Deciduous Trees

Section 9030: Plant Material and Planting

1.08 Measurement and Payment

Add F: Perennial Ground Cover and Deciduous Trees

1. **Measurement:** Each perennial/shrub/tree/plant accepted in place will be counted. Amended planting soil shall be considered incidental to the deciduous tree bid item.
2. **Payment**: Payment will be at the unit price for perennial/shrub/tree/plant installed and accepted. Payment will be made according to the following:
    a. 100% of unit price at initial acceptance (less retainage). Initial acceptance will be determined by Engineer. Plant material shall be thriving, fully maintained and show no signs of stress. Upon substantial completion of entire project, a one-year warranty period will commence. Contractor shall provide one-year warranty certificate with start and finish dates as directed by Engineer. Contractor shall maintain all plant material as necessary, including watering, to ensure healthy, vigorous plant material throughout warranty period.
    b. At end of one-year warranty period, the Contractor and Engineer will conduct a thorough review of all plant material. Any plant material not thriving shall be replaced with same size, species and quality as originally planted, per contract documents, at no additional cost to the Owner. A one-year warranty period will apply to all replacement plant material.
3. **Includes:** Unit price includes, but is not limited to, delivery, excavation, installation, watering, placing amended planting soil (when indicated), backfill, mulching, wrapping, staking or guying, herbicide, maintenance during establishment and warranty periods, and replacements.

2.02 Mulch

Delete and Replace with the following:

A. Finely shredded, double-processed hardwood mulch.
B. Particle sizes ranging from 0.25-0.5-inch diameter and maximum 3 inches in length.

C. Green or freshly chipped or shredded mulch shall be rejected.
D. Mulch shall be free of weeds, weed seed, chaff, diseases, or other foreign material.

2.03 Backfill Material

Delete and Replace with the following:

A. Planting backfill shall consist of amended planting soil as indicated on contract documents, unless otherwise specified.
B. Existing topsoil must be approved for use.
C. Ensure backfill material is loose, friable, and free of clods and rocks 1 inches in diameter or larger. Do not use frozen or muddy soil as backfill material.

END OF SECTION

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SECTION 32 9113 – STRUCTURAL SOIL

1) General

A. Summary

i) Section Includes:

(a) All labor, materials, equipment, and supervision required to furnish and install the structural soil to finished grade for designated tree plantings, as shown on the Plan Sheets or directed by the Engineer

B. Measurement and Payment

i) Structural Planting Soil

(a) Payment shall be per cubic yard and shall include all costs to supply, mix, haul, place and compact the structural soil material. All costs associated with subgrade preparation shall be included in this bid item. Excavation for structural soil will be paid separate, under common excavation bid item

C. Submittals

(a) Product labels and data sheets

(b) Chemical analysis of structural soil

(c) 1 Gallon sample of structural soil mix

D. Materials

i) Clay Loam

(a) Clay Loam shall be a "loam" based on the "USDA classification system" as determined by mechanical analysis (ASTM D-422) and it shall be of uniform composition, without admixture of subsoil. It shall be free of stones greater than one-half inch, lumps, plants and their roots, debris and other extraneous matter over one inch in diameter or excess of smaller pieces of the same materials. It shall not contain toxic substances harmful to plant growth. It shall be obtained from naturally well-drained areas, which have never been stripped of topsoil before and have a history of satisfactory vegetative growth. Clay loam shall contain not less than 2% or more than 5% organic matter as determined by the loss on ignition of over-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230 degrees F., plus or minus 9 degrees.

(b) Mechanical analysis for a Loam/Clay Loam shall be as follows:

(c)

Textural Class	% of Total Weight
Gravel	less than 5%
Sand	20-45%
Silt	20-50%
Clay	20-40%

(d) Chemical analysis: Meet or be amended to meet the following criteria:

(i) pH between 5.5 to 6.5

(ii) Percent organic matter 2% - 6% by dry weight

(iii) Nutrient levels as required by the testing laboratory recommendations for the type of plants to be grown in the soil

(iv) Soluble salt less than 1.0 Millimho per cm

(v) Cation Exchange Capacity (CEC) greater than 10

(vi) Carbon/Nitrogen Ratio less than 33:1

(e) No topsoil shall come from USDA - classified prime farmland.

ii) Crushed Stone

(a) Crushed Stone shall be either granite or limestone. The size of the crushed stone shall be 0.75 inches to 1.5 inches allowing for 5% to 10% to be greater than 1.5 inches, and 5% to 10% less than 0.75 inches.

(b) Acceptable aggregate dimensions will not exceed 2.5:1.0 for any two dimensions chosen.

(c) Minimum 90% with one fractured face, minimum 75% with two or more fractured faces.

(d) Results of Aggregate Soundness Loss test shall not exceed 18%.

(e) Losses from LA Abrasion tests shall not exceed 40%.

iii) Fertilizer

(a) Commercial fertilizer shall comply with State and United States fertilizer laws. Fertilizer shall be formulated for mixing into the soil and be certified by the manufacturer to provide controlled release of nitrogen continuously for a period of no less than nine months and no more than 12 months.

(b) Fertilizer percentages of weight of ingredients and application rates shall be as recommended by the soil testing results. Contractor tor to coordinate any required testing and action required.

iv) Sulfur

(a) Sulfur shall be commercial granular, 96% pure sulfur, delivered in containers with the name of the manufacturer, material and analysis appearing on the container.

(b) Sulfur used to lower soil pH above 6.5 shall be ferrous sulfate formulation.

v) Lime

(a) Agricultural limestone containing a minimum of 85% carbonates. Minimum gradation: 100% passing 10 mesh sieves; 98% passing 20 mesh sieves; 55% passing 60 mesh sieve and 40% passing 100 mesh sieve.

vi) Hydrogel

(a) Hydrogel shall be a potassium propenoate-propenamide copolymer Hydrogel (Gelscape® Hydrogel Tackifier) as manufactured by Amereq Corp. (800) 832-8788 or approved equal.

vii) Water

(a) The installing contractor shall be responsible to furnish his own supply of water (as needed)

viii) Structural Soil Blend

(a) A uniformly blended mixture of crushed stone, clay loam and hydrogel mixed in the following proportions:

(i)

Material	Unit of Weight
Specified Crushed Stone	100 units dry weight
Specified clay loam	20-25 units (to achieve minimum CBR of 50)
Hydrogel	0.035 units dry weight
Moisture	ASTM D698/AASHTO T-99 optimum moisture

2) Execution

A. Mixing and Quality Control

i) All structural soil mixing shall be performed at the producer's yard using appropriate soil measuring, mixing and shredding equipment of sufficient capacity and capability to assure proper quality control and consistent mix ratios. No mixing of Structural Soil at the project site shall be permitted.

ii) Should the independent laboratory test results of the clay loam reveal a need to amend it, to meet specifications, the amending materials should be added to the clay loam following the rates and recommendations provided by the licensed producer of the structural soil.

B. Underground Utilities and Subsurface Conditions

i) The installing contractor shall notify the engineer of any subsurface conditions which will affect the contractor's ability to install the structural soil

ii) The installing contractor shall locate and confirm all underground utility lines and structures prior to the start of any excavation

iii) The installing contractor shall repair any underground utilities or foundations damaged during the progress of the is work

C. Site Preparation

i) Do not proceed with the installation of structural soil material until all walls, curbs, footings and utility work in the area have been installed. For site elements dependent on structural soil for foundation support, postpone installation of such elements until immediately after the installation of structural soil.

ii) Excavate and compact the proposed subgrade to depths, slopes and widths as shown on the drawings. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not over excavate compacted subgrades of adjacent pavement or structures.

iii) Do not proceed with the installation of structural soil until the confirmation of the subgrade elevation and compaction and all utility work in the area has been installed. All subsurface drainage systems shall be operational prior to installation of structural soil.

D. Installation of Structural Soil

i) Install structural soil in 6-inch lifts and compact each lift.

ii) Compact all materials to at least 95% Proctor Density from a standard compaction curve AASHTO T 99 (ASTM D 698). No compaction shall occur when moisture content exceeds maximum as listed herein. Delay compaction if moisture content exceeds maximum allowable as directed by the engineer.

iii) Bring structural soil to finished grades as shown on the drawings and protect from contamination as directed by the engineer.

iv) The engineer may periodically check the material being delivered, prior to installation for color and texture consistency with the approved sample provided by the installing contractor as part of the submittal for structural soil. If the engineer determines that the delivered structural soil varies significantly from the approved samples, the engineer shall contact the licensed producer.

v) Structural soil should not be stockpiled long-term. Any structural soil not installed immediately should be protected by a tarp or other waterproof covering.

E. Clean-Up

i) Upon completion of the structural soil installation operations, clean areas within the contract limits. Remove all excess fills, soils and mix stockpiles and legally dispose of all waste materials, trash and debris. Remove all tools and equipment and provide a clean, clear site. Sweep do not wash, all paving and other exposed surfaces of dirt and mud until the paving has been installed over the structural soil material. Do no washing until finished materials covering structural soil material are in place.

END OF SECTION

APPENDIX A – GEOTECHNICAL REPORT

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Construction Materials Testing

November 15, 2021

Project No: 212102MSS

Bolton and Menk, Inc.
1519 Baltimore Drive
Ames, Iowa 50010

Re: **Geotechnical Investigation Executive Summary**
State Street Reconstruction
Marshalltown, Iowa

Dear Mr. Greg Broussard, P.E.:

Thank you for the opportunity to provide our services for the above referenced project. Upon completion of the geotechnical drilling and analysis, the following summary of the findings can be concluded from the data.

- The site consists of mainly loess and granular alluvium soil deposits, classified as CL and SP soils. The natural, on-site soils are not expansive by nature. These types of soils are easily compacted and suitable for all types of fill applications. Proctor values of the virgin material from the borings have not been established. It is likely these virgin soils will be intermixed with other fill materials, therefore it is recommended the Proctor values be established at the time of construction.
- Existing fill soils were encountered to a depth of 3 feet below existing grade in Boring No.6. The fill was fairly homogenous, in a moist condition. If the owner does not want to assume the risk of unforeseen settlements, the fill soils should be completely removed and replaced in a controlled manner. This would be the most conservative approach.
- Contaminated soils were noted in Boring Nos. 12 and 13, near a depth of 10 feet below existing grades. Historical data suggests a gas station was present on the southeast corner of the intersection where the contamination was noted. CMT should be retained to assist with proper remediation of the contaminated soil areas.
- Some of the on-site soils are very sensitive to moisture content fluctuations, i.e. the granular alluvium sands noted in some of the bores. This could create low bearing or difficult compaction scenarios. It may be necessary to re-work (farm) or chemically stabilize the soils to adjust the moisture contents to an acceptable range for compaction.
- No groundwater was noted during drilling operations, however moisture seepage was noted in Boring Nos. 2, 9, 14, 15 and 21, generally near a depth of 10 feet below existing grades. Dewatering techniques may become necessary during construction as these levels will fluctuate with seasonal changes.
- Pavements can be supported on the natural soils, which should be scarified and recompacted to support the desired pavement sections. The pavement sections could also be supported on granular subbase for additional drainage enhancements. It is recommended to utilize a 7 inch pavement section for the project.

Please feel free to call should you have questions or if I may be of further assistance.

Sincerely,

Sybil K. Ferrier, P.E.
Principal Engineer

1610 East Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851
www.cmt-iowa.com

GEOTECHNICAL INVESTIGATION

FOR

STATE STREET RECONSTRUCTION

MARSHALLTOWN, IOWA

Project No: 212102MSS

Performed For:

Bolton & Menk, Inc.
Attn: Mr. Greg Broussard, P.E.
1519 Baltimore Drive
Ames, Iowa 50010

Conducted By:

Construction Materials Testing, Inc.
1610 E. Madison Ave
Des Moines, IA 50313

November 15, 2021

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Sybil K. Ferrier 11-15-21

Sybil K. Ferrier, P.E. Date
License No. 20479

My License renewal date is **December 31,** 2022.
Pages or sheets covered by this seal: All Pages.

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GEOTECHNICAL ENGINEERING REPORT

State Street Reconstruction

Marshalltown, Iowa

Project No: 212102MSS

November 15, 2021

PROJECT BACKGROUND

Bolton and Menk is assisting the City of Marshalltown with the reconstruction of State Street, between North 3rd Street and North 3rd Avenue. The reconstruction is approximately 6 blocks in length, with intersections improvements near N. Center Street. It will require the construction of new streets, updating utilities, and landscaping. It is anticipated that minor site grading on the order of 2 feet or less will be required to achieve the desired final grades. Twenty-one borings were conducted along the street alignment to evaluate soil conditions. The purposes of this report are to describe the subsurface conditions encountered in the borings, analyze and evaluate the test data, and provide geotechnical recommendations regarding the design and reconstruction of the street.

FIELD EXPLORATION

Field exploration was conducted on November 4, 2021. The boring locations were selected and staked in the field by Bolton & Menk, Inc. Topographic site information was also provided by Bolton and Menk. Individual Boring Logs and a Site Plan are included in the attachments of this report showing the findings and locations of the borings.

The borings were drilled with a truck-mounted drill rig using continuous flight augers to advance the boreholes. Representative samples were obtained at various intervals using augers and split spoon samplers in general accordance with ASTM procedures. Field logs of each boring were recorded by the drill crew during drilling operations. These logs contain visual classifications of the materials encountered as well as the driller's interpretation of the subsurface conditions between samples during drilling. Soil samples were sealed and returned to the laboratory for further testing and classification. The final Boring Logs (see attached) represent an interpretation of the field logs and include modifications based on laboratory observations and test results for the samples.

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SITE AND SUBSURFACE CONDITIONS

Site Geology

The site is located near downtown Marshalltown, and this geologic region of Iowa is known as the Des Moines Glacial Lobe. After the last glacier advanced through Iowa, it left behind a poorly drained landscape consisting of pebbly deposits striated with sand and gravel seams from glacial meltwater streams. Many of the natural soils present consist of Wisconsinan glacial till, loess and Pre-Illinoian glacial till underlain by the Pennsylvanian bedrock system. Wisconsinan glacial till typically consists of a lower sand content glacial till, generally mixed with sand seams and layers. The upper more weathered portion of the Pre-Illinoian glacial till, referred to as paleosol, is typically a higher clay content soil.

Soil Conditions

Specific subsurface soil conditions at each boring location are presented on the individual Boring Logs, enclosed in the appendix. The stratification boundaries shown on the Boring Logs represented the approximate boundary lines where changes in soil formations may occur. In-situ the transition between materials is more gradual than what is presented on the Boring Logs. Based on the borings, the subsurface conditions can be generalized as follows:

Pavement Section – The pavement section along this street was generally comprised of HMA pavements, with some brick sections and PCC sections noted below. The pavement sections were measured to be approximately 6 to 14 inches in thickness, with an average thickness of 8.5 inches. The PCC section was noted beneath the HMA in Boring Nos. 7, 8 and 11 (near Center St. intersection). Brick sections were noted beneath Boring Nos.9, and 12 through 21 (east half of project). Beneath the pavement, granular subbase comprised of approximately 4 inches of gravel and sand backfill were noted. The gravel sections were generally noted under Boring Nos. 1 through Boring No. 8 (west half of project), while the sand subbase was noted under Boring Nos. 9 through 21 (east half of project). The granular subbase was noted to be in a dry condition at the time of drilling. Refer to the appendix of this report for photographs of the core sections.

Existing Fill – A minor layer of existing fill soil was encountered to a depth of 3 feet below the pavement section in Boring No. 6. The fill was comprised of dark brown silty lean clays(CL) with sand seams. This soil was present in a moist condition, and exhibited medium stiff consistencies.

Granular Alluvium –Granular alluvium sands were present in Boring Nos. 4, 8 and 15, at various depths. The sands were comprised of brown, light brown, and yellowish brown fine to coarse sand (SP), present in a moist condition. They exhibited medium dense consistencies at the time of drilling. The granular alluvium was encountered between the depth of 10 to 12 ft below existing grade in Boring No. 4. Boring Nos. 8 and 15 terminated in this soil stratum near depths of 15 feet below existing grades.

Loess– Loess soils were the predominate soil encountered across this site. The loess was comprised of various shades of gray-brown, brown, light brown, very dark brown silty lean clays (CL). This soil was present in a moist to very moist condition, and exhibited soft to stiff consistencies. Mottling of the soil was noted after depths of 5 to 10 feet below existing grades in most of the bores. Sand seams were noted in Boring Nos. 2, 3, 7, 12, 14, and 20, generally after a depth of 11 feet below existing grades. In addition, contaminated soils were noted in Boring Nos. 12 and 13 near a depth of 10 feet below existing grades. Historical data suggests a gas

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station was present on the southeast corner of the intersection where the contamination was noted. All borings terminated in this soil stratum near a depth of 15 feet below existing grade, with the exception of Boring Nos. 8 and 15.

Groundwater Observations

No groundwater accumulation was noted during drilling operations. Moisture seepage was noted in Boring Nos. 2, 9, 14, 15 and 21, generally near a depth of 10 feet below existing grades. The remaining borings were dry during and after drilling operations. It should be anticipated that groundwater levels will likely fluctuate between drilling and construction operations, which means dewatering techniques may become necessary. Sand seams and layers were also present in some of the bores, which can readily trap and channel groundwater.

Brown-gray coloring of the soil is another indication of potential groundwater levels. Fluctuations in groundwater can occur from varying amounts of precipitation, changes in surface coverage (i.e. adding pavements or vegetation), irrigation practices, etc. These short term observations are not necessarily an accurate indication of normal groundwater levels. Long-term observations would be required to better define the natural groundwater level in this area.

PROCEDURES

Laboratory Testing

The soil samples were classified in the laboratory based on visual observations, moisture content and strength tests. The soil descriptions and group symbols presented on the Boring Logs for native soils are in general accordance with the Unified Soil Classification System (USCS). The results of the laboratory tests are shown on the boring logs attached to this report.

ENGINEERING ANALYSIS AND RECOMMENDATIONS

Existing Fill Soils

Existing fill soils were encountered in Boring No. 6 only, beneath the granular surfacing. The fill soil was fairly homogeneous, and was comprised of a lean clay (CL). It is presumed this soil was placed during the construction of State Street. Undocumented fill soils can cause differential settlements if not properly addressed. CMT has not been provided with any records of fill placement or compaction records, therefore we cannot address more specific fill support characteristics. Based on final site grades being altered, the fill soils may have a minor impact on subgrade construction for the reconstruction. It is likely these fill soils will be reworked prior to paving operations. It will be dependent on final elevations to determine the best remediation option at the time of construction, to alleviate potential settlement concerns. It is likely settlement concerns will be alleviated by replacing the fill soils in a controlled manner according to the new project specifications.

If fill soils are encountered in other areas of the site, the following design considerations should be noted. When the fill soils are encountered during grading, the owner should elect the following options for remediation, after consultation with the civil and geotechnical engineer of record. If the owner does not want to assume the risk

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of unforeseen settlements, the fill soils should be completely removed and replaced in a controlled manner. This is the most conservative approach. If this is not feasible, a less conservative approach would be to remove and replace the top 2 feet in a controlled manner. Pavements are typically easier to repair than utility lines and foundations, therefore, the owner may elect to build/replace exterior pavements on these soils and assume the risk. If sidewalk pavements experience settlements, this could create tripping hazards for pedestrian traffic. If the owner does not wish to assume the risk of pavement movements, the same over-excavation and backfill procedure should be implemented in these areas. CMT can review these options and provide further recommendations based on final grading plans.

Cohesive fill material should be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D-698 (Standard Proctor Test) at a moisture content of -1 to +4 percent of optimum. No fill should be placed in lifts greater than one foot in thickness. All lifts should be verified with density and moisture content testing during placement. Do no place fill on frozen ground or if the fill contains frozen material.

Site Preparation

Site preparation should consist of the stripping of any loose material present near the surface, such as existing pavement sections. This could be on the order of 14 inches or less across the site to adequately remove the existing pavement sections. If encountered, any mature debris fields, contaminated soils, vegetation, roots, or other large areas of organic materials, should be removed from the construction area and properly backfilled prior to further grading or construction operations.

During the initial site exploration, the moisture contents of the natural soils were generally above to well above (+4-6%) the recommended moisture content for compaction. Adjustment of the moisture content may be necessary during grading operations to achieve the desired amount of compaction at the preferred moisture content. If the soils are wetter during grading operations and weather permitting, farming the soils is a very economical way to lower the moisture content of the soils. If farming is not a feasible option, chemical stabilization can be conducted with cement, fly ash or hydrated quick lime. Chemical stabilization options can be discussed further as construction progresses and site conditions warrant stabilization. If elected, dosage rates should be determined at the time of construction to adjust for current soil moisture contents and the chemical chosen for stabilization. Based on current site conditions, it is assumed that a minimum of 8% fly ash and 6% cement (based on dry soil weight) would be needed for stabilization.

Earthwork Considerations

The soil profile at this site consists of silty lean clays, which contain random zones of high sand content and/or sand seams. No expansive soils were encountered during this exploration. Contaminated soils were noted in Boring Nos. 12 and 13, near a depth of 10 feet below existing grades. Proper remedial techniques should be utilized to properly dispose of the contaminated soils and replace them with suitable fill soils. If additional areas of contaminated soils are encountered, they should be removed and properly disposed. CMT should be retained to provide recommendations for remediation options.

The on-site soils (existing fill and natural) are suitable for general grading applications. The fill soils can be reused, if properly moisture conditioned and placed in a controlled manner. The on-site soils can be excavated utilizing conventional equipment. Cohesive soils are best compacted utilizing a sheepsfoot or pneumatic type

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compactor. Granular soils are best compacted using a vibratory compactor. If areas of heavy organics are identified during construction, they should be removed and properly backfilled prior to further construction.

It is recommended for any additional fill or borrow material to consist of a non-expansive (CL) cohesive material, free of organics and rubble, or a granular material. The cohesive material (clays) should be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D-698 (Standard Proctor Test) at a moisture content of -1 to +4 percent of optimum. If utilizing a granular fill, the material should be compacted to a minimum of 98 percent of the material's maximum dry density at a moisture content of -3 to +3 percent of optimum, as determined by ASTM D-698. No fill should be placed in lifts greater than one foot in thickness. All fill materials, cohesive or granular, should be pre-approved prior to placement. It is recommended for CMT personnel to be on-site during construction to verify compaction or material suitability during the grading process. Do no place fill on frozen ground or if the fill contains frozen material.

The loess soils have a characteristically high silt content, giving them a natural affinity for a high moisture content and lack of cohesion. In addition, sand seams and sand layers were noted in some of the bores. These soil types will not support trenching operations if encountered. If areas of increased sand are encountered during construction, they could cave or collapse rapidly especially if water is flowing freely throughout the excavation. All excavations should be adequately sloped or braced for safety if it is necessary for personnel to enter excavations. Excavation side slopes should be constructed and maintained in accordance with all local, state and federal requirements, including OSHA 29 CFR, part 1926.

Exterior Pavement Support and Design Considerations

The on-site natural soils are suitable for pavement subgrade preparation when properly moisture conditioned. Pavement subgrades should be thoroughly scarified and re-compacted to a minimum depth of 12 inches in order to maintain as much uniformity as possible. By scarifying and re-compacting the soils, a more homogeneous subgrade can be constructed. This will help to reduce the potential for differential settlements to occur within the pavements, especially if transition points from clay to sand are present along the subgrade alignment. In addition, the subgrade preparation should be conducted to a minimum width of 2 feet beyond the edge of the pavements to eliminate the potential for curb and gutter settlements. If soil subgrades prove to be unsuitable during construction, chemically stabilizing the subgrade may be done with cement, fly ash or quick lime. If warranted, chemical dosage rates should be determined at the time of construction to adjust for current soil moisture contents and the chemical chosen for stabilization.

If a concrete pavement is utilized, the pavement can be designed for a modulus of subgrade reaction of 100 pounds per cubic inch or a minimum CBR value of 3 when placed on the prepared subgrade. If a hot mix asphalt pavement is utilized, the subgrade should be designed for a modulus of 2,000 pounds per square foot.

For the anticipated traffic loads in this site, CMT recommends a 7 inch thick PCC pavement consisting of 4,000 psi mix with a 6 percent entrained air content for a pavement section. If a HMA pavement is considered, CMT recommends a 1,000,000 ESAL mix for each lift. The lifts should consist of 4 inches of ¾ inch base mix, placed in two lifts, and 3 inches of ½ inch surface mix. The pavement sections should be increased in thickness for areas receiving higher traffic loads, such as near intersections, existing tie ins, or service vehicle approaches (trash enclosures), etc.

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Pavement Drainage Considerations

Excess water from irrigation methods, rainfall events or general surface water runoff can infiltrate the pavement structure through cracks and joints. This type of water infiltration typically leads to premature pavement failures, seen as joint spalling, heaving of panels or pavement staining if not maintained appropriately. The fluctuations in groundwater levels can increase the risk for unwanted pavement faulting. Seasonal fluctuations have shown that perimeter drains, edge drains or a granular subbase can enhance the lifetime of the pavement structure.

Proper drainage will also aid in reducing the amount of differential settlement a pavement experiences. If this is a concern, one option would be to place a granular subbase under the pavements to aid in drainage. The granular subbase could consist of a one inch clean granular material, such as crushed limestone, D-57 stone or IDOT Modified Subbase and be placed a minimum of 6 inches in thickness. As an alternative, the onsite pavement sections can be recycled into a granular subbase and used as a drainage layer. If edge drains are desired, they could be installed behind the curb and gutter system and connected to storm drains. Edge drains consisting of 4 inch perforated PVC pipe would be adequate to maintain soil moisture contents. Drain tiles could also be considered to aid in removing excess water from under the pavements and should be surrounded by a free draining granular material. This will help in maintaining the groundwater table beneath the pavements and alleviate frost heave potentials. All drainlines should be constructed to drain to a suitable outlet, or daylighted out away from structures so as not to re-introduce water to those structures.

Pavement Frost Heave Considerations

Transition points in soil subgrades or soils that exhibit predominate textural changes (silts to clays, sands to clays, etc.) can react differently to frost heave movements, even when groundwater levels are uniform beneath the pavements. These transition areas may not be apparent from the ground surface, but could exist within the zone of influence beneath the pavements (within several feet bottom of the pavement structure). These transitions points can create faulting in the pavement sections, or non-uniform frost heave movements. It may not be possible to delineate these zones from boring information alone, however remedial measures can be taken to reduce the potential for these movements to occur. The soils at this site are comprised of predominately silty lean clays and sand seams. To alleviate the potential for frost heave, groundwater levels should be maintained as low as possible beneath pavements. Dewatering techniques, such as drainlines or subdrains, or utility trench bedding material, can be designed to divert water from beneath pavements. Proper utility line installation and curb backfill process can also improve frost heave potential.

GENERAL COMMENTS

CMT should be retained for testing and observation during construction to help determine that the design recommendations are fulfilled.

The analysis and recommendations presented in this report are based upon the data obtained from the soil borings performed at the indicated locations and from any other information discussed in this report. This report does not reflect any variations, which may occur between borings. If, during construction, the nature and extent of such variations appear evident; it will be necessary to reevaluate the recommendations of this report.

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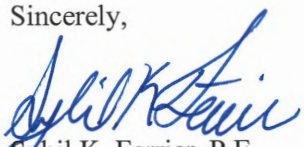
Construction Materials Testing

The scope of service for this project does not include either specifically or by implication any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied are intended or made. In the event that any changes in the nature, design or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid, unless the changes are reviewed and the conclusions of this report are modified or verified in writing by the geotechnical engineer.

Sincerely,



Sybil K. Ferrier, P.E.
Principal Engineer

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Construction Materials Testing

APPENDIX

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GENERAL NOTES - BORING LOG DESCRIPTIONS

Soil descriptions stated on the Boring Logs are based on the Unified Soil Classification System as stated in ASTM Designations D-2487 and D-2488. The Unified Soil Classification group symbol listed in the table below correlate to the group symbols listed on the Boring Logs. The classification is mainly based on visual observations to define the soil characteristics. If a more detailed soil description is required, additional soil testing will be conducted to better define the soil characteristics.

Group Symbol	Group Name	Group Symbol	Group Name	Group Symbol	Group Name	Group Symbol	Group Name
SW	Well-graded Sand	GW	Well-graded Gravel	CL	Lean Clay	CH	Fat Clay
SP	Poorly-graded Sand	GP	Poorly-graded Gravel	ML	Silt	MH	Elastic Silt
SM	Silty Sand	GM	Silty Gravel	OL or OH	Organic Silt Organic Clay	Pt	Peat
SC	Clayey Sand	GC	Clayey Gravel				

RELATIVE DENSITY OF COARSE-GRANED SOILS		**CONSISTENCY OF FINE-GRAINED SOILS**		
SPT, bpf	*Relative Density*	*Unconfined Compressive Strength, Q_u, psf*	*Consistency*	*SPT, bpf*
0-3	Very Loose	< 500	Very Soft	0 – 2
4-9	Loose	500 - 1,000	Soft	2 – 4
10-29	Medium Dense	1,001 - 2,000	Medium Stiff	4 – 8
30-49	Dense	2,001 – 4,000	Stiff	8 – 15
50-80	Very Dense	4,001 – 8,000	Very Stiff	15 – 30
80+	Extremely Dense	8,001 – 16,000	Hard	30 – 100
		>16,000	Very Hard	>100

GRAIN SIZE TERMINOLOGY		**RELATIVE PROPORTIONS**		
Major Component of Sample	*Size Range*	*Descriptive Terms(s) (of components also present in sample)*	*Fines Percent of Dry Weight*	*Sand and Gravel Percent of Dry Weight*
Cobbles	12 in. to 3 in. (300 mm to 75 mm)	Trace	< 5	< 15
Gravel	3 in. to #4 sieve (75 mm to 4.75 mm)	With	5 – 12	15 – 29
Sand	#4 to #200 sieve (4.75 mm to 0.074 mm)	Modifier	> 12	> 30
Silt or Clay	Passing #200 sieve (> 0.074 mm)			

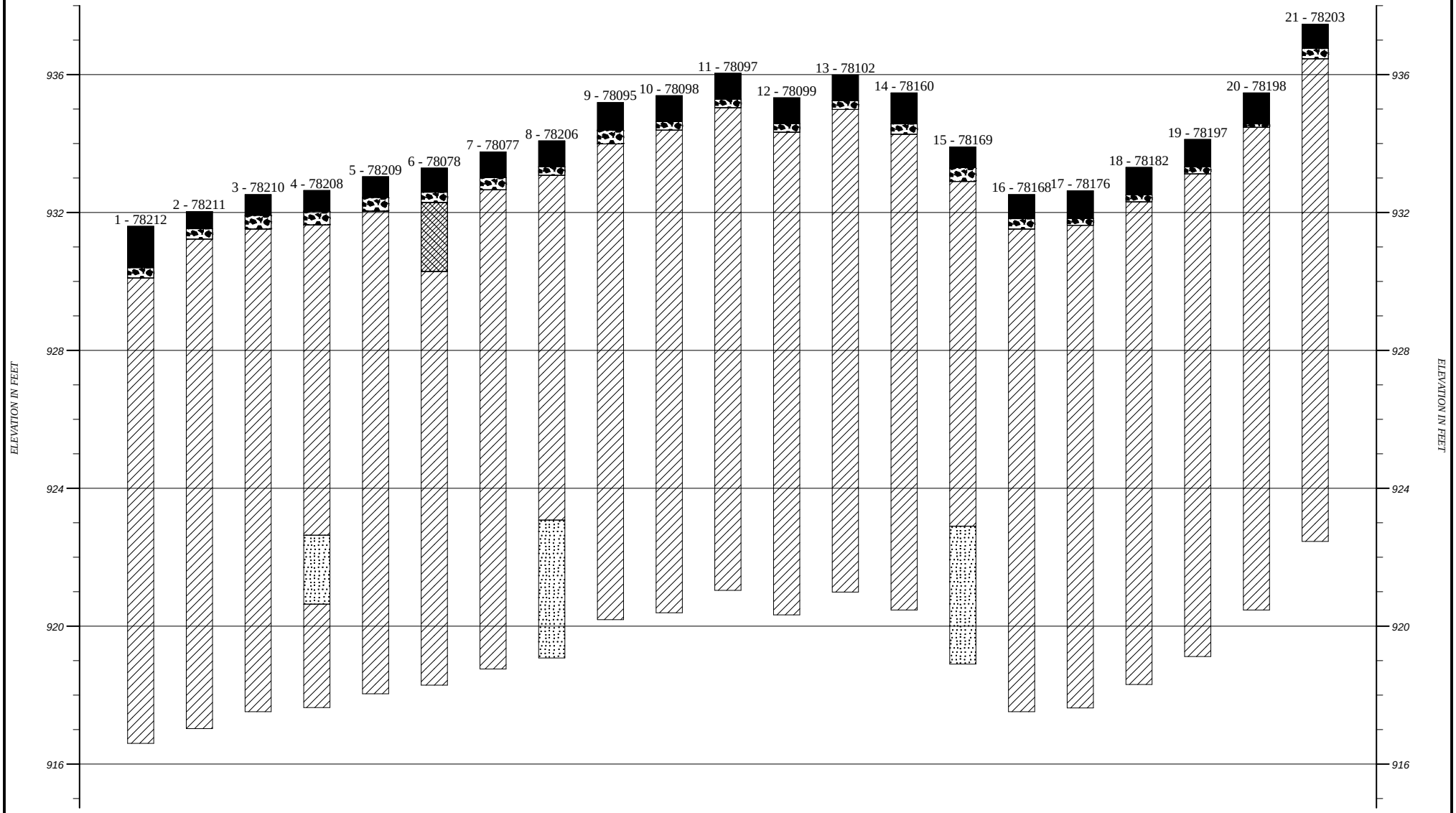
DRILLING AND SAMPLING ABBREVIATIONS

Drilling Methods

CFA – Continuous Flight Auger; typically, 4, 6, or 8 inches in diameter (ASTM D 1452)
HSA – Hollow Stem Auger; 6 or 8 inches in diameter, continuous flight auger remains in bore hole with undisturbed soil samples obtained from center of auger.
HA – Hand Auger; typically with a 4 inch or less diameter auger

Sample Types

SS - Split Spoon; samples obtained with a 140 lb manual hammer in accordance with ASTM D1586.
SSA – Split Spoon; samples obtained with a 140 lb automatic hammer in accordance with ASTM D 1586.
ST – Shelby Tube; thin walled tube samples, typically for cohesive soils, in accordance with ASTM D1587.
SPT- Standard Penetration Test: The number of blows required to drive a sampler, either split spoon or drive cone, into the soil with a 140 lb mass dropped a distance of 30 inches, in accordance with ASTM D 1586, and the number of blows are recorded in each 6 inch interval over a distance of 18 inches. Blow counts are reported for each 6 inch interval or the sum of the last two intervals is reported. The sum of the last two intervals is referred to as N, in blows per foot.
BS – Bulk Disturbed Sample
CPT – Cone Penetration Test; A device in which a 60° cone is pushed continuously into the soil and the cone end resistance is measured for skin friction and end bearing (ASTM D3441).



Strata symbols

- Paving
- Subbase
- Lean Clay
- Poorly graded sand
- Fill

CONSTRUCTION MATERIALS TESTING

GENERALIZED SOIL PROFILE

HORIZONTAL SCALE:	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=4'		11/15/2021

State Street Reconstruction
Marshalltown, Iowa

PROJECT NO. 212102MSS

FIGURE NUMBER

CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **1 - 78212**

Surface Elev. **931.60 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±14.0 inches HMA		
								±4.0 inches Granular Subbase		
								Gray-brown silty lean clay, moist to very moist	CL	
3										
	1	CS		13.4		3,000**				
6								LOESS		
9	2	CS		29.4		1,000**		Mottled after 10 ft.		
12										
	3	CS		28.2		1,500**				
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
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Client **BMI**

Boring # **2 - 78211**

Surface Elev. **932.03 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±6.0 inches HMA		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		27.5		1,500**				
6								LOESS		
9	2	CS		30.1		500**		Mottled after 10 ft.		
12								Moisture seepage noted near 12 ft.		
	3	CS		20.2		2,500**		Sand seam noted near 14 ft dring drilling operations.		
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **3 - 78210**

Surface Elev. **932.52 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±7.5 inches HMA		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		22.8		2,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		22.2		2,500**		Sand seam noted near 9 ft during drilling operations.		
								Sand seam noted near 11 ft during drilling operations.		
12										
	3	CS		15.4		3,500**				
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **4 - 78208**

Surface Elev. **932.64 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	**Material Description** * * The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.	USCS	Water Level
0								±7.0 inches HMA		
								±4.0 inches Granular Subbase		
								Light brown silty lean clay, moist to very moist	CL	
3										
	1	CS		23.2		2,000**				
								Moisture seepage noted near 5 ft during drilling operations.		
6								LOESS		
9	2	CS		29.4		1,500**				
								Brown fine to medium sand, moist	SP	
								GRANULAR ALLUVIUM		
12								Gray silty lean clay, moist to very moist	CL	
								LOESS		
	3	CS		15.9		3,500**				
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

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CONSTRUCTION MATERIALS TESTING

Project State Street Reconstruction
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Client BMI

Boring # 5 - 78209

Surface Elev. 933.04 FT

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±7.0 inches HMA		
								±4.0 inches Granular Subbase		
								Very dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		23.0		2,500**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		27.4		1,500**				
12										
	3	CS		31.6		500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **6 - 78078**

Surface Elev. **933.29 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±2.0 inches HMA, ±6.0 inches PCC		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, with sand seams, moist EXISTING FILL	CL	
3								Brown silty lean clay, moist to very moist	CL	
	1	CS		20.5		3,000**		Mottled after 5 ft.		
6								LOESS		
9	2	CS		14.4		4,000**				
12										
	3	CS		32.6		500**				
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **7 - 78077**

Surface Elev. **933.76 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±2.0 inches HMA, ±7.0 inches PCC		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		25.5		2,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		25.6		2,000**				
								Sand seam noted near 11 ft.		
12										
	3	CS		19.1		3,000**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project State Street Reconstruction
Marshalltown, Iowa

Client BMI

Boring # 8 - 78206

Surface Elev. 934.08 FT

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±8.5 inches PCC		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		27.2		1,500**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		27.2		1,500**				
								Light brown fine to coarse sand, moist	SP	
12										
								GRANULAR ALLUVIUM		
	3	CS		15.3		3,500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **9 - 78095**

Surface Elev. **935.19 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±5.0 inches HMA, ±5.0 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		28.1		1,500**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		31.3		500**				
								Moisture seepage noted near 10 ft during drilling operations.		
12										
	3	CS		32.1		500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **10 - 78098**

Surface Elev. **935.39 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±8.0 inches HMA		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		28.6		1,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		30.4		500**				
12										
	3	CS		31.2		500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **11 - 78097**

Surface Elev. **936.04 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±2.0 inches HMA, ±6.0 inches PCC		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		27.3		2,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		30.7		500**				
12										
	3	CS		32.4		500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **12 - 78099**

Surface Elev. **935.33 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±4.0 inches HMA, ±4.0 inches Brick		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		25.4		2,500**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		28.0		1,500**				
								Moisture seepage noted near 10 ft duirng drilling operations. Contaminated soils noted near 10 ft.		
12										
	3	CS		21.4		2,500**		Sand seam noted near 14 ft during drilling operations.		
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **13 - 78102**

Surface Elev. **935.99 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±4.0 inches HMA, ±4.0 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown-brown silty lean clay, moist to very moist	CL	
3										
	1	CS		27.1		1,500**				
6								LOESS		
9	2	CS		30.4		500**		Moisture seepage noted near 10 ft duirng drilling operations. Contaminated soils noted near 10 ft.		
12								Gray after 12 ft.		
	3	CS		23.4		2,500**				
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **14 - 78160**

Surface Elev. **935.47 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±7.0 inches HMA, ±4.0 inches Brick		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		26.8		2,000**				
6								LOESS		
9	2	CS		29.6		500**		Moisture seepage noted near 10 ft duirng drilling operations.		
12										
	3	CS		23.9		3,000**		Sand seam noted near 14 ft during drilling operations.		
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **15 - 78169**

Surface Elev. **933.90 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±5.0 inches HMA, ±2.5 inches Brick		
								±4.0 inches Granular Subbase		
								Brown silty lean clay, moist to very moist	CL	
3										
	1	CS		25.9		2,500**				
6								LOESS		
9	2	CS		29.6		1,000**		Moisture seepage noted near 10 ft duirng drilling operations.		
								Yellowish brown fine to coarse sand, moist	SP	
12								GRANULAR ALLUVIUM		
	3	CS		19.1		3,500**				
15								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project State Street Reconstruction
Marshalltown, Iowa

Client BMI

Boring # 16 - 78168

Surface Elev. 932.52 FT

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±5.5 inches HMA, ±2.5 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		30.1		500**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		31.1		500**				
12										
	3	CS		29.5		500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **17 - 78176**

Surface Elev. **932.63 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±5.0 inches HMA, ±4.5 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		27.7		1,500**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		28.2		1,500**				
12										
	3	CS		28.8		2,500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **18 - 78182**

Surface Elev. **933.31 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±5.0 inches HMA, ±4.5 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		23.7		3,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		29.4		500**				
12										
	3	CS		29.1		500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **19 - 78197**

Surface Elev. **934.12 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±5.0 inches HMA, ±2.5 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		26.5		2,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		27.8		1,500**				
12										
	3	CS		28.0		1,500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **20 - 78198**

Surface Elev. **935.47 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±7.0 inches HMA, ±2.5 inches Brick		
								±4.0 inches Granular Subbase		
								Dark brown silty lean clay, moist to very moist	CL	
3										
	1	CS		24.2		2,000**				
								Mottled after 5 ft.		
6										
								LOESS		
9	2	CS		26.0		2,000**				
12										
	3	CS		24.7		3,000**		Sand seam noted near 14 ft during drilling operations.		
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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CONSTRUCTION MATERIALS TESTING

Project **State Street Reconstruction**
Marshalltown, Iowa

Client **BMI**

Boring # **21 - 78203**

Surface Elev. **937.46 FT**

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								±6.0 inches HMA, ±2.5 inches Brick		
								±4.0 inches Granular Subbase		
								Gray silty lean clay, moist to very moist	CL	
3										
	1	CS		25.4		2,500**				
6								LOESS		
9	2	CS		29.1		500**				
								Moisture seepage noted near 10 ft duirng drilling operations. Mottled after 10 ft.		
12										
	3	CS		27.0		2,500**				
15								End of Boring		
								No groundwater noted during drilling operations.		
								**Estimated using calibrated penetrometer		
18										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

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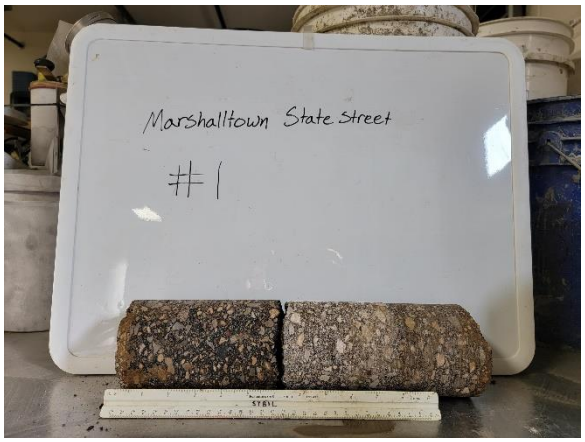
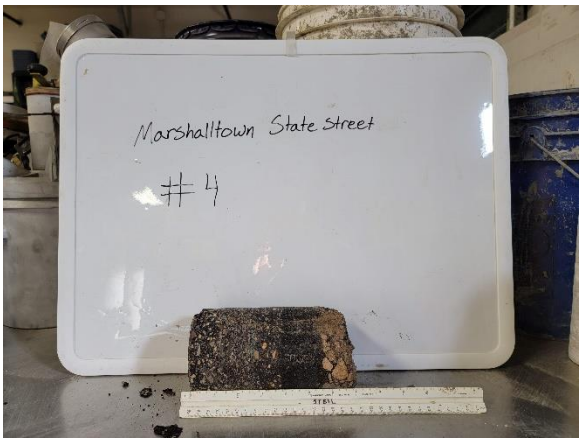
Construction Materials Testing





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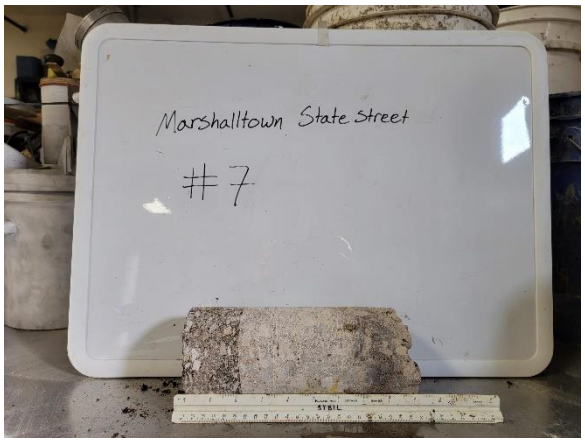

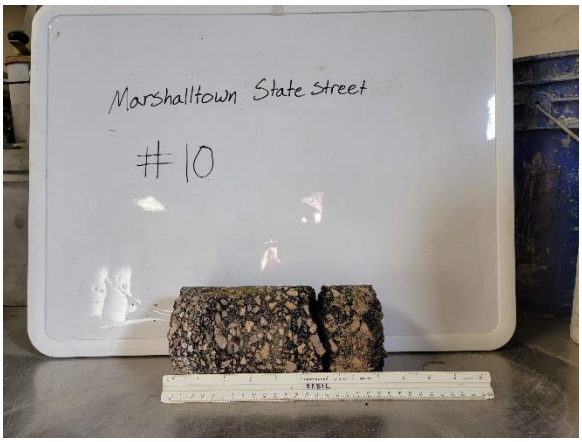

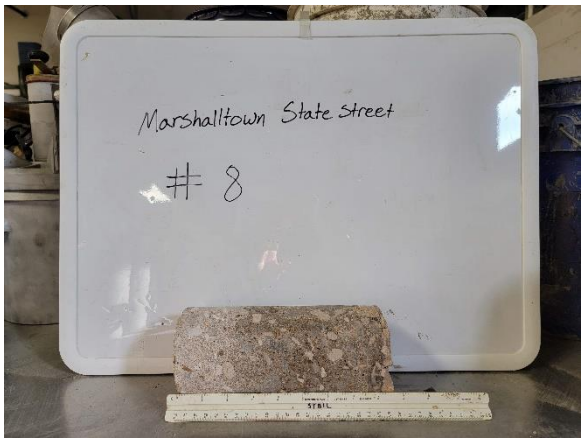

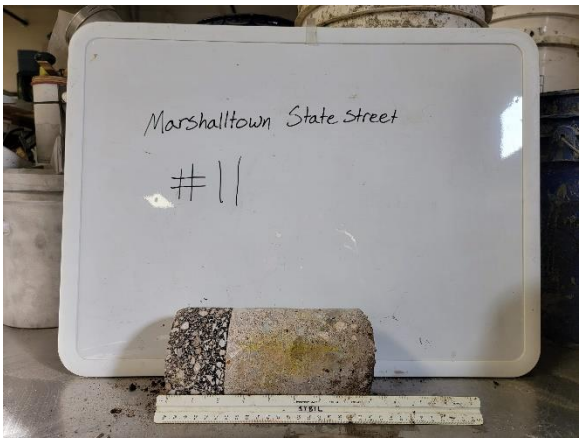

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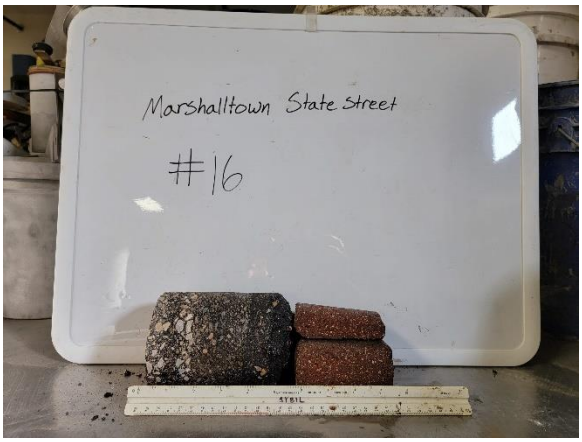

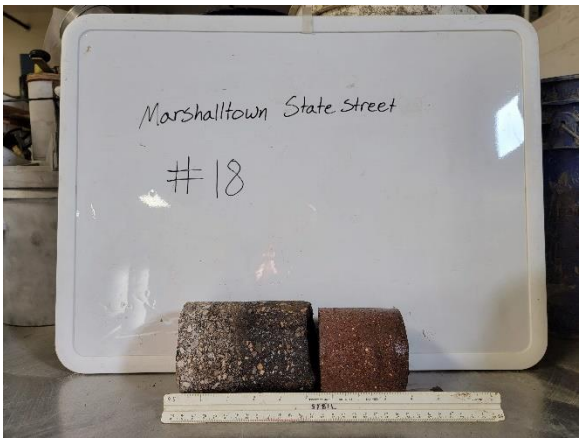

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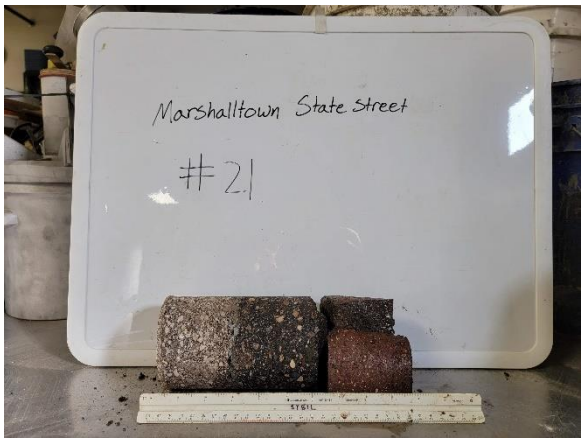

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State Street Reconstruction
City of Marshalltown

Geotechical Boring
October 2021

BOLTON & MENK

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APPENDIX B – CONTAMINATED SOILS REPORT

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CONTAMINATED SITE REVIEW

State Street roughly bounded by North 3rd Street and North 3rd Avenue
Marshalltown, Iowa 50158

Prepared For:

Bolton & Menk, Inc.
1519 Baltimore Drive
Ames, Iowa 50010

Prepared by:

IMPACT7G

9550 Hickman Road, Suite 105
Clive, Iowa 50325

November 16, 2021

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1.0 INTRODUCTION

Impact7G was retained by Bolton & Menk, Inc. to conduct a Contaminated Site Review for a proposed sewer, water, and road reconstruction project located along a portion of State Street roughly bounded by North 3rd Street and North 3rd Avenue in Marshalltown, Iowa (referred to herein as the "Project Area"). **Figure 1** shows the Project Area and vicinity on a recent topographic map.

1.1 Scope of Services

The purpose of the Contaminated Site Review was to identify potential locations of environmental interest across the Project Area, including known subsurface contamination (soil and/or groundwater), underground storage tanks (USTs), groundwater monitoring wells, properties known or suspected to be contaminated with petroleum and/or hazardous substances, and other environmental concerns. As part of this project Impact7G performed, or attempted to perform, the following services:

- Records evaluation, including:
  - Review of historical information (Sanborn fire insurance maps and city directories).
  - Review of federal, state, tribal, and local government listings obtained from a third-party database provider.
  - Review of State regulatory environmental databases.
  - Review of site-specific environmental files obtained from State regulators.
- Visual inspection of the Project Area and surrounding sites.
- Interviews or discussions with City officials, and certain property owners, operators, and occupants of properties within the Project Area.
- Preparation of a Contaminated Site Review report.

1.2 Limitations and Exceptions

Any conclusions regarding potential environmental risks or particular events and practices are limited by the quality and quantity of information provided by available historical documents; the visual inspection; available government databases; and interviews with government officials, property owners/operators and residents.

The information and conclusions presented in this report are based solely on the observations made during the site assessment evaluation and on data provided by others (individuals – entities). Thus, the accuracy of the resulting reporting and conclusions drawn from this information is inherently based on the accuracy of the information that was obtained and provided. The conclusions and opinions stated herein do not represent or warrant that the Project Area is either free from or containing of contamination, pollution, or environmental problems. In summary, there is always a possibility that environmental findings may be present within the Project Area which were not discovered or noted during the Contaminated Site Review activities (walkover inspection, records review) conducted by Impact7G. Therefore, no guarantees or warranties as to the condition of the Project Area or suitability of individual site use for any particular purpose are made or implied by Impact7G.

1.3 Special Terms and Conditions

Contractual terms, conditions, and liability limitations are specified in the contract between the User and Impact7G.

Information used to prepare this report was provided by a number of parties including government agencies, third party vendors, and persons familiar with the site. All information reviewed was not

independently verified unless actual knowledge of Property conditions or history indicated obvious inconsistencies or errors.

1.4 User Reliance

This report has been prepared on behalf of and for the exclusive use of Bolton & Menk, Inc. solely for use in evaluating environmental findings and is not intended for any other purpose nor the benefit or use of any other person or entity. This report and the findings contained herein shall not in whole, or in part, be disseminated or conveyed to any other party, nor used by any other person, in whole or in part, without the prior written consent of Impact7G, except that the report may be conveyed to persons or groups of persons within Bolton & Menk, Inc.

2.0 PROJECT AREA SUMMARY

2.1 Location and Description

The Project Area subject to this Contaminated Site Review includes an approximate ½-mile stretch of W. State Street and E. State Street, extending the length of six city blocks, beginning just west of N. 3rd Street, ending at N. 3rd Avenue, and split down the middle by N. Center Street. The Project Area includes the entire width of State Street and encompasses land both to the north and south of State Street at varying distances of up to approximately 275 feet, but typically no more than 20 to 30 feet from the edge of the city street. Refer to **Figure 1** for the Project Area shown on a recent topographic map and to **Figure 2** for an overhead outline of the Project Area and immediate surroundings.

Overall, the Project Area includes portions of eight city streets, 14 city blocks, and over 70 land parcels. The city blocks included in the Project Area are summarized in the following table:

Project Area Summary			
Marshall County Parcel ID	**# Parcels (or portions of parcels) in Project Area***	**Description**	**Present and Historical Parcel Address Range(s)^**
8418-26-**358**	1	North of W. State Street, west of N. 3rd Street	301 W. State Street; 102 N. 3rd Street
8418-26-**362**	1	South of W. State Street, west of N. 3rd Street	302 W. State Street; 6 to 12 N. 3rd Street
8418-26-**376**	3	North of W. State Street, bounded by N. 3rd Street and N. 2nd Street	200-block W. State Street (odd numbers) 101 N. 3rd Street 102 N. 2nd Street
8418-26-**379**	6	South of W. State Street, bounded by N. 3rd Street and N. 2nd Street	200-block W. State Street (even numbers) 7 to 11 N. 3rd Street 8 to 12 N. 2nd Street
8418-26-**377**	7	North of W. State Street, bounded by N. 2nd Street and N. 1st Street	100-block W. State St (odds) 101 to 103 N. 2nd Street 102 to 104 N. 1st Street

Project Area Summary			
Marshall County Parcel ID	**# Parcels (or portions of parcels) in Project Area***	**Description**	**Present and Historical Parcel Address Range(s)^**
8418-26-**380**	4	South of W. State Street, bounded by N. 2nd Street and N. 1st Street	100-block W. State St (evens) 7 to 11 N. 2nd Street 24 to 36 N. 1st Street
8418-26-**378**	8	North of W. State Street, bounded by N. 1st Street and N. Center Street	00-block W. State St (odds) 101 N. 1st Street 102 to 106 N. Center Street
8418-26-**381**	4	South of W. State Street, bounded by N. 1st Street and N. Center Street	00-block W. State St (evens) 21 to 35 N. 1st Street 20 to 36 N. Center Street
8418-26-**454**	6	North of E. State Street, bounded by N. Center Street and N. 1st Avenue	00-block E. State St (evens) 101 to 103 N. Center Street 100 to 102 N. 1st Avenue
8418-26-**456**	13	South of E. State Street, bounded by N. Center Street and N. 1st Avenue	00-block E. State St (odds) 19 to 35 N. Center Street 20 to 36 N. 1st Avenue
8418-26-**455**	3	North of E. State Street, bounded by N. 1st Avenue and N. 2nd Avenue	100-block E. State St (evens) 101 N. 1st Avenue 100 to 104 N. 2nd Avenue
8418-26-**457**	10	South of E. State Street, bounded by N. 1st Avenue and N. 2nd Avenue	100-block E. State St (odds) 19 to 33 N. 1st Avenue 8 to 34 N. 2nd Avenue
8418-26-**453**	1	North of E. State Street, bounded by N. 2nd Avenue and N. 3rd Avenue	200-block E. State St (evens) 101 to 103 N. 2nd Avenue 100 to 104 N. 3rd Avenue
8418-26-**458**	5	South of E. State Street, bounded by N. 2nd Avenue and N. 3rd Avenue	200-block E. State St (odds) 10 to 12 N. 3rd Avenue

^May not reflect recent changes to parcel boundaries not yet reflected on Marshall County public databases
*Historical address ranges generally back to the 1930s. Prior, many address listings did not match those established in later decades.

2.2 Use(s) of the Project Area

The Project Area is an urban setting situated in the central/downtown district of Marshalltown. Historically, this area was developed prior to 1884 and occupied by a mix of residential, commercial, and municipal properties. At present, the Project Area is characterized by residences, commercial buildings, vacant grass-covered lots, municipal parking lots, and public roadways and sidewalks. Representative photographs of the Project Area and notable observations are included in **Appendix A**.

3.0 SCOPE OF RECORDS REVIEW

Impact7G obtained and reviewed records to help identify environmental findings across the Project Area. These records included historical use records, standard and additional environmental records sources, and State regulatory files that were publicly available, obtainable, and practicably reviewable within the time and cost constraints of this Contaminated Sites Review. The following sections outline the records sources that Impact7G evaluated as part of this project.

3.1 Fire Insurance Maps

Sanborn® Fire Insurance (Sanborn) Maps were historically published to assist the fire insurance industry in assessing the potential for fire and explosion hazards associated with developed properties. As a result, these maps often provide information pertaining to potential environmental concerns.

From database provider EDR Lightbox (EDR), Impact7G obtained and reviewed Sanborn maps covering the Project Area dating back to 1884. Sanborn Maps were available for the years 1884, 1888, 1894, 1901, 1910, 1921, 1931, 1945, and 1964. The Certified Sanborn® Map Report from EDR is presented in **Appendix B** and complete findings from the Sanborn Map review are summarized in **Table 1**.

3.2 Street Directories

To identify past ownership, occupancy, and/or former site usage that may suggest the storage or handling of potentially hazardous materials or petroleum products, Impact7G obtained and reviewed available street directories provided by EDR for listings across and in the area immediately surrounding the Project Area. Listings were available at approximate five-year intervals between 1965 and 2017 and for the following streets:

- W. State Street
- E. State Street
- N. 3rd Street
- N. 2nd Street
- N. 1st Street
- N. Center Street
- N. 1st Avenue
- N. 2nd Avenue
- N. 3rd Avenue

Impact 7G has summarized pertinent listings (e.g., those representing potential environmental concern) in **Table 1**. Refer to the EDR-City Directory Image Report (**Appendix C**) for the complete listings provided by EDR.

3.3 Local, State, and Federal Government Records

Impact7G commissioned EDR to provide a summary of Federal, State, and local/tribal environmental record sources for listings mapped inside and surrounding the Project Area (within 1/8 of a mile). The databases searched included the Standard Environmental Records Sources required to be searched for assessments conducted within the scope of the ASTM E1527-13 *Standard Practice for Environmental Site Assessments*. The purpose of this search was to obtain and review information that would aid in identifying potential environmental concerns in or in the vicinity of the Project Area. Impact7G has reviewed and summarized pertinent findings information from the Standard Environmental Record Sources in **Table 2**. The complete environmental records database report ("EDR Report") is included in **Appendix D**.

3.4 State Regulatory Records

Both to identify any additional records not identified by and to further evaluate environmental listings in the EDR Report (see **Section 3.3**, above), Impact7G queried several Iowa Department of Natural Resources (DNR) databases to search for listings within or immediately surrounding the Project Area. For sites where environmental findings were identified and one or more regulatory file was likely available and useful for this Contaminated Sites Review, Impact7G also requested copies of electronic files directly from the Iowa DNR's Records Center. Impact7G accessed the following Iowa DNR databases as part of this project:

Iowa Department of Natural Resources (DNR) Facility Explorer:
Impact7G accessed the Iowa DNR's Facility Explorer database for all "Environmental Facility" listings on October 19, 2021.

Iowa DNR and Public Safety State Fire Marshal Office Storage Tanks Database:
Impact7G accessed this database on October 19, 2021, to search for any underground storage tanks (USTs) or leaking UST (LUST) records for sites within the Project Area.

Iowa DNR Contaminated Sites Database:
Impact7G accessed this database on October 19, 2021, to search for any environmental records or reports for sites within the Project Area.

4.0 PROJECT AREA RECONNAISSANCE

Impact7G coordinated and completed a reconnaissance of the Project Area to evaluate operations and obtain information pertaining to potential environmental conditions or subsurface features within the Project Area. Photographs representative of the Project Area and adjoining sites are included in **Appendix A,** and notable observations are summarized below and in **Table 3.**

4.1 Methodology and Limiting Conditions

Project Area Reconnaissance Details	
Field Personnel:	Jon Reis, Impact7G
Recon Date:	October 20, 2021
Weather:	60s° F, cloudy
Escort:	N/A
Methodology:	Based on the nature of the Project Area and the roadway expansion, the reconnaissance consisted of walking over the Project Area. Imact7G started at the west end of the Project Area and walked the Project Area boundary in a counterclockwise direction ending up back at the west end of the Project Area.
Limiting Conditions	Multiple buildings, paved parking lots, and roadways covered part of the Project Area, which limited observations of the ground. Impact7G did not access any buildings during the reconnaissance. Additionally, parked cars were located throughout the Project Area limiting observations of the pavement. There were no additional limiting conditions for the Project Area or surrounding area during the visit.

4.2 General Project Area Use and Setting

Impact7G reviewed a recent *USGS 7.5 Minute Topographic Map* and other useful sources covering the Project Area to outline the general setting and uses outlined in the following table:

Observed Project Area Setting and Uses	
Surface Topography:	The Project Area is relatively flat with an apparent slight slope downward to the west.
Surface Water:	No surface water was observed on or adjacent to the Project Area. However, multiple stormwater drains were observed along the roadways.
Hydrogeologic or Hydrologic Conditions:	Overall, the Project Area and surrounding area are generally flat. Thus, localized groundwater flow could be influenced by utility conduits.
Current Use(s) of the Project Area:	The Project Area consisted of paved roadways and sidewalks, paved and gravel parking lots, grass-covered yards and associated landscaping, and buildings.
Past Use(s) of the Project Area:	The past use(s) of the Project Area appeared to be similar to the current use(s): roadways and sidewalks, paved and gravel parking lots, grass-covered yards and associated landscaping, and residential and commercial buildings.

4.3 Use(s) of the Adjoining Sites and Surrounding Area

Impact7G observed that the Project Area is located in a mixed commercial and residential setting along State Street. Observed uses of sites adjoining the Project Area included residential buildings, commercial buildings, grass-covered yards and associated landscaping, paved roadways and sidewalks, and paved and gravel parking lots.

4.4 Project Area Observations of Interest

Block ID	Current Address(es)	Summary of Observations
453	(8418-26-453-050)	Potential gravel fill at southwest corner of parcel. Debris pile next to State Street including pipe cap and potential clay pipe. Two intact white pipe caps (likely sanitary sewer cleanouts) near a residence on the north side of the parcel.
455	120 E State Street	Concrete patch area in sidewalk along State Street – likely former light pole location.
455	102 E State Street	One potential filled boring/monitoring well in N 1st Avenue.
454	(8418-26-454-041)	One potential filled hole in parking lot along State Street.
454	101 N Center Street	One potential filled boring/monitoring well in sidewalk along N Center Street.
378	104 N Center Street	One potential filled boring/monitoring well in parking lot south of southwest corner of building. Concrete patch area in sidewalk along N Center Street – likely former light pole location.
378	11, 13 W State Street	Three potential filled borings/monitoring wells on south side of parcel near State Street.
378	1, 3 W State Street	Two potential filled borings/monitoring wells on south side of parcel: one in parking lot toward the south side of the parcel and one in the sidewalk along State Street.
378	19 W State Street	One potential filled boring/monitoring well in sidewalk along State Street.
377	105 W State Street	One test well located in sidewalk along State Street.

Block ID	Current Address(es)	Summary of Observations
377	104 N 1st Street	One potential filled boring/monitoring well in sidewalk along N 1st Street.
377	102 N 1st Street	One potential filled boring/monitoring well in sidewalk along State Street.
379	208 W State Street	Two intact white pipe caps (likely sanitary sewer cleanouts) in front yard near sidewalk/State Street.
380	104 W State Street	One potential filled boring/monitoring well in sidewalk along State Street.
381	24 N Center Street	One potential filled boring/monitoring well in sidewalk along N Center Street. One green capped conduit in sidewalk at building along State Street.
456	31 N Center Street	One potential filled boring/monitoring well in sidewalk along N Center Street near State Street. One yellow-capped cleanout in sidewalk along N Center Street.
456	9-11 E State Street	Potential building coal chute at sidewalk along State Street.
457	107 E State Street	One potential pipe cleanout in sidewalk along N 1st Avenue.
457	118 E Main Street	Two potential building coal chutes along alleyway.
457	122 E Main Street	One potential conduit along alleyway.
458	207 E State Street	Round patch in sidewalk along State Street – likely former light pole location.
458	12 N 3rd Avenue	Three potential filled borings/monitoring wells: west of northeast corner of building; northeast corner of the parcel; east side of parcel. One round concrete patch area north of the building.

5.0 INTERVIEWS

This component of the Contaminated Site Review process consisted of interviews intended to gather information indicating potential environmental risks in connection with the Project Area.

5.1 Owner/Occupant Interview(s)

Impact7G spoke with a representative of 12 N 3rd Avenue during the Project Area reconnaissance. According to the representative, the property was historically a gas station though it was the representative's understanding that the former gasoline tanks had been removed. The representative was unaware of existing soil or groundwater contamination associated with the property.

6.0 FINDINGS

Based on the available information obtained, reviewed, and reported as part of this Contaminated Site Review, Impact7G has identified findings in connection with the Project Area in the following sections.

6.1 Overall Project Area Findings

The records review and reconnaissance identified a number of specific locations or broader portions of the Project Area that should be considered higher risk for encountering subsurface contamination or features (e.g., orphan storage tanks) associated with historical use. Over the course of this review, Impact7G identified the following historical uses as findings:

- Automotive sales, storage, and repair facilities.
- Gasoline filling stations and buried storage tanks.
- Leaking underground storage tank sites.
- Laundry or dry-cleaning facilities.
- Other industrial or manufacturing facilities.

In addition to the past use, Impact 7G performed a reconnaissance of the Project Area and identified a number of existing features that should be considered indicative of potential subsurface contamination, buried obstructions, or similar. These include former/plugged soil test boring or groundwater monitoring well locations, existing test wells, pipe cleanouts, piles of fill material, etc.

6.2 Location or Parcel-Specific Findings

The following table summarizes the Project Area findings by location. To simplify the review and descriptions or locations of specific sites identified in this report, Impact7G identified sites of interest within each city block using the three-digit ID unique to each city block followed by a unique site identifier. For instance, a site of interest within a city block where parcel IDs begin with "8418-26-358" are identified by address and its Project Area ID (e.g., 358.1 or 358.2). Refer to **Figure 2** for the general location of these findings, and to **Figures 3A** through **3J** for detailed outlines or locations within each city block.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
458.1 458.2 458.3 (8418-26-458-005)	12 N. 3rd Avenue	This location included two gasoline dispensing and auto service station from the 1930s into the late-1980s. Three gasoline USTs and one used oil UST were documented to have been removed in 1988. Iowa DNR did not require any further action following removal of the tanks and soil sampling conducted in 1988. A fifth UST (heating oil) was removed from this site in 1990. LUST case #8LTI79 was opened in July 1996 and closed in 1998 following extensive soil and groundwater testing and completion of a Tier 1 Report. At that time, soil and groundwater contamination appears to have been most prevalent immediately west of and likely beneath N. 3rd Avenue, based on an easterly groundwater flow direction. A March 11, 1998 notification was provided to the local utility company notifying of contamination and stating that there were no known plastic water line receptors.	HIGH potential for contaminated soil and groundwater immediately west of and beneath N. 3rd Avenue. Installation of plastic water lines should be avoided. MODERATE potential for groundwater monitoring wells along N. 3rd Avenue. LOW potential for orphan USTs based on past tank removal and site investigation activities.
458.4 (8418-26-458-017)	205 E. State Street	The 1964 Sanborn Map showed this parcel's use as "Auto Sales & Service." No other historical information was available pertaining to use of this parcel, possible USTs, or otherwise.	MODERATE potential for contaminated soil. LOW potential for orphan USTs.
457.11	134 (#2) E. Main Street	Sanborn Maps from 1921 through 1964 show an automotive garage along the south side of E. State Street. The map	MODERATE potential contaminated soil.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
(8418-26-457-023)	(formerly 123 to 129 E. State Street)	indicates that a repair shop was present on the 2nd floor of the facility. An elevator was situated at the southwestern corner of the structure.	LOW potential for orphan USTs.
457.9 457.10 (8418-26-457-023)	119 E. State Street (formerly 119 to 123 E. State Street)	Sanborn Maps from 1910 and 1921 show a Machine Shop (1910) and Automotive Garage with repair shop on 2nd floor (1921) in a building situated beginning 100 feet south of State Street, at the northeastern corner of the intersection of two alleyways. An elevator was situated at the northeastern corner of the structure.	MODERATE potential for contaminated soil. LOW potential for orphan USTs.
457.2 457.3 457.5 457.6 457.7 457.8 (8418-26-457-005)	No current address (formerly 113 to 115 E. State Street)	According to Sanborn Maps dated 1931 and 1945, an Auto Sales, Repair Shop, and Garage was located along the western side of the alley and south of E. State Street. Prior, the same location was used for wagon storage and repair (including a paint shop), as shown on Sanborn Maps dated 1910 and 1921. A building on the southern end of the parcel included an automotive repair shop (1965 map) after it was also used for dry cleaning (1945 map).	MODERATE potential for contaminated soil. LOW potential for orphan USTs.
457.1 457.4 (8418-26-457-019)	107 E. State Street (formerly 107 to 109 E. State Street)	A portion of a former building near the southern end of the parcel was used for dry cleaning (1964 map). According to Sanborn Maps dated 1931 and 1945, an auto sales and service facility was present along E. State Street and extending approximately 160 feet to the south. Prior use of this portion of the parcel nearest State Street included battery charging (1921) and a veterinary hospital (1910).	MODERATE potential for contaminated soil. LOW potential for orphan USTs.
456.4 (8418-26-456-011)	26 N. 1st Avenue	The 1931 Sanborn Map showed a laundry facility at this location along the western side of N. 1st Avenue.	MODERATE potential for contaminated soil.
456.5 (8418-26-456-033)	24 N. 1st Avenue	The 1921 Sanborn Map showed a Chinese Laundry facility at this location along the western side of N. 1st Avenue.	MODERATE potential for contaminated soil.
456.3 (8418-26-456-010)	28 N. 1st Avenue (formerly 30/36 N. 1st Avenue and 15 E. State Street)	City Directory listings dated 1965 and 1975 showed the southwestern corner of E. State Street and N. 1st Avenue as occupied by a used car lot (Central Iowa Sales, and Pat Manning Chevrolet).	LOW potential for contaminated soil. LOW potential for orphan USTs.
456.1 456.2 (8418-26-456-031)	17 E. State Street (formerly 5A to 25 N. Center Street)	The 1964 Sanborn Map showed this large parcel to be largely occupied by two auto sales and service facilities. An auto repair shop was located between approximately 90 and 180 feet south of State Street. The 1921 Sanborn Map included an Oil Service Station at 7 E. State Street (approximately 150 feet east of N. Center Street). Mapped features included 3 buried gas tanks.	MODERATE potential for contaminated soil. HIGH potential for orphan USTs.
455.1 455.2 (8418-26-455-020)	106 N. 2nd Avenue (formerly 120 E. State Street)	The 1964 Sanborn Map indicated this parcel was a used automotive sales lot with a small office and automotive repair facility at its northern end (approximately 160 feet north of E. State Street).	LOW potential for contaminated soil. LOW potential for orphan USTs.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
455.3 (8418-26-455-019)	132 to 136 E. State Street (formerly 102 N. 2nd Avenue)	A filling station was present at the northwestern corner of E. State Street and N. 2nd Avenue (according to a 1964 Sanborn Map and city directory listings from 1969 to 1972). No tank registration or removal records were identified for this parcel.	MODERATE potential for contaminated soil. HIGH potential for orphan USTs.
454.5 454.8 (8418-26-454-041)	100 N. 1st Avenue (formerly 28 to 32 E. State Street)	Historical records indicate that a gasoline station and automotive repair was located at the northwestern corner of E. State Street and N. 1st Avenue from at least the 1930s to the mid-1960s or after. Three gasoline tanks were mapped along the western side of N. 1st Avenue. A "greasing" building was shown at the northwestern corner of the parcel. A Phase II assessment conducted in April 2019 indicated petroleum contamination at this site. The site was evaluated in the Iowa DNR LUST program (#9LTS46), and ultimately classified as "No Action Required" in January 2020. Eight groundwater monitoring wells were abandoned in February 2020. Although the LUST case was closed based on risk to receptors, contaminated soil and groundwater is likely present beneath and immediately west of N. 1st Avenue.	HIGH potential for contaminated soil and groundwater beneath and immediately west of N. 1st Avenue. MODERATE potential petroleum USTs beneath or immediately west of N. 1st Avenue (although a prior ground-penetrating radar scan indicated no USTs present on the site; it does not appear the scan included the western side of the street).
454.4 (8418-26-454-041)	No current address (formerly 20 to 22 E. State Street)	Sanborn Maps from 1921, 1931, and 1945 show an automotive garage (with repair shop on 2nd floor) in a building situated along and extending approximately 180 feet north of E. State Street. An elevator was situated at the northwestern corner of the structure.	LOW potential for contaminated soil. LOW potential for orphan USTs.
454.7 (8418-26-454-041)	No current address (formerly 4 to 14 E. State Street)	A Phase II assessment conducted in April 2019 indicated petroleum contamination at this site (a former feed and mill facility). A GPR scan of this site did not indicate that any USTs were likely present. Three soil and groundwater test borings were advanced, and only low concentrations of petroleum hydrocarbons were reported in soil and groundwater samples. The data were reported to Iowa DNR, which responded that, based on vapor intrusion potential, institutional controls or use restrictions should be placed on the Property.	LOW potential for contaminated soil. LOW potential for orphan USTs.
454.1 454.2 454.3 454.6 (8418-26-454-020)	101 N. Center Street (formerly included 2 E. State Street)	A filling station was present at the northeastern corner of E. State Street and N. Center Street. At least two configurations were present: • 1964/1945 (building with three gasoline USTs south of it, mapped approximately 30 to 45 feet north of E. State Street and 50 feet east of N. Center Street), and • 1931 (gasoline USTs on either side of a small building). Prior to the gas stations, this site was a livery/barn (c. 1910 and prior) and an auto garage (c. 1921). City directory listings from 1975 through 1989 indicate a dry cleaner was present on this site in that timeframe.	MODERATE potential for contaminated soil. HIGH potential for orphan USTs north of E. State Street and E. of N. Center Street. MODERATE potential for groundwater monitoring wells along N. Center Street.
453.1 (8418-26-453-050)	No current address (formerly 206 E. State Street)	This site was a used auto sales lot, according to a 1964 Sanborn Map. A small office building and garage were noted on the central and northern portion of the parcel. No tanks or other features were mapped. During reconnaissance, Impact7G noted potential gravel fill on	LOW potential for contaminated soil. LOW potential for orphan USTs.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
		the site, a debris pile next to State Street including pipe cap and potential clay pipe, and two intact white pipe caps near a residence north of this site.	
381.1 381.2 381.3 381.4 (8418-26-381-001)	35 N. 1st Street (formerly 12 W. State Street)	A filling station was present at the southeastern corner of W. State Street and N. 1st Street. At least two configurations were present: • 1964/1945 (building with three gasoline USTs immediately north of it, mapped approximately 5 to 20 feet south of W. State Street and 50 feet east of N. 1st Street), and • 1931 (different building, but with two gasoline USTs at locations similar to the later maps). Prior to the gas stations, this site was a livery/barn and a residence (c. 1921 and prior).	MODERATE potential for contaminated soil. HIGH potential for orphan USTs south of W. State Street.
380.3 380.4 380.5 380.6 380.7 380.8 (8418-26-380-004)	104 W. State Street (formerly 102 to 106 W. State Street & 24 to 30 N. 1st Street)	This site included multiple gasoline dispensing and auto service stations from the 1920s into the 1990s. A laundry facility was present along N. 1st Street in 1921. Regulatory records indicate that three gasoline USTs were removed by 1993, and that no additional dispensing of gasoline occurred after. No records were available pertaining to older generations of USTs, but LUST report maps indicate that much of the site north and east of one former building was excavated. LUST Case #7LTO01 was opened in 1990 and was classified "No Action Required" in 2004. The case was closed based on risk, but a plume of groundwater contamination extended well across W. State Street to the north and N. 1st Street to the east. Soil contamination extended from the site to the north and east, beneath both adjoining roadways. A November 2003 Local Authority Certification Letter notification was provided to the Iowa DNR certifying that Marshall County had an ordinance in place restricting the installation of water wells.	HIGH potential for contaminated soil and groundwater beneath and on both sides of W. State Street and N. 1st Street. Installation of water wells has been restricted (county ordinance). Installation of plastic water lines should be avoided. MODERATE potential for orphan USTs west of N. 1st Street. MODERATE potential for groundwater monitoring wells along N. 1st Street and W. State Street
380.1 380.2 (8418-26-380-003 & 8418-26-380-004)	108 W. State Street	Sanborn Maps and city directory listings indicate the presence of an automotive body and repair shop on this parcel between the 1930s and 2010s. The historical maps show the building to have been on the south end of the parcel (between approximately 80 and 180 feet south of W. State Street). An "oil house" was present east of the auto repair building, just east of an alleyway.	LOW potential for contaminated soil. LOW potential for orphan USTs.
378.11 378.12 (8418-26-378-025)	1 & 3 W. State Street (formerly 102 N. Center Street)	This site was a gasoline dispensing station from the 1930s into the 1960s or after. Regulatory records indicate that three gasoline USTs and one used oil UST were removed in 1988. LUST Case #7LTA03 was opened in 1995 and was classified "No Action Required" in 2014. The case was closed based on risk, and soil contamination extended from the site to the south and east, beneath both adjoining roadways and onto properties on the other sides of the roads. A November 2003 Local Authority Certification Letter notification was provided to the Iowa DNR certifying that Marshall County had an ordinance in place restricting the installation of water wells.	HIGH potential for contaminated soil and groundwater beneath and on both sides of W. State Street and N. Center Street. Installation of water wells has been restricted (county ordinance). Installation of plastic water lines should be avoided. MODERATE potential for orphan USTs west of N.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
		In 1996 the Iowa DNR issued a memorandum in response to tetrachloroethylene (PCE) contamination identified in groundwater at this site. The memo noted that the petroleum contamination has been managed within the UST Section, and that if any action is taken by the State, it would "likely be done as part of an investigation into a more extensive PCE problem that exists in Marshalltown."	Center Street. MODERATE potential for groundwater monitoring wells along N. Center Street and W. State Street
378.5 378.6 378.7 378.8 378.9 378.10 (8418-26-378-015 & 8418-26-378-016)	13 & 15 W. State Street (formerly 11 to 17 W. State Street)	Historical records indicate use of these parcels as an automotive garage and farm implements facility (1920s and 1930s), and for automotive sales and service (1940s into the 1960s). A buried gasoline tank was mapped beneath the north side of W. State Street on a 1921 map.	MODERATE potential for contaminated soil. HIGH potential for orphan USTs on north side of W. State Street.
378.1 378.2 378.3 378.4 (8418-26-378-014)	19 W. State Street (formerly 19 to 29 W. State Street)	Historical records indicate use of this parcel as an automotive garage and repair facility from the 1920s through at least the 1960s. State regulatory records indicate that a 10,000-gallon diesel fuel UST was installed in 1971 and removed in 1992. Laboratory analytical results from soil and groundwater samples collected at the time of the UST removal indicated only trace levels of contaminants (less than the State regulatory standards at that time).	LOW potential for contaminated soil. LOW potential for orphan USTs.
(8418-26-377-023)	105 W. State Street	The Project Area reconnaissance identified a test well in the sidewalk along W. State Street	HIGH potential for groundwater monitoring wells along W. State Street.

In addition to the sites that were mapped within the Project Area, Impact7G identified a few sites of potential environmental concern that were located just outside, but near, the Project Area. These sites are summarized below and have been plotted on the figures.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
(see Map 458) 482.3 482.4 (8418-26-482-024)	11 N. 3rd Avenue	This site at the southeastern corner of E. State Street and N. 3rd Avenue was a gas station in the 1960s and 1970s. No records were found pertaining to registration or removal of USTs from this site.	MODERATE potential for contaminated soil. MODERATE potential for orphan USTs south of E. State Street and east of N. 3rd Avenue.
(see Map 458) 482.1	7 N. 3rd Avenue	This site along the east side of N. 3rd Avenue was an auto garage and tire sales/service facility between the 1930s and 1960s or after. Two buried gas tanks were mapped immediately	MODERATE potential for contaminated soil.

Map IDs (Parcel IDs)	Address(es)	Summary of Environmental Findings	Primary Concern(s)
482.2 (8418-26-482-029)		east of N. 3rd Avenue (1931 and 1945 maps).	MODERATE potential for orphan USTs east of N. 3rd Avenue.
(see Map 453) 479.1 (8418-26-479-023)	111 N. 3rd Avenue	This site is an existing gas station, and it has been since the 1960s. It was investigated as a LUST site (#7LTU35) which was classified as "No Action Required" in 1999.	LOW potential for contaminated soil northeast of the Project Area.
(see Map 453) 479.2 (8418-26-479-010)	105 N. 3rd Avenue	This parcel includes an electrical substation operated by Iowa Electric Light & Power.	LOW potential for contaminated soil northeast of the Project Area.
458.5	5 to 17 N. 2nd Avenue	Sanborn Maps and city directory listings indicate this site was a steam laundry (early 1900s) and then an auto service garage from the 1920s into the 1980s. Sanborn Maps from the 1930s to 1960s show a buried gasoline tank beneath N. 2nd Avenue, approximately 25 feet south of the alleyway.	MODERATE potential for contaminated soil south of the Project Area HIGH potential for orphan USTs on the east side of N. 2nd Avenue, south of the Project Area.
378.13 (8418-26-378-020)	112 N. Center Street	This site included a dry cleaner and/or laundry facility from the 1960s to 1990s.	MODERATE potential for contaminated soil north of the Project Area.

7.0 CONCLUSIONS

Impact7G was retained by Bolton & Menk, Inc. to conduct a Contaminated Site Review for a proposed sewer, water, and road reconstruction project located along State Street roughly bounded by North 3rd Street and North 3rd Avenue, Marshalltown, Iowa 50158 (referred to herein as the "Project Area"). The Project Area is shown on **Figure 1**.

Overall, the Contaminated Site Review identified that the entire Project Area was developed for residential, commercial, and municipal occupancy dating back to 1884, the oldest available resource referred to for this project. The review identified many sites of environmental interest based on historical usage. Impact7G reported and mapped findings based on either the potential for historical use to have impacted the environment, or due to known environmental conditions identified through past environmental investigations where reports were available. The primary historical uses that prompted findings in this review included:

- Automotive repair, storage, and sales.
- Gasoline filling stations.
- Sites with past petroleum USTs and regulatory LUST cases.
- Laundry and dry cleaner facilities.
- Other heavy industrial or manufacturing.

As shown on **Figure 2**, the sites of environmental interest are of the highest density nearest the center and eastern portions of the Project Area, beginning just west of N. 1st Street and continuing beyond N. 3rd Avenue. This report includes detail maps for each city block where one or more site of environmental interest was identified (**Figures 3A** through **3J**).

8.0 REFERENCES

8.1 Internet Sources

- Iowa Department of Natural Resources Facility Explorer database. https://facilityexplorer.iowadnr.gov/FacilityExplorer/
- Iowa Department of Natural Resources and Public Safety State Fire Marshal Office Storage Tanks database. https://programs.iowadnr.gov/tanks/pages/advanced.aspx
- Iowa Department of Natural Resources Contaminated Sites database. https://programs.iowadnr.gov/contaminatedsites/Site/Search
- Beacon - Marshall County Assessor's Maps. https://beacon.schneidercorp.com/Application.aspx?AppID=1026&LayerID=21621&PageTypeID=1&PageID=9213
- Google Earth. www.google.com/earth.

8.2 Database Listings

- Environmental Data Resources, Inc. (EDR), Shelton, CT.
  - *Certified Sanborn Map Report.* Inquiry #6698245.3. October 12, 2021.
  - *The EDR-City Directory Image Report.* Inquiry #6698245.5. October 13, 2021.
  - *The EDR Radius Map Report with GeoCheck.* Inquiry #6698245.2S. October 11, 2021.

8.3 User-Provided Sources

- Limited Phase II Subsurface Investigation report, 20 East State Street, Marshalltown, Iowa. Report dated May 8, 2019 and prepared by UES Consulting Services, Inc.
- Additional Limited Phase II Environmental Site Assessment report, 12 East State Street, Marshalltown, Iowa. Report dated December 4, 2019 and prepared by Braun Intertec Corporation.

9.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to perform a Contaminated Site Review across the Project Area. Qualifications of the Environmental Professionals are included in Appendix E.

Project Area Research and Report Preparation: _____

Dan Keltner
Senior Project Manager

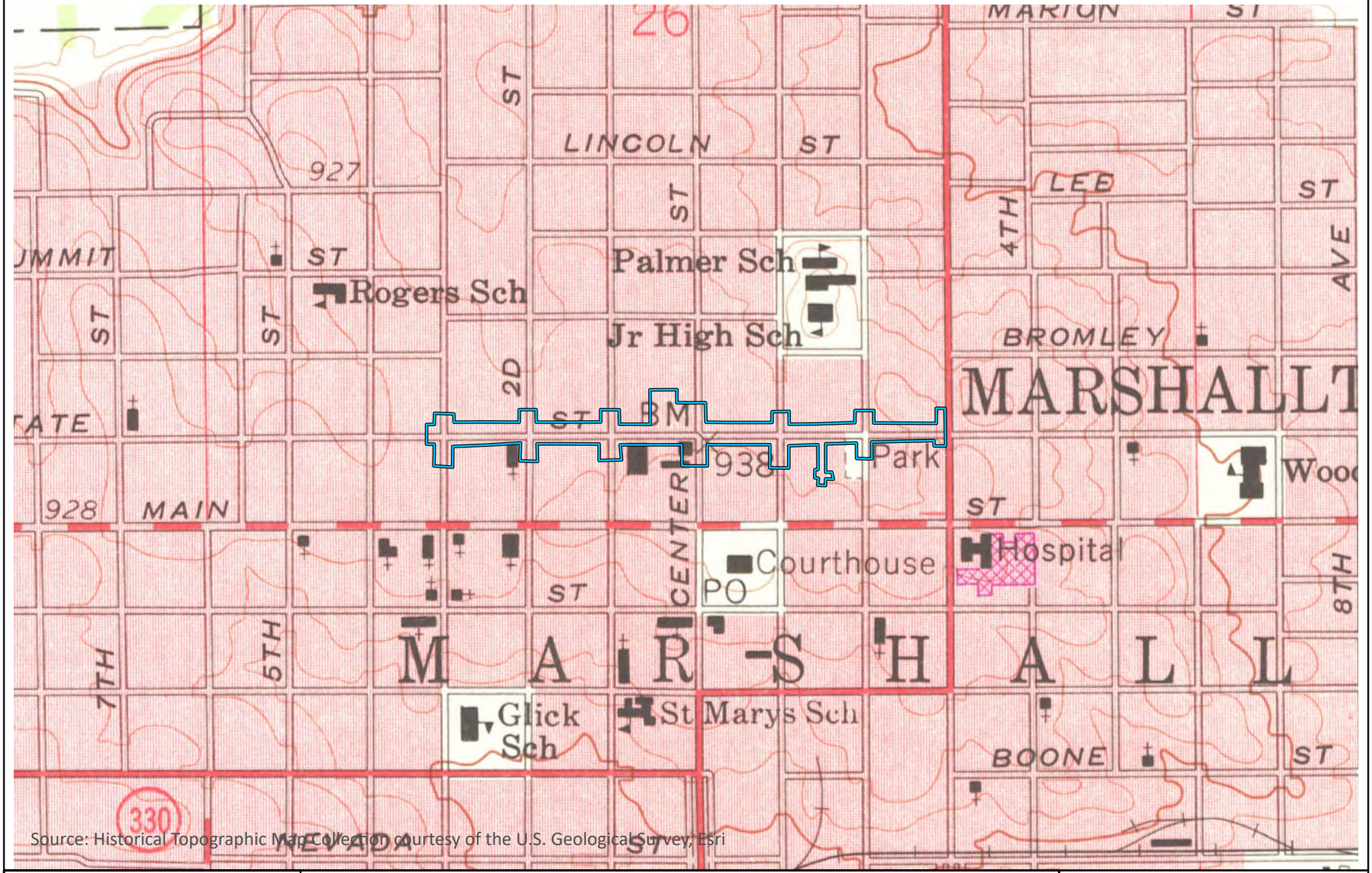
Project Management and Report Review: _____

Jon Reis
Senior Project Manager

FIGURES

FIGURE 1 – PROJECT AREA LOCATION MAP
FIGURE 2 – PROJECT AREA OVERVIEW MAP
FIGURE 3A –BLOCK 377 DETAIL MAP
FIGURE 3B – BLOCK 378 DETAIL MAP
FIGURE 3C – BLOCK 380 DETAIL MAP
FIGURE 3D – BLOCK 381 DETAIL MAP
FIGURE 3E – BLOCK 453 DETAIL MAP
FIGURE 3F – BLOCK 454 DETAIL MAP
FIGURE 3G – BLOCK 455 DETAIL MAP
FIGURE 3H – BLOCK 456 DETAIL MAP
FIGURE 3I – BLOCK 457 DETAIL MAP
FIGURE 3J – BLOCK 458 DETAIL MAP

Figure 1. Project Area Location Map



Source: Historical Topographic Map Collection courtesy of the U.S. Geological Survey, Esri

Project Area Location Map

City of Marshalltown

Project Area

0 295 590 1,180 Feet

0 90 180 360 Meters

N W E S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 2 - Project Area Overview Map

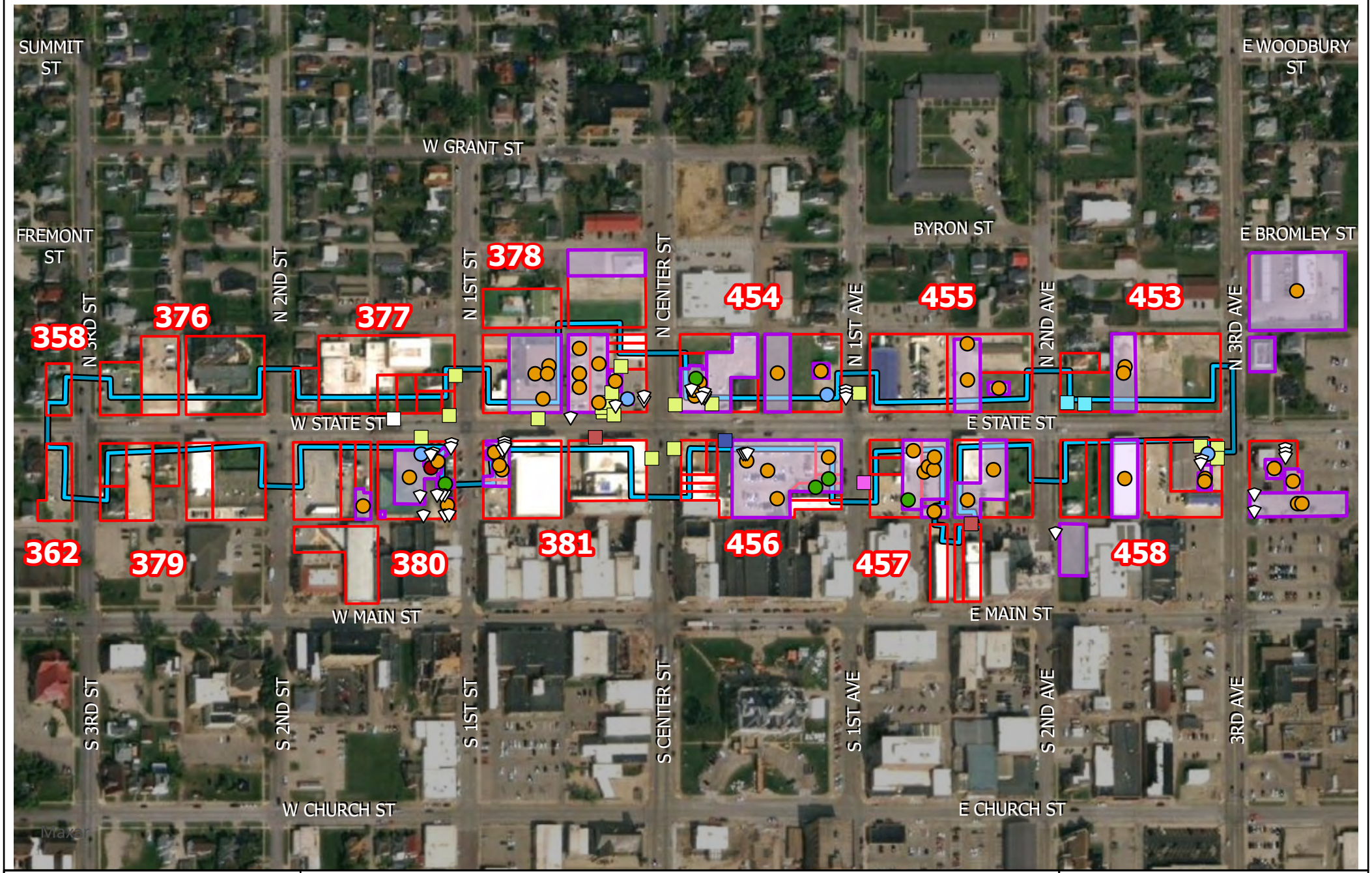


Figure 2 – Area Overview Map
Contaminated Site Review
Marshalltown, IA

Parcel (Block Number)
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair / Filling Station
LUST
Laundry
Restricted Use

Potential Field Observation
Boring/Well
Coal Chute
Conduit
Fill
Pipe Cleanout
Test Well

0 105 210 Feet
0 25 50 Meters

N
W E
S

Created by: K. Kettler 11/15/2021

IMPACT7G

Figure 3A - Block 377 Detail Map

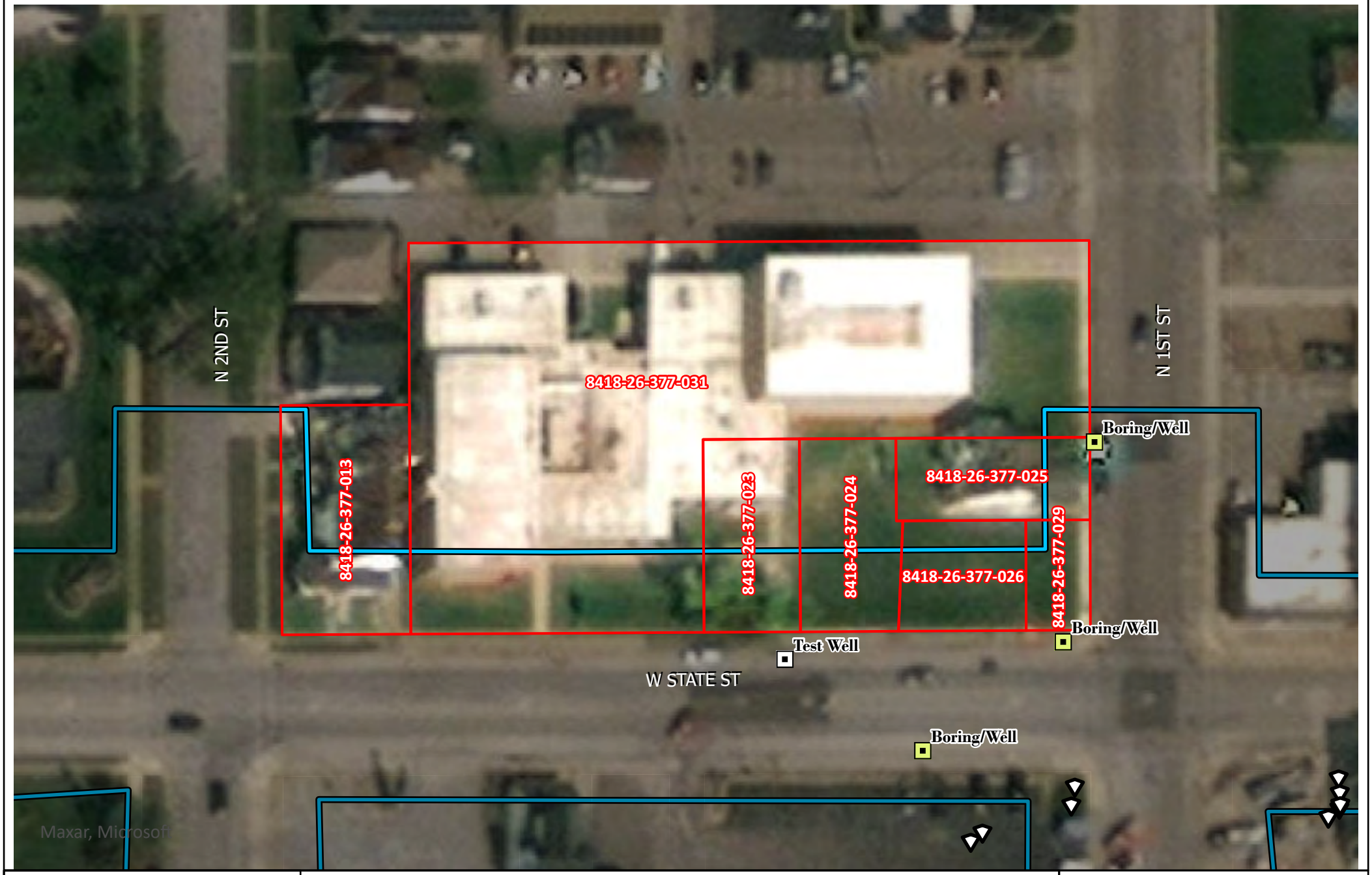


Figure 3A – Block 377 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Potential
Field Observation
Boring/Well
Test Well

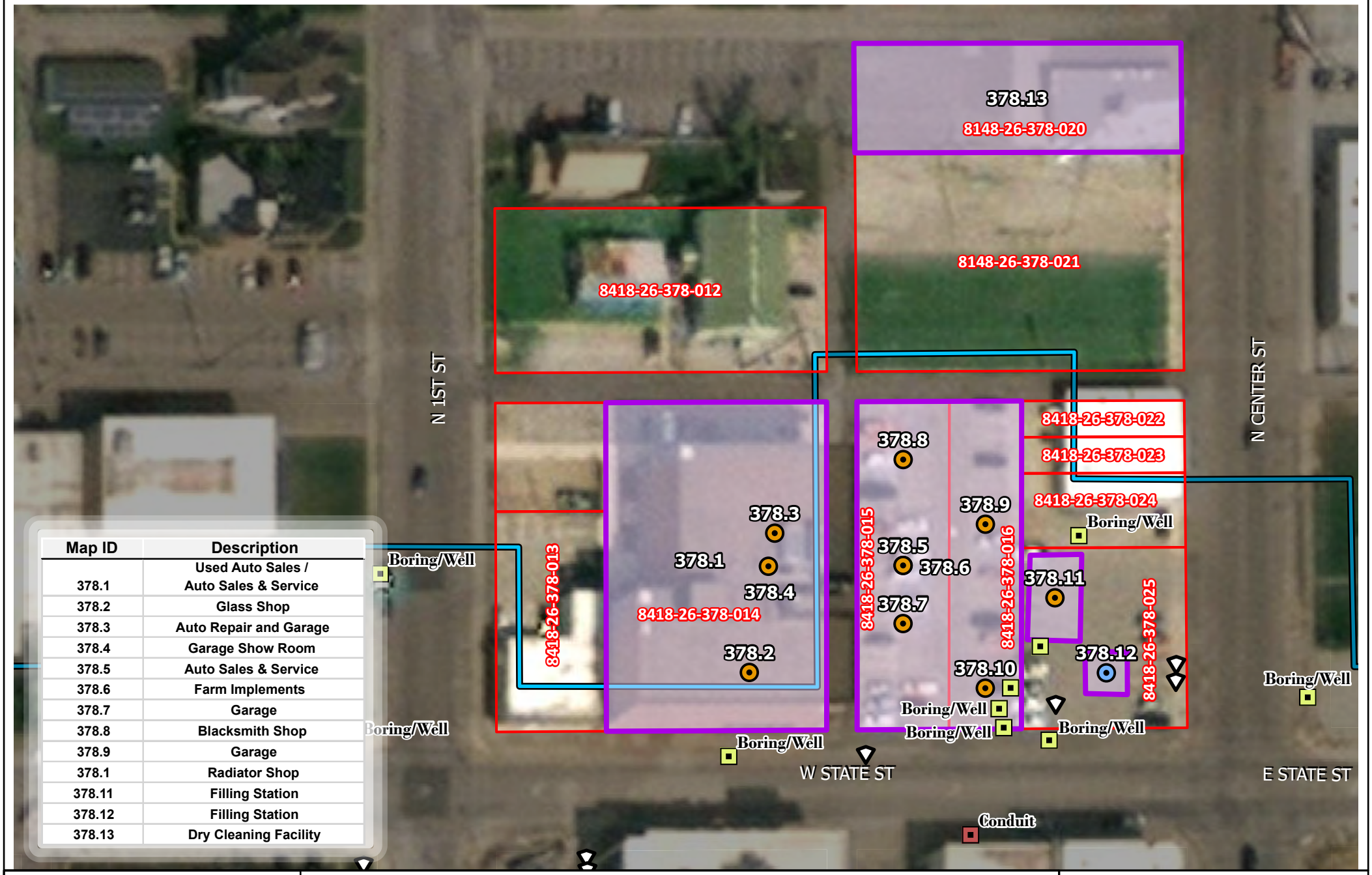
0 15 30 60 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 3B - Block 378 Detail Map



Map ID	Description
378.1	Used Auto Sales / Auto Sales & Service
378.2	Glass Shop
378.3	Auto Repair and Garage
378.4	Garage Show Room
378.5	Auto Sales & Service
378.6	Farm Implements
378.7	Garage
378.8	Blacksmith Shop
378.9	Garage
378.1	Radiator Shop
378.11	Filling Station
378.12	Filling Station
378.13	Dry Cleaning Facility

Figure 3B – Block 378 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair / Filling Station
LUST

Potential Field Observation
Boring/Well
Conduit

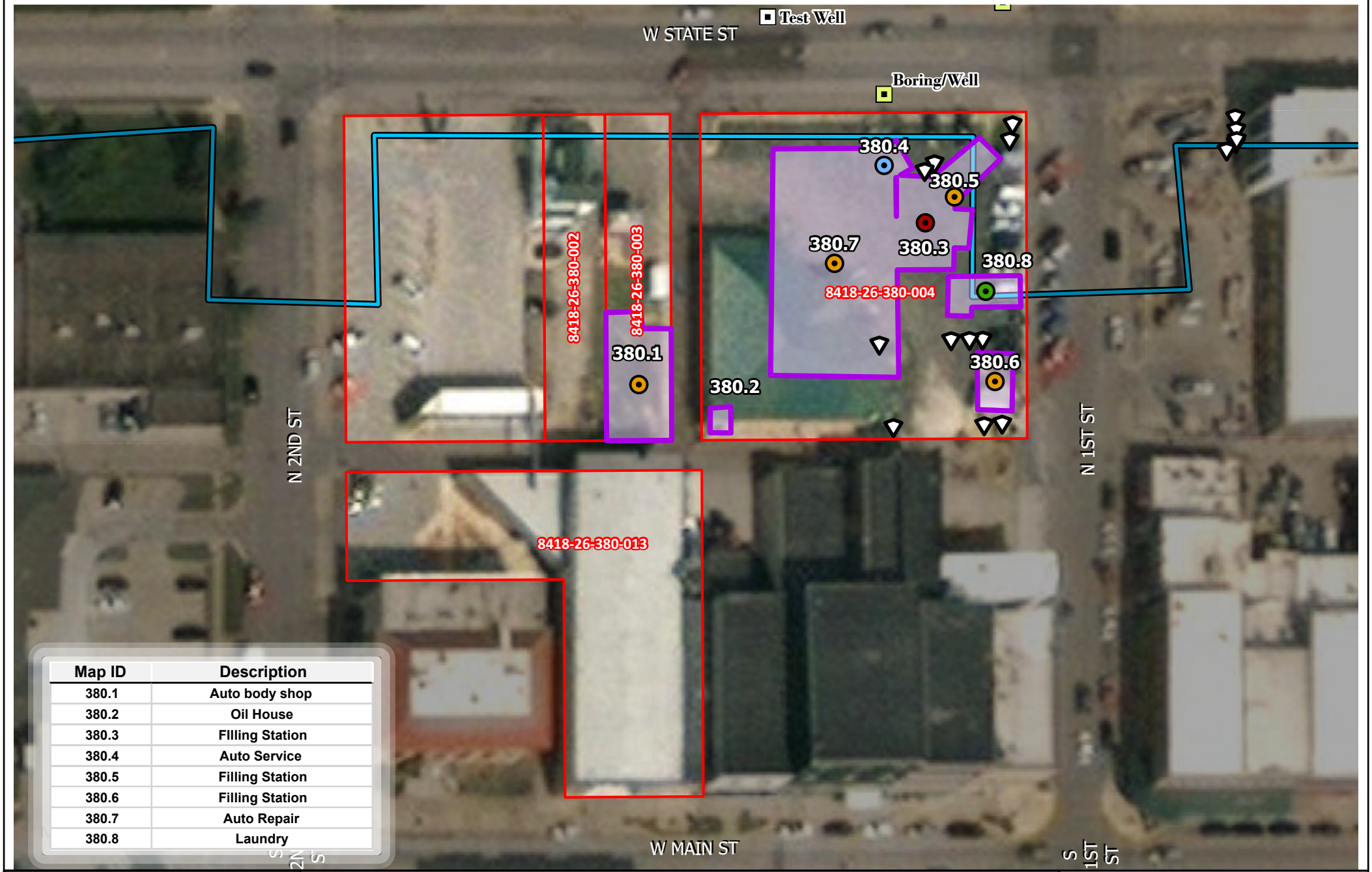
0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/15/2021

IMPACT7G

Figure 3C - Block 380 Detail Map



Map ID	Description
380.1	Auto body shop
380.2	Oil House
380.3	FIlling Station
380.4	Auto Service
380.5	Filling Station
380.6	Filling Station
380.7	Auto Repair
380.8	Laundry

Figure 3C – Block 380 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair / Filling Station
Laundry
LUST
Restricted Use

Potential Field Observation
Boring/Well
Test Well

0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/12/2021

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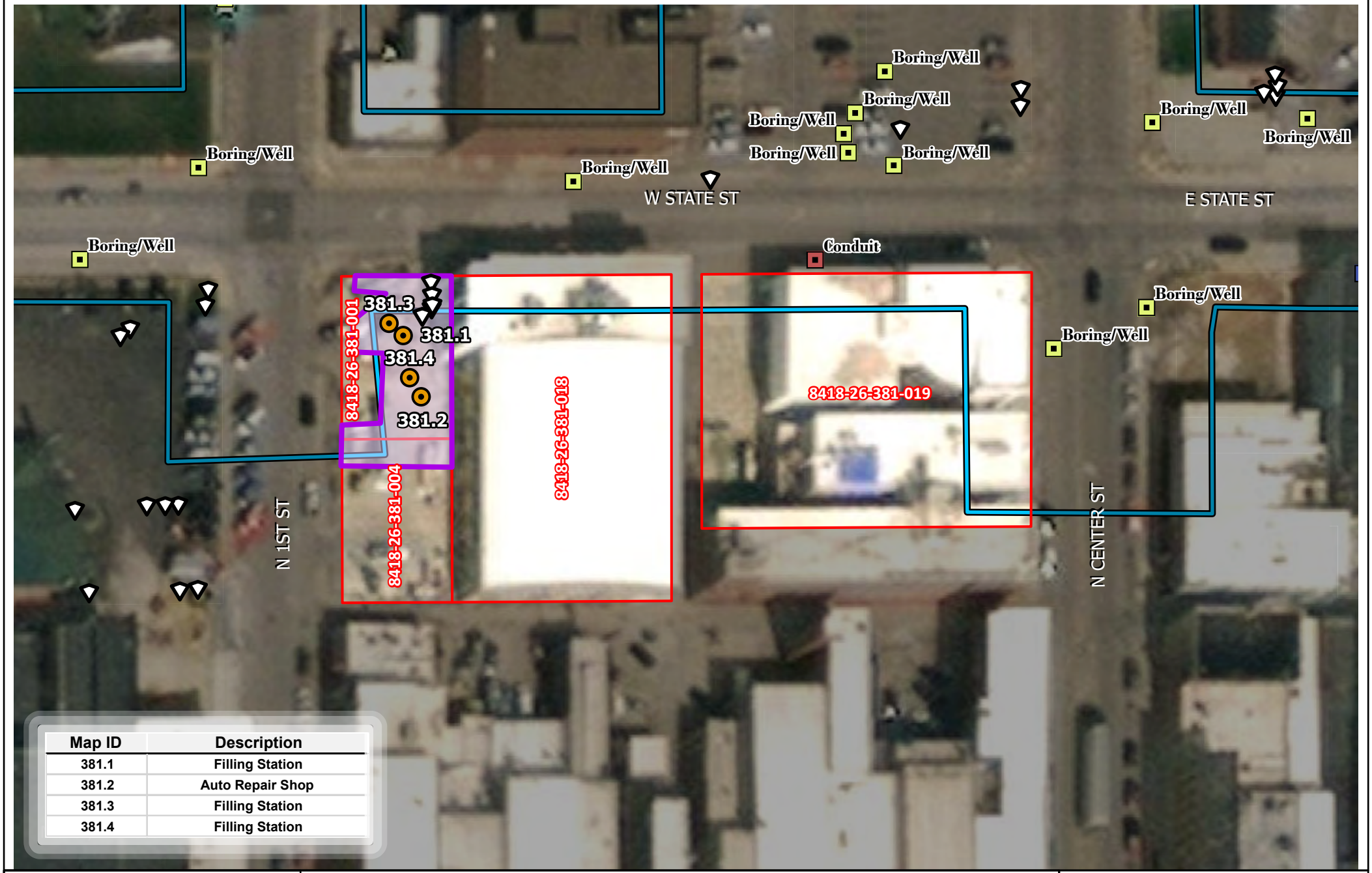
Figure 3D - Block 381 Detail Map



Map ID	Description
381.1	Filling Station
381.2	Auto Repair Shop
381.3	Filling Station
381.4	Filling Station

Figure 3D – Block 381 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair / Filling Station

Potential Field Observation
Boring/Well
Conduit

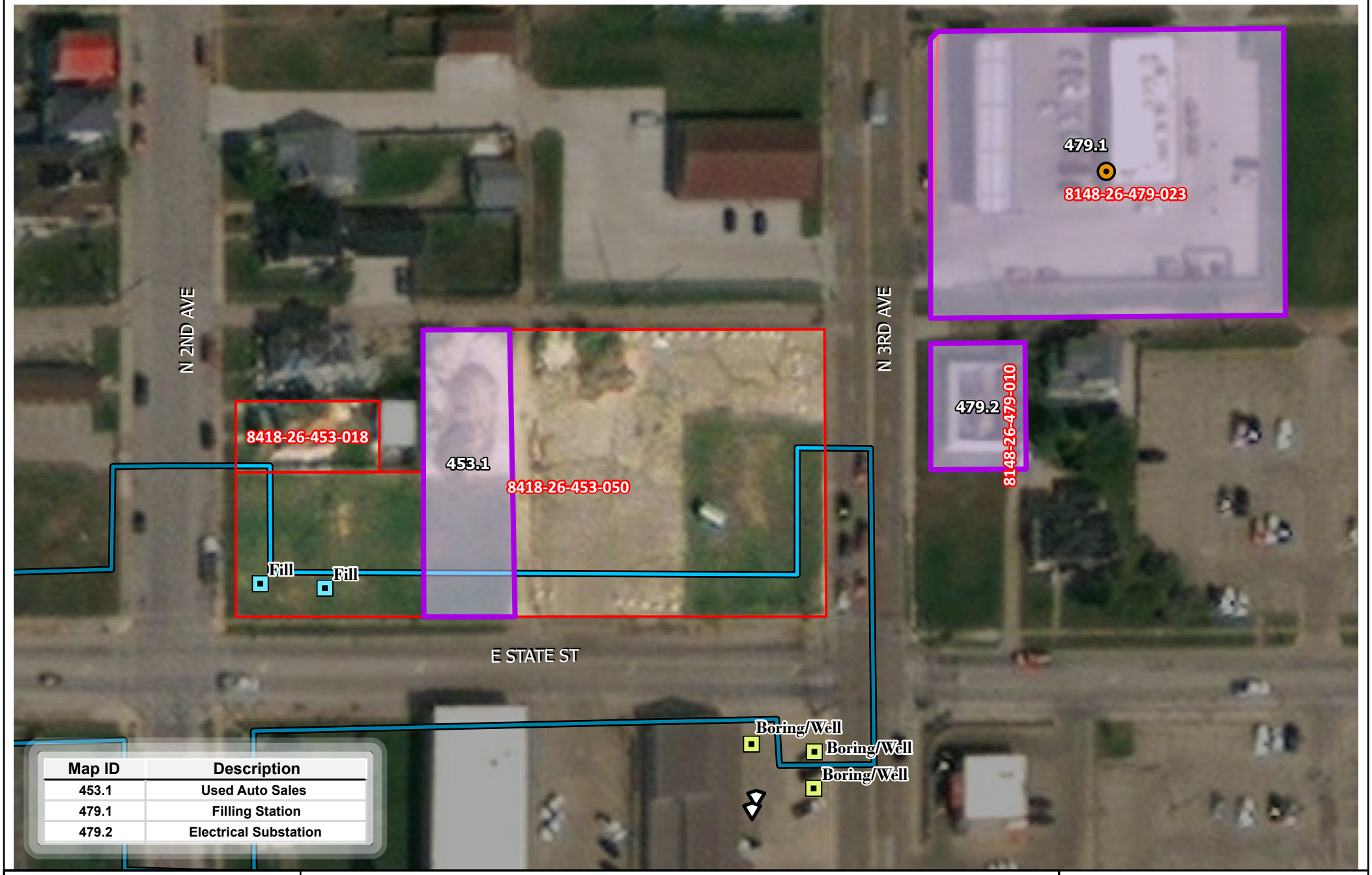
0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 3E - Block 453 Detail Map



Map ID	Description
453.1	Used Auto Sales
479.1	Filling Station
479.2	Electrical Substation

Figure 3E – Block 453 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Potential
Field Observation
Boring/Well
Fill

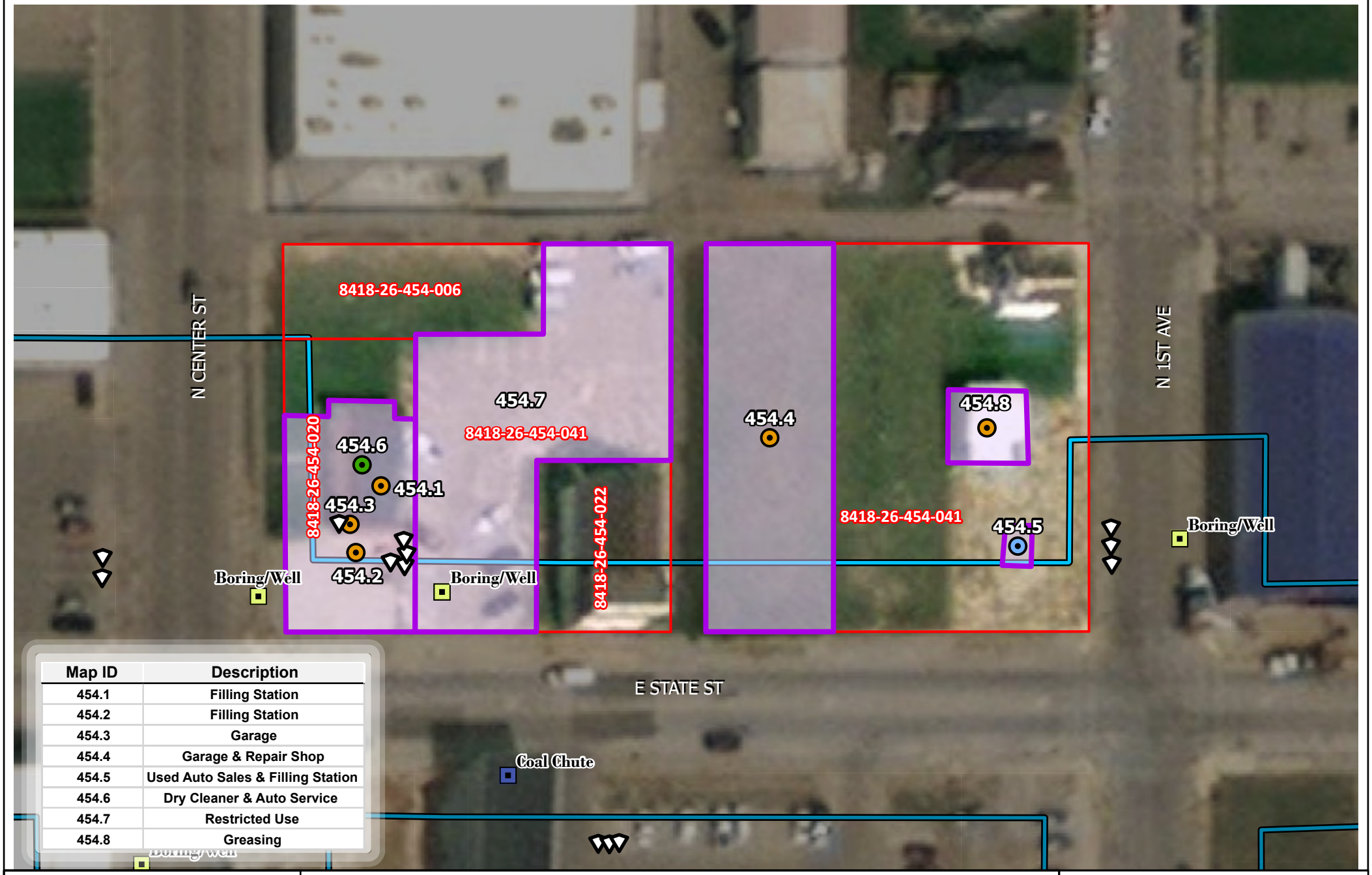
0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 3F - Block 454 Detail Map



Map ID	Description
454.1	Filling Station
454.2	Filling Station
454.3	Garage
454.4	Garage & Repair Shop
454.5	Used Auto Sales & Filling Station
454.6	Dry Cleaner & Auto Service
454.7	Restricted Use
454.8	Greasing

Figure 3F – Block 454 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair / Filling Station
Laundry
LUST

Potential Field Observation
Boring/Well
Coal Chute

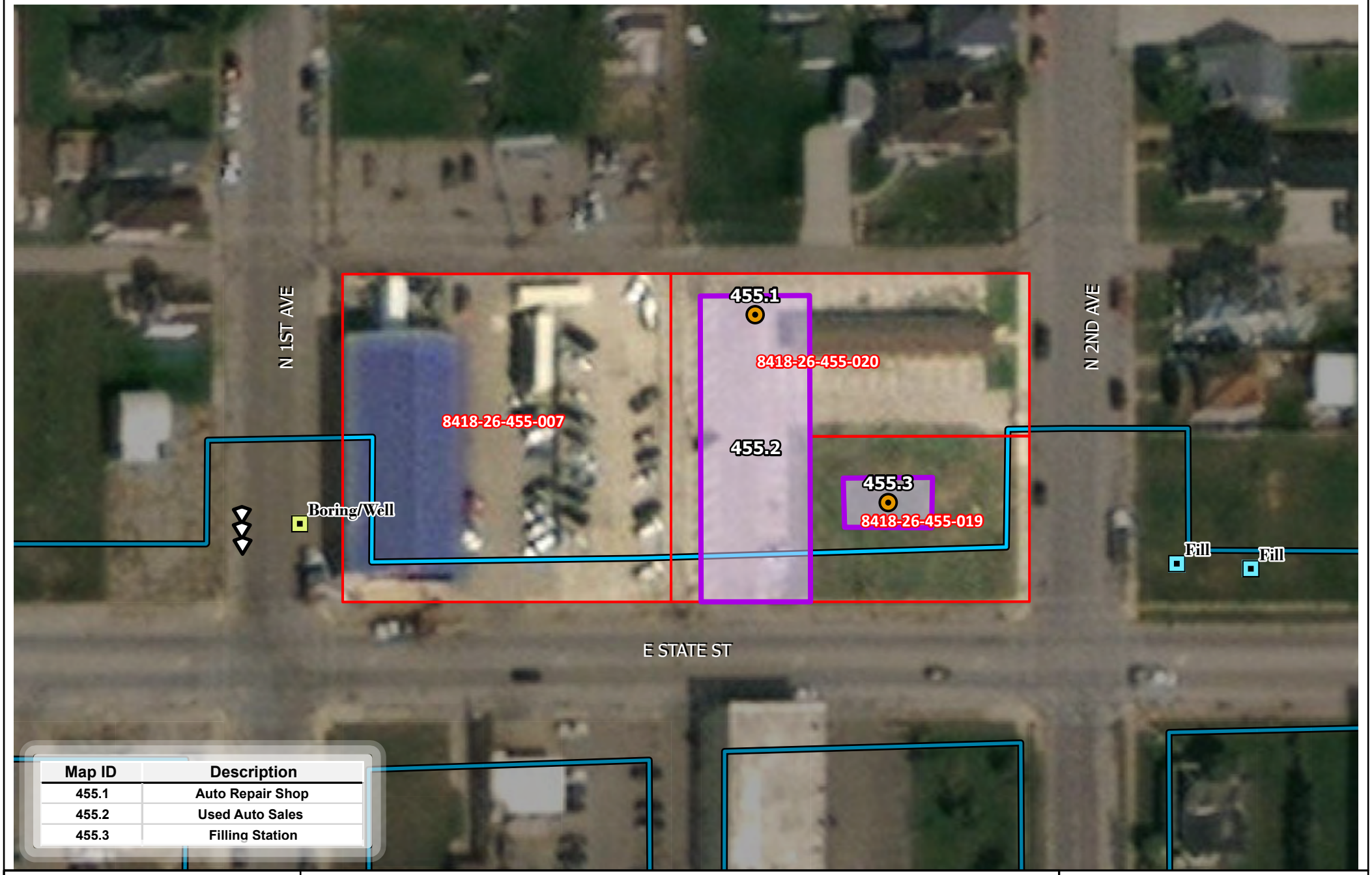
0 15 30 60 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/15/2021

IMPACT7G

Figure 3G - Block 455 Detail Map



Map ID	Description
455.1	Auto Repair Shop
455.2	Used Auto Sales
455.3	Filling Station

Figure 3G – Block 455 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern

Site Location
Auto Repair / Filling Station

Potential Field Observation
Boring/Well

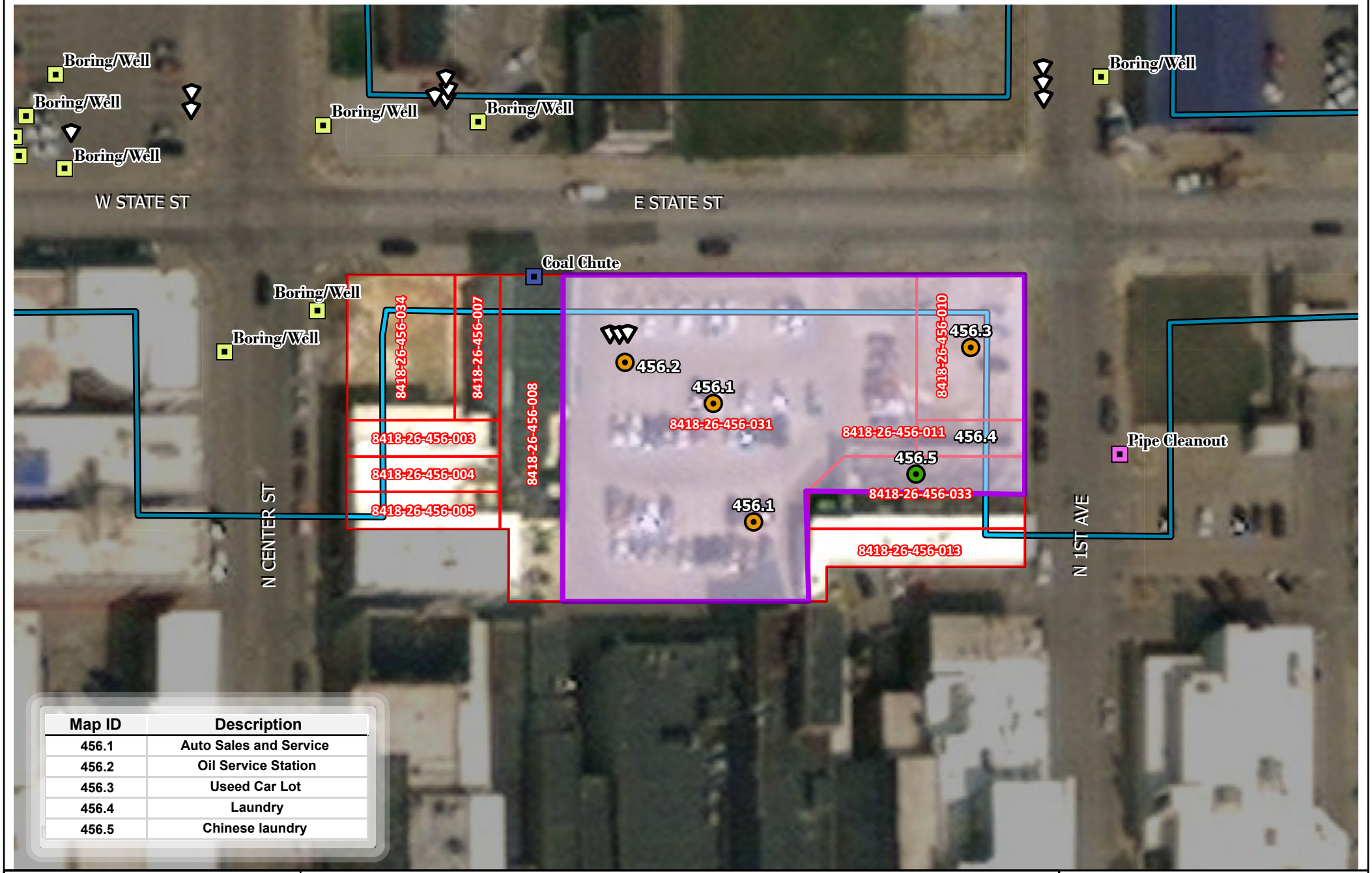
0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 3H - Block 456 Detail Map



Map ID	Description
456.1	Auto Sales and Service
456.2	Oil Service Station
456.3	Useed Car Lot
456.4	Laundry
456.5	Chinese laundry

Figure 3H – Block 456 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair
Laundry

Potential Field Observation
Boring/Well
Coal Chute
Pipe Cleanout

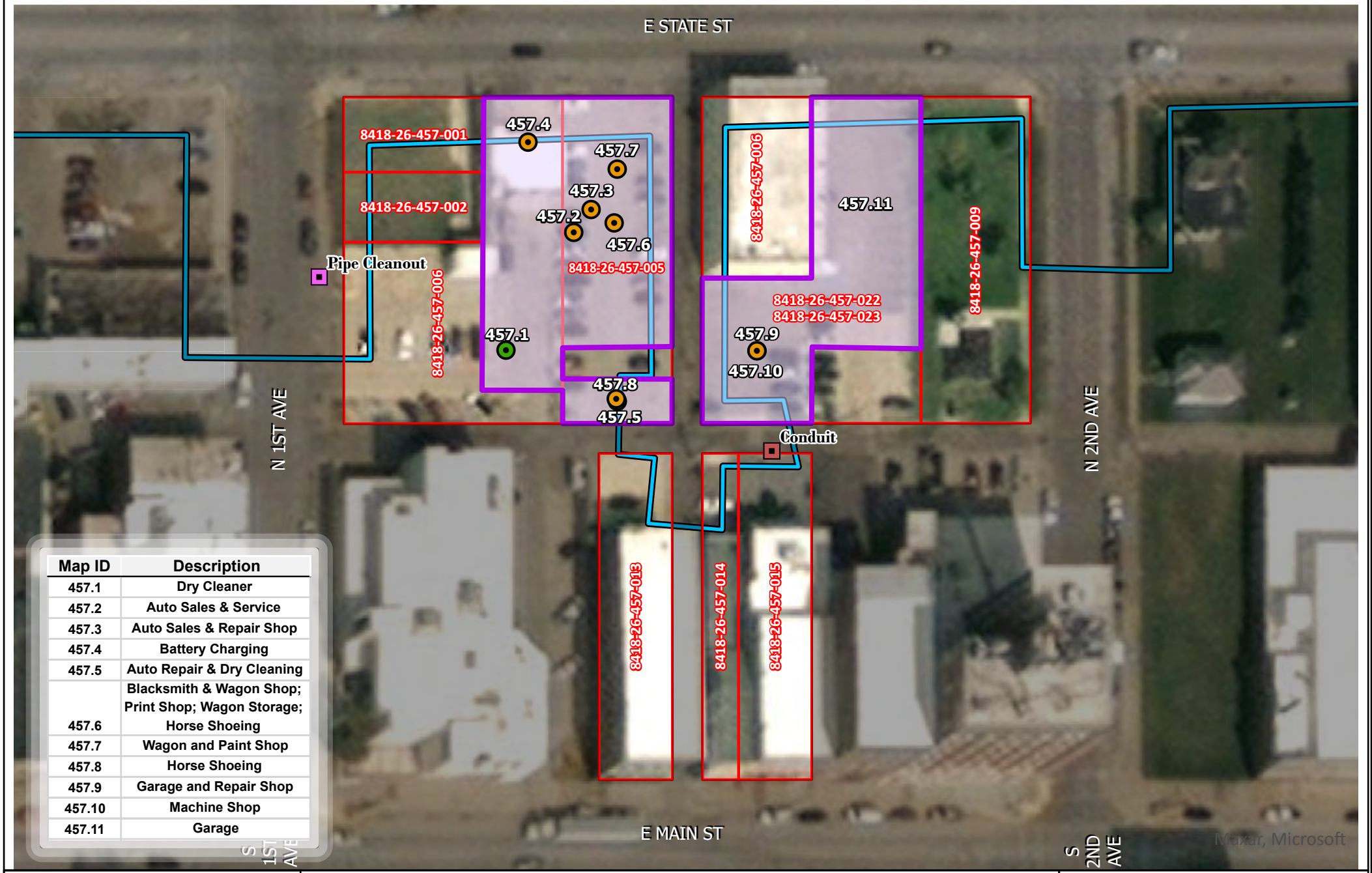
0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 3I - Block 457 Detail Map



Map ID	Description
457.1	Dry Cleaner
457.2	Auto Sales & Service
457.3	Auto Sales & Repair Shop
457.4	Battery Charging
457.5	Auto Repair & Dry Cleaning
457.6	Blacksmith & Wagon Shop; Print Shop; Wagon Storage; Horse Shoeing
457.7	Wagon and Paint Shop
457.8	Horse Shoeing
457.9	Garage and Repair Shop
457.10	Machine Shop
457.11	Garage

Figure 3I – Block 457 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern

Site Location
Auto Repair
Laundry

Potential Field Observation
Conduit
Pipe Cleanout

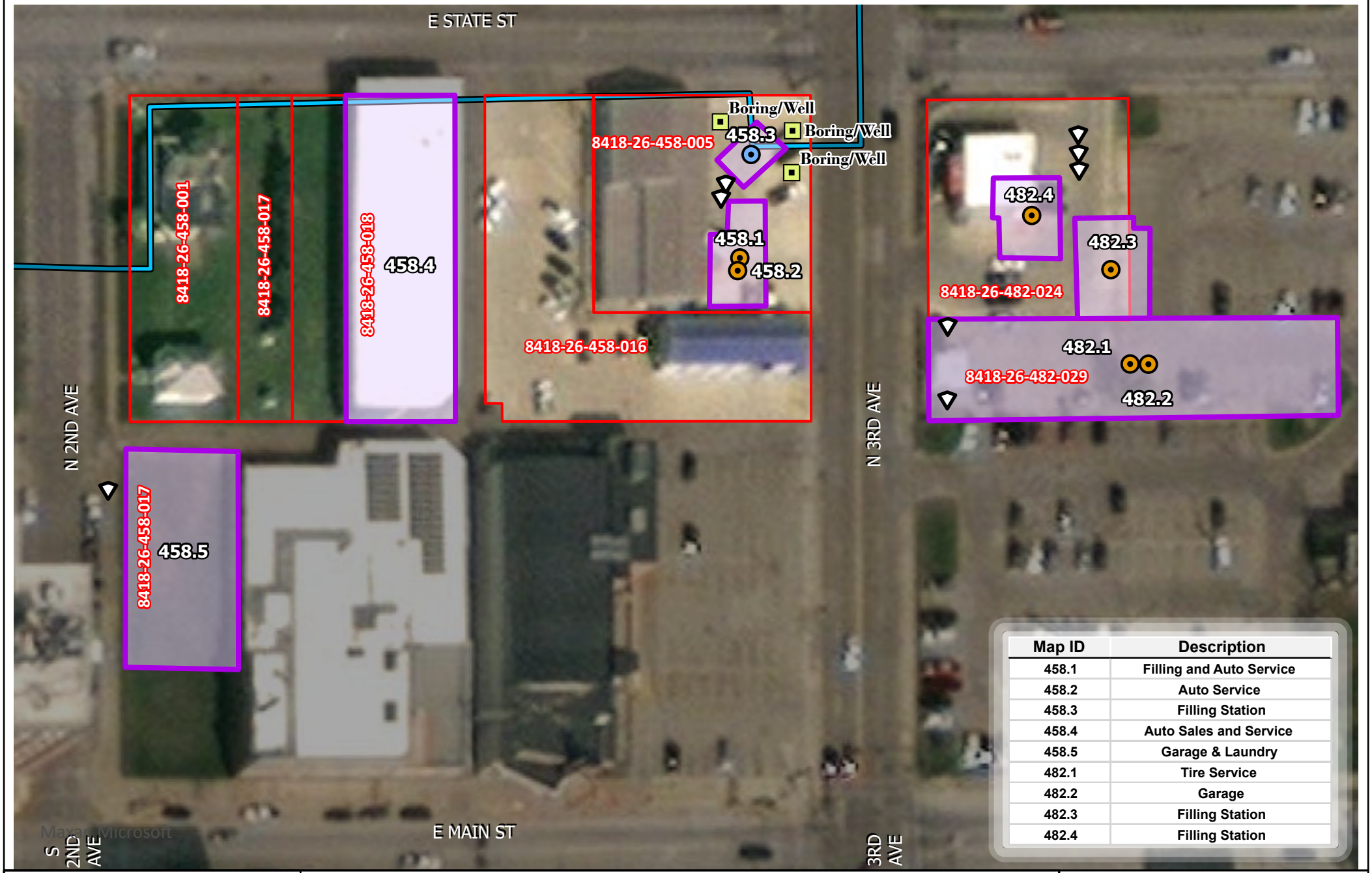
0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/11/2021

IMPACT7G

Figure 3J - Block 458 Detail Map



Map ID	Description
458.1	Filling and Auto Service
458.2	Auto Service
458.3	Filling Station
458.4	Auto Sales and Service
458.5	Garage & Laundry
482.1	Tire Service
482.2	Garage
482.3	Filling Station
482.4	Filling Station

Figure 3J – Block 458 Detail Map
Contaminated Site Review
Marshalltown, IA

Parcel
Project Area
Area of Concern
Gas Tank

Site Location
Auto Repair / Filling Station
LUST

Potential Field Observation
Boring/Well
Fill

0 20 40 80 Feet
0 5 10 20 Meters

N
W E
S

Created by: K. Kettler 11/15/2021

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TABLES

TABLE 1 – PROJECT AREA HISTORICAL REVIEW FINDINGS
TABLE 2 – PROJECT AREA REGULATORY REVIEW FINDINGS
TABLE 3 – PROJECT AREA RECONNAISSANCE FINDINGS

Table 1
Project Area Historical Review Findings
Contaminated Site Review
State State, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Alternate or Historical Address(es)	City Directory Findings (1965 to 2017 listings)	Sanborn Fire Insurance Map Findings (1884 to 1964 maps)								
					1964	1945	1931	1921	1910	1901	1894	1888	1884
358	8418-26-358-014	301 W STATE ST	301 W State Street 102 N 3rd Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
362	8418-26-362-015	8 N 3RD ST	8, 8 1/2, 10, & 12 N 3rd Street	No environmentally sensitive listings	Residences	Residences	Residences	Residences	Residences	Residences	Vacant / residences	Residences	Residences
376	8418-26-376-011	211 W STATE ST	211 W State Street 101 N 3rd Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
376	8418-26-376-022	207-209 W STATE ST	207, 209 W State Street	No environmentally sensitive listings	Residences	Residences	Residences	Residences	Residences	Residences	Residences	Residences	Residences
376	8418-26-376-023	201 W STATE ST	102 N 2nd Street	No environmentally sensitive listings	Undertaker	Undertaker	Undertaker	Residence	Residence	Residence	Residence	Residence	Residence
377	8418-26-377-013	111 W STATE ST	111 W State Street 101 N 2nd Street	No environmentally sensitive listings	Apartments (residential)	Apartments (residential)	Residence	Residence	Residence	Residence	Residence	Residence	Residence
377	8418-26-377-031	107 W STATE ST	107, 109 W State Street	No environmentally sensitive listings	Residence and Parking	Residences	Residences	Residences	Residences	Residences	Residences	Residences	Residences
377	8418-26-377-023	105 W STATE ST	105 W State Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	vacant	Residence	Residence	Residence	Residence
377	8418-26-377-024	103 W STATE ST	103 W State Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	vacant	Residence	Residence	Residence	Residence
377	8418-26-377-026	101 W STATE ST	101 1/2 W State Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
377	8418-26-377-029	102 N 1ST ST	101 W State Street 102, 102A N 1st Street	No environmentally sensitive listings	Offices	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
377	8418-26-377-025	104 N 1ST ST	104 N 1st Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Vacant
378	8418-26-378-013	35 W STATE ST	31, 33, 35, 37 W State Street 101 N 1st Street	35: Strand Paint Co. (1984, 1975) 35: Glidden Paint Center (1970)	Flat (Residence)	Flat (Residence)	Flat (Residence)	Flat (Residence)	Flat (Residence)	Vacant	Vacant	Vacant	Vacant
378	8418-26-378-014	19 W STATE ST	19, 21, 23, 25, 29, 29 1/2 W State Street	25 - 37: Mount Fred Mtrs - used car lot (1965)	**Used Auto Sales / Auto Sales & Service**	Residence and Store (29); **Auto Repair and Garage, glass shop (23, 25)**	Residence and Store (29); **Auto Repair and Garage, glass shop (23, 25)**	Residence and Grocery (29, 23); **Garage, Show Room (19, 21)**	Residence / vacant	Residence / vacant	Residence / vacant	Residence / vacant	Residence / vacant
378	8418-26-378-015	15 W STATE ST	15, 17 W State Street	15: Mount Fred Motors - storage (1965)	**Auto Sales & Service** (roller rink on 2nd floor)	**Used Auto Sales**	**Farm Implements Garage**	**Garage (buried gas tank in street); Blacksmith & Repair shop (back of parcel)**	vacant	Residence	Residence	Residence	Residence
378	8418-26-378-016	13 W STATE ST	11, 13 W State Street	No environmentally sensitive listings	Commercial (stores)	Commercial (stores)	**Farm Implements Garage & Radiator Shop**	**Garage (25 car capacity) & Radiator Shop**	Commercial (stores, warehouse)	Commercial (stores)	vacant	vacant	vacant
378	8418-26-378-025	1, 3 W STATE ST	1, 3, 3 1/2 W State Street 102 N Center Street	3: Otto Standard Serv - gas station (1965)	**Filling Station**	**Filling Station (3 gas tanks)**	**Filling Station (3 gas tanks)**	Residence	Residence	Residence	Residence	Residence	Residence
378	8418-26-378-022	106 N CENTER ST	106, 106 1/2 N Center Street	No environmentally sensitive listings	Office	Residence	Residence	Residence	Residence	Residence	stone foundation	vacant	vacant
378	8418-26-378-023	104 B N CENTER ST	104B N Center Street	No environmentally sensitive listings	Store	Residence	Residence	Residence	Residence	Residence	stone foundation	vacant	vacant
378	8418-26-378-024	104 N CENTER ST	104, 104 1/2 N Center Street	No environmentally sensitive listings	Office	Residence	Residence	Residence	Residence	Residence	stone foundation	Residence	Residence
379	8418-26-379-001	212 W STATE ST	11 N 3rd Street	No environmentally sensitive listings	Flat (Residence)	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
379	8418-26-379-003	208 W STATE ST	208 W State Street	No environmentally sensitive listings	Flat (Residence)	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
379	8418-26-379-004	204 W STATE ST	206 W State Street	No environmentally sensitive listings	"F.P.X." (1958)	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
379	8418-26-379-005	202 W STATE ST	12 N 2nd Street	No environmentally sensitive listings	Baptist Temple	Baptist Temple	Baptist Temple	Baptist Temple	vacant	Residence	Residence	Residence	Residence
379	8418-26-379-006	7 N 3RD ST	7 N 3rd Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	vacant	Stable	Stable
379	8418-26-379-024	210 W STATE ST	210 W State Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	vacant
380	8418-26-380-002	110 W STATE ST	110 W State Street 108 1/2 W State Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
380	8418-26-380-003	108 W STATE ST	108 W State Street	108: Helfer Auto Service (2014, 2005, 1995, 1989, 1984, 1979) 108: Helfer Clarence Auto Service (1975, 1970)	Vacant **(Auto body shop at south half of parcel)**	Residence **(Auto body shop at south half of parcel)**	Residence **(Auto body shop at south half of parcel)**	Residence	Residence	Residence	Residence	Residence	Residence
380	8418-26-380-004	104 W STATE ST	102, 104, 106 W State Street 24, 28, 30 N 1st Street	28: Weaver Service Center (2000, 1995, 1989, 1984, 1979, 1975, 1970, 1965) 28: U Haul Co. (1995) 104: US Auto Parts Inc. (1995, 1989)	**Filling Station (102); Vacant (106)**	**Filling Station (102); Auto Service (106)**	**Filling Station (102); Vacant (106)**	Residence (102); Commercial office (104); **Laundry (24)**	Residences (102, 104); Feed Yard & Scales (106)	Residences & Boarding Houses	Residences	Residences	Residences
380	8418-26-380-013	123 W MAIN ST	112 W State Street 11 N 2nd Street	No environmentally sensitive listings	Parking lot	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
381	8418-26-381-001	35 N 1ST ST	35 N 1st Street 12 W State Street	35: Egger's Service Center - service station (1975, 1970) 35: Thompson DX Serv - gas station (1965)	**Filling Station & Auto Repair Shop**	**Filling Station & Auto Repair Shop**	**Filling Station**	Vacant	Vacant	Residence	Residence	Residence	Residence
381	8418-26-381-004	25 N 1ST ST	21 N 1st Street	No environmentally sensitive listings	Ice Cream Factory	Ice Cream Factory	Ice Cream Factory	Livery (stable)	Livery (stable)	Livery (stable)	Livery (stable)	Livery (stable)	Livery (stable)

Table 1
Project Area Historical Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Alternate or Historical Address(es)	City Directory Findings (1965 to 2017 listings)	Sanborn Fire Insurance Map Findings (1884 to 1964 maps)								
					1964	1945	1931	1921	1910	1901	1894	1888	1884
381	8418-26-381-018	20 W STATE ST	8, 10 W State Street	No environmentally sensitive listings	Coliseum	Coliseum	Coliseum	Feed Yard (barn)	Feed Yard (barn)	Residences	Residences	Residences	Residences
381	8418-26-381-019	24 N CENTER ST	2, 6 W State Street 20, 22, 24, 36 N Center Street	No environmentally sensitive listings	Vacant (6); Public Library (corner, built 1902); Municipal Building (24); Office (22)	Central Fire Station (6); Public Library (corner, built 1902); Municipal Building (24); Office (22)	Central Fire Station (6); Public Library (corner, built 1902); Municipal Building (24); Office (22)	Central Fire Station (6); Public Library (corner, built 1902); Municipal Building (24); Office (22)	Central Fire Station (6); Public Library (corner, built 1902); vacant (24); Office (22)	Hay Market w/City Scales; Restaurant (22)	Hay Market; Geo. Humlong's Carriage Works (22)	Old school house; Carriage & Wagon Shops (22)	Public School; Marshall Carriage Works (22)
453	8418-26-453-050	(NO ADDRESS)	212 E State Street & 102 N 3rd Avenue	No environmentally sensitive listings	Undertaker & Chapel	Undertaker	Undertaker	Residence	Residence	Residence	Residence	Residence	Residence
			208-210 E State Street	No environmentally sensitive listings	Residence	Residences	Residences	Residences	Residence	Residence	Vacant	Vacant	Vacant
			206 E State Street	No environmentally sensitive listings	**Used Auto Sales lot**	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
			202-204 E State Street 101-103 N 2nd Avenue	No environmentally sensitive listings	Residences	Residences	Residences	Residences	Residences	Residences	Vacant	Residence	Residence
454	8418-26-454-020	101 N CENTER ST	2 E State Street 101 N Center Street	101: A & A Auto Rental (2005, 2000) 101: Budget Truck Rental (2005) 101: Sunshine II dry cleaner (1989, 1965) 101: One Hour Martinizing cleaner (1984, 1979, 1975)	**Filling Station**	**Filling Station (3 tanks)**	**Filling Station (2 tanks)**	**Garage (capacity 35 cars)**	Livery (stable)	Livery (stable)	Livery (stable)	Livery (stable)	Livery (stable) & Carriage Shop
454	8418-26-454-021 (currently part of 8418-26-454-041)	(NO ADDRESS)	4, 6, 10, 12, 14 E State Street	No environmentally sensitive listings	Feed Mill and Feed Store	Flour & Feed Mill	Flour & Feed Mill	Flour & Feed Mill	Flour & Feed Mill	Flour & Feed Mill	Residence	Residence	Residence
454	8418-26-454-022	16 E STATE ST	14, 16, 18, 18 1/2 E State Street	No environmentally sensitive listings	Commercial (stores & restaurant)	Commercial (stores & restaurant)	Commercial (stores)	Commercial (stores)	Commercial (stores)	Armory Hall	Spiritual Temple	Swede Ev. Lutheran Church	Swedish Lutheran Church
454	8418-26-454-023 (currently part of 8418-26-454-041)	(NO ADDRESS)	20, 22 E State Street	No environmentally sensitive listings	Commercial - Offices and Club Room	**Garage & Repair Shop (occupancy 100 cars)**	**Garage & Repair Shop (occupancy 100 cars)**	**Garage & Repair Shop (occupancy 100 cars)**	Residence	Residence	Residence	Residence	Residence
454	8418-26-454-024	(NO ADDRESS)	24 E State Street	No environmentally sensitive listings	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
454	8418-26-454-025 (currently part of 8418-26-454-041)	100 N 1ST AVE (fmr 28 E STATE ST)	32 E State Street 100 N 1st Avenue	No environmentally sensitive listings	**Used Auto Sales**	**Filling Station (3 tanks)**	**Filling Station (3 tanks)**	Residence & Commercial (fruits store)	Residence	Residence	Residence	Residence	Residence
455	8418-26-455-007	102 E STATE ST	102 - 118 E State Street 101 N 1st Avenue	No environmentally sensitive listings	Commercial (store & parking)	Vacant (102) Commercial building - stores, restaurant (108 - 118)	Commercial stores and offices (102 - 118)	Residence (102); Commercial (tire vulcanizing, grocery, feed office, wall paper & paints) (106-114) 2nd floor - play suit and skirt factory	Cobbler (102); Commercial (drug store, grocery, feed office, wall paper & paints) (106-114) 2nd floor - skirt factory	Residence (102); New commercial building and hall ("building just finished")	Residences	Residences	Residences
455	8418-26-455-019	132 - 136 E STATE ST	132, 134, 136 E State Street 102 N 2nd Avenue	No environmentally sensitive listings	**Filling Station**	Residences	Residences	Residences	Residences	Residences	Residences	Residences	Residences
455	8418-26-455-020	106 N 2ND AVE	120 E State Street	No environmentally sensitive listings	**Used Auto Sales lot (Auto Repair facility at far north end of parcel)**	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
456	8418-26-456-006	19 N CENTER ST	19, 21 N Center Street	No environmentally sensitive listings	Store (wall paper & paints)	Store (wall paper & paints)	Stores	Restaurant	vacant building, lunch & billiard hall	Saloon	Flour & feed	Stores	Stores
456	8418-26-456-005	23 N CENTER ST	23 N Center Street	No environmentally sensitive listings	Restaurant	Restaurant	Store	Lunch room	Saloon	Flour/Feed; Billiards	Harnesses	Vacant	Vacant
456	8418-26-456-004	25 N CENTER ST	25 N Center Street	No environmentally sensitive listings	Store	Store	Store	Barber	Billiard hall	Cigar factory	Office	Vacant	Vacant
456	8418-26-456-003	27 N CENTER ST	27 N Center Street	No environmentally sensitive listings	Restaurant	Restaurant	Store	Hardware & Furniture	Stores and restaurant	Restaurant	Harnesses	Flour & feed	Stoves, vacant buildings
456	8418-26-456-002 (currently part of 8418-26-456-035)	31 N CENTER ST	29, 31, 33 N Center Street	No environmentally sensitive listings	Stores	Stores	Stores	Tobacco, grocery store	Grocery store, restaurant	Hay Market Hotel	Baled Hay & Flour	stores	vacant building
456	8418-26-456-001	35 N CENTER ST	35 N Center Street	No environmentally sensitive listings	Store	Store	Store	General storage	Unknown (building)	Meat market	Blacksmith	Blacksmith	Blacksmith

Table 1
Project Area Historical Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Alternate or Historical Address(es)	City Directory Findings (1965 to 2017 listings)	Sanborn Fire Insurance Map Findings (1884 to 1964 maps)								
					1964	1945	1931	1921	1910	1901	1894	1888	1884
456	8418-26-456-007	7 1/2 E STATE ST	1, 7 E State Street	No environmentally sensitive listings	Store	Store	Store	Store	vacant	vacant (back of hotel/stores	vacant / residence	Residence	Residence
456	8418-26-456-008	9-11 E STATE ST	3, 5, 9, 11 N Center Street	No environmentally sensitive listings	Stores (Hatchery at back of parcel)	Stores, veterinary	Stores, veterinary	Stores	Stores, office	Rug factory & store	Residence	Residence	Residence
456	8418-26-456-031	17 E STATE ST	5A, 7, 9, 15, 25 N Center Street	No environmentally sensitive listings	**Auto Sales & Service (Auto Repair at back of parcel)**	Grocery store (7); Auto Parking	Grocery store (7); Auto Parking & Feed Yard; Produce store	**Oil Service Station (3 buried gasohol tanks);** Feed Yard and buildings	Residence; (Illegible); Feed Yard & buildings	Residence; (Illegible); Feed Yard & buildings	Residence; Feed Yard and buildings	Vacant	Residence, vacant
456	8418-26-456-010	28 N 1ST AVE	15 E State Street 30 N 1st Avenue	corner: Central Iowa Sales Inc. - used cars (1975) 30 - 36: Manning Pat Chevrolet, Inc. - storage (1965)	Vacant & Store	Stores & restaurants	Stores	Stores veterinary, restaurant	Stores and offices	stores and offices	Office	vacant	vacant
456	8418-26-456-011	26 N 1ST AVE	28 N 1st Avenue	No environmentally sensitive listings	Store	Store	**Laundry**	**Chinese Laundry**	Billiard hall	Agricultural implements	YMCA	Roller skating rink	Roller skating rink
456	8418-26-456-033	24 N 1ST AVE	24, 26 N 1st Avenue	No environmentally sensitive listings	Hatchery	Stores	Stores	Harness	Harness	Agricultural implements	YMCA	Roller skating rink	Roller skating rink
456	8418-26-456-013	22 N 1ST AVE	20, 22 N 1st Avenue	No environmentally sensitive listings	Stores	Stores	Stores	Hardware / Tin Shop	Hardware / Tin Shop	Plumbing/tin shop	Plumbing	Produce, blacksmith	Meat, blacksmith
457	8418-26-457-019	107 E STATE ST	19, 21, 23, 25 N 1st Avenue 107, 109 E State Street	No environmentally sensitive listings	Drive-in bank; Parking lot stores, restaurant; **Dry cleaner (near S end of parcel)**	Stores & restaurants (along N 1st Ave.); **Auto sales & Service (107, 109)**	Stores & restaurants (along N 1st Ave.); **Garage (107, 109)**	Clothing / Boots & Shoes (along N 1st Ave.); Stores; **Battery Charging (107, 109)**	Stores, saloon (along N 1st Ave.); Veterinary Hospital (107, 109)	Livery (stable), saloon (along N 1st Ave.); vacant (107, 109)	Livery (stable); Residence	Livery (stable); Residence	Livery (stable); Residence
457	8418-26-457-002	27, 29 N 1ST AVE	27, 29, 31, 33 N 1st Avenue	No environmentally sensitive listings	Stores	Stores	Stores, Lodge/Hall	Billiards hall, restaurant	Restaurant	stores and offices	Residence	Residence	Residence
457	8418-26-457-001	31 N 1ST AVE	31, 33 N 1st Avenue 101 E State Street	No environmentally sensitive listings	Stores, Lodge/Hall	Stores, Lodge/Hall	Stores, Lodge/Hall	Grocery store / Hall	Store (general merchandise)	Grocery store	Residence	Residence	Residence
457	8418-26-457-005	(NO ADDRESS)	113, 115, 117 E State Street	No environmentally sensitive listings	Warehouse; **Auto Repair (S end of parcel)**	**Auto Sales and Repair Shop; Garage; Dry Cleaning (S end of parcel)**	**Auto Sales and Repair Shop; Garage;** Poster Advertising Supplies (S end of parcel)	**Blacksmith & Wagon Shop; Print Shop; Wagon Storage; Horse Shoeing**	**Wagon Shop; Paint Shop; Horse Shoeing (south end of parcel)**	Residence	Residence	Residence	Residence
457	8418-26-457-006	119 E STATE ST	119, 121, 123 E State Street	No environmentally sensitive listings	Creamery	Creamery; Auto Transfer and Household Storage	Creamery; Auto Transfer and Household Storage	Residence and commercial; **Garage (20-car capacity) at S end of parcel; Repair Shop (S end of parcel)**	Residence and commercial; **Machine Shop & Auto Repairing (S end of parcel)**	Feed Yard	Residence & Feed Barns	Residence & Feed Barns	Residence & Feed Barns
457	8418-26-457-023	134 #2 E MAIN ST	123, 125, 129 E State Street	No environmentally sensitive listings	**Garage (capacity 40 cars); Repair shop at 2nd level;** Beer warehouse at back of parcel	**Garage (capacity 40 cars); Repair shop at 2nd level; Sign Painting (at back of parcel)**	**Garage (capacity 40 cars); Repair shop at 2nd level; Sign Painting (at back of parcel)**	**Garage (capacity 40 cars); Repair shop at second level;** General Store (at back of parcel)	vacant; Sale Barn at south end of parcel	Vacant; Stables	Vacant; Stables	Vacant; Stables	Vacant; Stables
457	8418-26-457-009	129 E STATE ST	135 E State Street 8 N 2nd Avenue	No environmentally sensitive listings	vacant	vacant	Residence	Residences	Residences	Residences	Residences	Residences	Residences
457	8418-26-457-013	118 E MAIN ST	116, 118 E Main Street	No environmentally sensitive listings	Furniture store	Store	Store and storage building	Billiard, barber, cigars; Auto garage	Picture framing; Grocery	Grocery store; Warehouse	Sewing machines, grocery, warehouse	Hardware, grocery, stable	Grocery; warehouse
457	8418-26-457-014	120 E MAIN ST	120 E Main Street	No environmentally sensitive listings	Store	Stores	Stores	clothing store	Stores	stores and offices	Bakery, stores	Bakery, restaurant	Bakery, restaurant
457	8418-26-457-015	122 E MAIN ST	122, 124 E Main Street	No environmentally sensitive listings	Stores	Stores	Stores	Clothing, boots, shoes, dry goods	**Marshall Auto Company (including machine shop)**	Dry goods and grocery	Tailors	Tailor	Residences; Harnesses; Office; Stables
458	8418-26-458-001	201 E STATE ST	201 E State Street	No environmentally sensitive listings	Museum	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence

Table 1
Project Area Historical Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Alternate or Historical Address(es)	City Directory Findings (1965 to 2017 listings)	Sanborn Fire Insurance Map Findings (1884 to 1964 maps)								
					1964	1945	1931	1921	1910	1901	1894	1888	1884
458	8418-26-458-005	12 N 3RD AVE	10, 12 N 3rd Avenue 209, 211 E State Street	12: Exhaust Pros (2017, 2014, 2010, 1995) 10: Pep Stop Stores (1984) 10: Lou's Champlin Service gas station (1979) 10: Wayne's Champlin Service - gas station (1975, 1970) 10 - 12: Wayne's Champlin Serv - gas station (1965)	Residence (209) **Filling & Auto Service Station (10, 12)**	Residence (209) **Filling & Auto Service Station (10, 12)**	Residence (209) **Filling & Auto Service Station (10, 12)**	Residences	Residences	Residences	Residences	Residences	Residences
458	8418-26-458-016	207 E STATE ST	207, 207 1/2 E State Street	No environmentally sensitive listings	Flat (Residence)	Flat (Residence)	Residences	Residence	Residence	Residence	Residence	Residence	Residence
458	8418-26-458-017	203 E STATE ST	203 E State Street	No environmentally sensitive listings	Parking lot	Residence	Residence	Residence	Residence	Residence	Residence	Residence	Residence
458	8418-26-458-018	205 E STATE ST	205 E State Street	No environmentally sensitive listings	**Auto Sales & Service**	Furniture Wareroom	Furniture Wareroom	Residence	Residence	Residence	Residence	Residence	Residence

Table 2
Project Area Regulatory Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Environmental Database Findings (from EDR Report)	UST & LUST Findings (from Iowa DNR Storage Tanks database)	Other Environmental Findings (from Iowa DNR Contaminated Sites database and/or regulatory file review)
358	8418-26-358-014	301 W STATE ST	No listing	No listing	None
362	8418-26-362-015	8 N 3RD ST	No listing	No listing	None
376	8418-26-376-011	211 W STATE ST	No listing	No listing	None
376	8418-26-376-022	207-209 W STATE ST	No listing	No listing	None
376	8418-26-376-023	201 W STATE ST	No listing	No listing	None
377	8418-26-377-013	111 W STATE ST	No listing	No listing	None
377	8418-26-377-031	107 W STATE ST	No listing	No listing	None
377	8418-26-377-023	105 W STATE ST	No listing	No listing	None
377	8418-26-377-024	103 W STATE ST	No listing	No listing	None
377	8418-26-377-026	101 W STATE ST	EDR HIST AUTO - Curts Inc. (1985)	No listing	None
377	8418-26-377-029	102 N 1ST ST	No listing	No listing	None
377	8418-26-377-025	104 N 1ST ST	No listing	No listing	None
378	8418-26-378-013	35 W STATE ST	No listing	No listing	None
378	8418-26-378-014	19 W STATE ST	UST / FINANCIAL ASSURANCE - C/O Real Estate Operations (198607809) TIER 2 - CenturyLink - Marshalltown (2019)	UST - 198607809 (one 10,000-gal. diesel UST, installed 1971 removed 1992) LUST - None	State regulatory records indicate that a 10,000-gallon diesel fuel UST was installed in 1971 and removed in 1992. Laboratory analytical results from soil and groundwater samples collected at the time of the UST removal showed only trace levels of contaminants (less than the State regulatory standards at that time). No LUST case was opened.
378	8418-26-378-015	15 W STATE ST	No listing	No listing	None
378	8418-26-378-016	13 W STATE ST	No listing	No listing	None

Table 2
Project Area Regulatory Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Environmental Database Findings (from EDR Report)	UST & LUST Findings (from Iowa DNR Storage Tanks database)	Other Environmental Findings (from Iowa DNR Contaminated Sites database and/or regulatory file review)
378	8418-26-378-025	1, 3 W STATE ST	ALLSITES - Amoco Corner of State and Center Streets (1481) LUST / UST - Former Amoco #5012 (7LTA03 / 198606392) SEMS ARCHIVE - Amoco Marshalltown PCE (0702771) HIST AUTO - Otto's Standard Service (1969 - 1977)	UST - 198606392 (two hoist oil tanks, no removal date); (one used oil UST, removed 1988); (three gasoline USTs, removed 1988) LUST - 7LTA03 (No Action Required, with local GW ordinance, Aug. 2014)	1481 - Corner of State & Center Streets - 1990s groundwater data indicated moderate levels of PCE in groundwater at the NW corner of Center and State Street. Iowa DNR deferred to the LUST cleanup (7LTA03) at this site and noted a "more extensive PCE problem that exists in Marshalltown." UST records indicated that three USTs were removed in 1988 and that evidence of gasoline contamination was observed in soils beneath the tanks. Iowa DNR opened LUST case #7LTA03 in July 1988, following the tank removal. The LUST case was closed in 2014 after extensive investigation and remediation activities. 2002 recorded document (Exhibit B) - restricts site to no GW use, no residential use. Requires that any soil excavation and disposal be approved in writing and governed by a written plan (e.g., Soil Management Plan). No basements allowed. Engineered ground cover barrier is required. Requires Construction Worker Caution Statement.
378	8418-26-378-022	106 N CENTER ST	No listing	No listing	None
378	8418-26-378-023	104 B N CENTER ST	No listing	No listing	None
378	8418-26-378-024	104 N CENTER ST	DRYCLEANERS - Patti's Cleaners (64-01-062) EDR HIST CLEANER - Patti's Uptown Cleaners (1996 - 2004)	No listing	None
379	8418-26-379-001	212 W STATE ST	No listing	No listing	None
379	8418-26-379-003	208 W STATE ST	No listing	No listing	None
379	8418-26-379-004	204 W STATE ST	No listing	No listing	None
379	8418-26-379-005	202 W STATE ST	No listing	No listing	None
379	8418-26-379-006	7 N 3RD ST	No listing	No listing	None
379	8418-26-379-024	210 W STATE ST	No listing	No listing	None
380	8418-26-380-002	110 W STATE ST	No listing	No listing	None
380	8418-26-380-003	108 W STATE ST	No listing	No listing	None

Table 2
Project Area Regulatory Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Environmental Database Findings (from EDR Report)	UST & LUST Findings (from Iowa DNR Storage Tanks database)	Other Environmental Findings (from Iowa DNR Contaminated Sites database and/or regulatory file review)
380	8418-26-380-004	104 W STATE ST	EDR HIST AUTO - Weaver VJ Co (1987 - 2000); Weaver Vern J Jr (1969 - 1989) LUST, UST - Family Video Movie Club, Inc. (7LTO01, 198603192)	UST - 198603192 (three gasoline USTs, removed 1993) LUST - 7LTO01 (No Action Required, with local ordinance, Aug. 2004)	Regulatory records indicate that three USTs were removed in 1993, and that no additional dispensing of gasoline occurred after. No records were available pertaining to older generations of USTs. LUST report maps indicate that much of the site north and east of a former building was excavated. LUST Case #7LTO01 was opened in 1990 and was classified "No Action Required" in 2004. The case was closed based on risk, but a fairly extensive plume of groundwater contamination extended well across W. State Street to the north and N. 1st Street to the east. A November 2003 Local Authority Certification Letter notification was provided to the Iowa DNR certifying that Marshall County had an ordinance in place restricting the installation of water wells.
380	8418-26-380-013	123 W MAIN ST	No listing	No listing	None
381	8418-26-381-001	35 N 1ST ST	EDR HIST AUTO - Egger Bros. DX (1969 - 1976)	No listing	None
381	8418-26-381-004	25 N 1ST ST	No listing	No listing	None
381	8418-26-381-018	20 W STATE ST	No listing	No listing	None
381	8418-26-381-019	24 N CENTER ST	No listing	No listing	None
453	8418-26-453-050	(NO ADDRESS)	No listing	No listing	None
			No listing	No listing	None
			No listing	No listing	None
			No listing	No listing	None
454	8418-26-454-020	101 N CENTER ST	RCRA NONGEN/NLR - La Fiesta (IAD981700040)	No listing	None
454	8418-26-454-021 (currently part of 8418-26-454-041)	(NO ADDRESS)	ALLSITES - 12 East State Street (2567)	No listing	Subsurface investigation from 2019 revealed low levels of VOCs (including PCE) in soil and GW. Iowa DNR recognized this as a "fairly small area of contamination" but recommended an environmental covenant based on the potential for vapor intrusion.
454	8418-26-454-022	16 E STATE ST	No listing	No listing	None

Table 2
Project Area Regulatory Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Environmental Database Findings (from EDR Report)	UST & LUST Findings (from Iowa DNR Storage Tanks database)	Other Environmental Findings (from Iowa DNR Contaminated Sites database and/or regulatory file review)
454	8418-26-454-023 (currently part of 8418-26-454-041)	(NO ADDRESS)	No listing	No listing	A 2019 Phase II investigation included a GPR scan of this site (no USTs found), and three soil and groundwater test borings tested for BTEX, naphthalene, and petroleum hydrocarbons. Only low levels of petroleum hydrocarbons were reported in soil and groundwater.
454	8418-26-454-024	(NO ADDRESS)	No listing	No listing	None
454	8418-26-454-025 (currently part of 8418-26-454-041)	100 N 1ST AVE (fmr 28 E STATE ST)	LUST - Former Station (9LTS46)	UST - 197910667 (No tank details available in database) LUST - 9LTS46 (No Action Required, Jan. 2020)	A Phase II assessment conducted in April 2019 indicated petroleum contamination at this former gasoline station property. The site was evaluated in the Iowa DNR LUST program, and ultimately issued a No Action Required classification in January 2020. Eight groundwater monitoring wells were abandoned in February 2020. Although the LUST case has been closed based on risk, contaminated soil and groundwater is very likely present beneath and immediately west of N. 1st Avenue.
455	8418-26-455-007	102 E STATE ST	RCRA VSQG - Big 8 Tire Center (IAD062777149)	No listing	None
455	8418-26-455-019	132 - 136 E STATE ST	HIST AUTO - Brothers Donald Eugene (1969 - 1972) HIST AUTO - Accurate Automotive (2007 -2011)	No listing	None
455	8418-26-455-020	106 N 2ND AVE	No listing	No listing	None
456	8418-26-456-006	19 N CENTER ST	No listing	No listing	None
456	8418-26-456-005	23 N CENTER ST	No listing	No listing	None
456	8418-26-456-004	25 N CENTER ST	No listing	No listing	None
456	8418-26-456-003	27 N CENTER ST	No listing	No listing	None
456	8418-26-456-002 (currently part of 8418-26-456-035)	31 N CENTER ST	No listing	No listing	None
456	8418-26-456-001	35 N CENTER ST	No listing	No listing	None
456	8418-26-456-007	7 1/2 E STATE ST	No listing	No listing	None
456	8418-26-456-008	9-11 E STATE ST	No listing	No listing	None
456	8418-26-456-031	17 E STATE ST	No listing	No listing	None
456	8418-26-456-010	28 N 1ST AVE	No listing	No listing	None
456	8418-26-456-011	26 N 1ST AVE	No listing	No listing	None
456	8418-26-456-033	24 N 1ST AVE	No listing	No listing	None
456	8418-26-456-013	22 N 1ST AVE	No listing	No listing	None

Table 2
Project Area Regulatory Review Findings
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Environmental Database Findings (from EDR Report)	UST & LUST Findings (from Iowa DNR Storage Tanks database)	Other Environmental Findings (from Iowa DNR Contaminated Sites database and/or regulatory file review)
457	8418-26-457-019	107 E STATE ST	HIST CLEANERS - Niehouse Cleaners (1969 - 1971)	No listing	None
457	8418-26-457-002	27, 29 N 1ST AVE	No listing	No listing	None
457	8418-26-457-001	31 N 1ST AVE	No listing	No listing	None
457	8418-26-457-005	(NO ADDRESS)	No listing	No listing	None
457	8418-26-457-006	119 E STATE ST	No listing	No listing	None
457	8418-26-457-023	134 #2 E MAIN ST	No listing	No listing	None
457	8418-26-457-009	129 E STATE ST	No listing	No listing	None
457	8418-26-457-013	118 E MAIN ST	No listing	No listing	None
457	8418-26-457-014	120 E MAIN ST	No listing	No listing	None
457	8418-26-457-015	122 E MAIN ST	No listing	No listing	None
458	8418-26-458-001	201 E STATE ST	No listing	No listing	None
458	8418-26-458-005	12 N 3RD AVE	EDR HIST AUTO - Lou's Champlin Service (1979 - 1988); Gene's Standard (1975 - 1979); Wayne Stonewall (1972 1973) LUST, UST -FINA #9531 (8LTI79, 198608419)	UST - 198608419 (two hoist oil tanks, no removal date); (one used oil UST, removed 1988); (three gasoline USTs, removed 1988) LUST - 8LTI79 (No Action Required, Dec. 1998)	Three gasoline USTs and one used oil UST were removed in 1988. Iowa DNR did not require any further action following tank removal and sampling conducted in 1988. A fifth UST (heating oil) was removed from this site in 1990. LUST #8LTI79 was opened in July 1996 and closed in 1998 following extensive soil and GW testing and completion of a Tier 1 Report. At that time soil and groundwater contamination appears to have been most prevalent immediately west of and likely beneath N. 3rd Avenue, based on an easterly GW flow direction. A March 11, 1998 notification was provided to the local utility company notifying of contamination, but with no known plastic water line receptors.
458	8418-26-458-016	207 E STATE ST	No listing	No listing	None
458	8418-26-458-017	203 E STATE ST	No listing	No listing	None
458	8418-26-458-018	205 E STATE ST	No listing	No listing	None

Table 3
Project Area Reconnaissance Observations
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Current or Recent Use	Project Area Reconnaissance Observations (October 20, 2021)
358	8418-26-358-014	301 W STATE ST	Residential (single-family)	No notable observations
362	8418-26-362-015	8 N 3RD ST	Parking lot	No notable observations
376	8418-26-376-011	211 W STATE ST	Parking lot	No notable observations
376	8418-26-376-022	207-209 W STATE ST	Vacant lot	No notable observations
376	8418-26-376-023	201 W STATE ST	Commercial/office building	No notable observations
377	8418-26-377-013	111 W STATE ST	Residential (multi-family)	No notable observations
377	8418-26-377-031	107 W STATE ST	Salvation Army Community Center (building)	No notable observations
377	8418-26-377-023	105 W STATE ST	Salvation Army Community Center (building)	**Test well located in sidewalk along State Street**
377	8418-26-377-024	103 W STATE ST	Salvation Army Community Center (grass lot)	No notable observations
377	8418-26-377-026	101 W STATE ST	Salvation Army Community Center (grass lot)	No notable observations
377	8418-26-377-029	102 N 1ST ST	Salvation Army Community Center (grass lot)	One potential boring/monitoring well in sidewalk along State Street.
377	8418-26-377-025	104 N 1ST ST	Residence (single-family)	One potential boring/monitoring well in sidewalk along N 1st Street.
378	8418-26-378-013	35 W STATE ST	Commercial / store	No notable observations
378	8418-26-378-014	19 W STATE ST	Commercial / office building	One potential boring/monitoring well in sidewalk along State Street.
378	8418-26-378-015	15 W STATE ST	parking lot	No notable observations
378	8418-26-378-016	13 W STATE ST	parking lot	3 potential borings/monitoring wells in parking lot, one of which is directly adjacent to the sidewalk along State Street
378	8418-26-378-025	1, 3 W STATE ST	parking lot	2 potential borings/monitoring wells - 1 in parking lot and 1 in sidewalk along State Street.
378	8418-26-378-022	106 N CENTER ST	Commercial / office building	No notable observations
378	8418-26-378-023	104 B N CENTER ST	Commercial / office building	No notable observations
378	8418-26-378-024	104 N CENTER ST	Commercial / store	Potential boring/monitoring well in parking lot. Concrete patch area in sidewalk along N Center Street - likely former light pole.
379	8418-26-379-001	212 W STATE ST	Residential (multi-family)	No notable observations
379	8418-26-379-003	208 W STATE ST	Residential (multi-family)	Two intact pipe caps in front yard near sidewalk.
379	8418-26-379-004	204 W STATE ST	Commercial/office building	No notable observations
379	8418-26-379-005	202 W STATE ST	Commercial/office building	No notable observations
379	8418-26-379-006	7 N 3RD ST	Residential (single-family)	No notable observations
379	8418-26-379-024	210 W STATE ST	Parking lot	No notable observations
380	8418-26-380-002	110 W STATE ST	Commercial / restaurant & Residential (multi-family)	No notable observations
380	8418-26-380-003	108 W STATE ST	Vacant lot	No notable observations
380	8418-26-380-004	104 W STATE ST	Commercial / retail store	Potential boring/monitoring well in sidewalk along State Street
380	8418-26-380-013	123 W MAIN ST	Parking lot	No notable observations
381	8418-26-381-001	35 N 1ST ST	Parking lot	No notable observations
381	8418-26-381-004	25 N 1ST ST	Parking lot	No notable observations
381	8418-26-381-018	20 W STATE ST	Municipal office building	No notable observations

Table 3
Project Area Reconnaissance Observations
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Current or Recent Use	Project Area Reconnaissance Observations (October 20, 2021)
381	8418-26-381-019	24 N CENTER ST	Municipal office building	Potential boring/monitoring well in sidewalk along N Center Street. Green conduit cap in sidewalk at building along State Street.
453	8418-26-453-050	(NO ADDRESS)	Commercial/vacant lots	Potential gravel fill. Debris pile next to State Street including pipe cap and potential clay pipe. Two intact white pipe caps near residence north of property.
454	8418-26-454-020	101 N CENTER ST	Commercial building and parking	Potential boring/monitoring well in sidewalk along N Center St.
454	8418-26-454-021 (currently part of 8418-26-454-041)	(NO ADDRESS)	Parking lot	Potential filled hole in parking lot toward sidewalk along State Street (8418-26-454-041)
454	8418-26-454-022	16 E STATE ST	Commercial building	No notable observations
454	8418-26-454-023 (currently part of 8418-26-454-041)	(NO ADDRESS)	Vacant lot	No notable observations
454	8418-26-454-024	(NO ADDRESS)	Vacant lot	No notable observations
454	8418-26-454-025 (currently part of 8418-26-454-041)	100 N 1ST AVE (fmr 28 E STATE ST)	Vacant lot	No notable observations
455	8418-26-455-007	102 E STATE ST	Commercial / automotive tire shop	Potential boring/monitoring well in N 1st Avenue
455	8418-26-455-019	132 - 136 E STATE ST	Vacant lot	No notable observations
455	8418-26-455-020	106 N 2ND AVE	Parking lot	Concrete patch area in sidewalk along State Street - former light pole?
456	8418-26-456-006	19 N CENTER ST	Commercial (bar) & Residential (multi-family)	No notable observations
456	8418-26-456-005	23 N CENTER ST	Commercial (office) & Residential (multi-family)	No notable observations
456	8418-26-456-004	25 N CENTER ST	Commercial / office building	No notable observations
456	8418-26-456-003	27 N CENTER ST	Commercial (store)	No notable observations
456	8418-26-456-002 (currently part of 8418-26-456-035)	31 N CENTER ST	Vacant lot	Potential boring/monitoring well in sidewalk at corner of N Center Street and State Street (Parcel 8418-26-456-035). One yellow-capped cleanout in sidewalk along N Center Street.
456	8418-26-456-001	35 N CENTER ST	Vacant lot	No notable observations
456	8418-26-456-007	7 1/2 E STATE ST	Commercial (office) & Residential (multi-family)	No notable observations
456	8418-26-456-008	9-11 E STATE ST	Commercial / store	Potential coal chute at sidewalk along State Street
456	8418-26-456-031	17 E STATE ST	Parking lot	No notable observations
456	8418-26-456-010	28 N 1ST AVE	Parking lot	No notable observations
456	8418-26-456-011	26 N 1ST AVE	Parking lot	No notable observations
456	8418-26-456-033	24 N 1ST AVE	Commercial (bar)	No notable observations
456	8418-26-456-013	22 N 1ST AVE	Commercial (bar)	No notable observations
457	8418-26-457-019	107 E STATE ST	Commercial (vacant? Or bank?)	Potential pipe cleanout in sidewalk along N 1st Avenue
457	8418-26-457-002	27, 29 N 1ST AVE	Commercial (vacant?? Or stores?)	No notable observations
457	8418-26-457-001	31 N 1ST AVE	Commercial (vacant?? Or stores?)	No notable observations
457	8418-26-457-005	(NO ADDRESS)	parking lot	No notable observations
457	8418-26-457-006	119 E STATE ST	Residential (apartments)	No notable observations

Table 3
Project Area Reconnaissance Observations
Contaminated Site Review
State Street, Marshalltown, Iowa

Detail Map #	Parcel ID	Address	Current or Recent Use	Project Area Reconnaissance Observations (October 20, 2021)
457	8418-26-457-023	134 #2 E MAIN ST	parking lot	No notable observations
457	8418-26-457-009	129 E STATE ST	Vacant lot; playground/park	No notable observations
457	8418-26-457-013	118 E MAIN ST	Commercial (office building)	Potential coal chutes along alleyway.
457	8418-26-457-014	120 E MAIN ST	Commercial (store)	No notable observations
457	8418-26-457-015	122 E MAIN ST	Commercial (office building)	Potential conduit along alleyway.
458	8418-26-458-001	201 E STATE ST	Historic Site (Glick-Sower House), 1859	No notable observations
458	8418-26-458-005	12 N 3RD AVE	Commercial / Marshall Glass	3 potential borings/monitoring wells on property along with a concrete patch area.
458	8418-26-458-016	207 E STATE ST	Commercial / parking lot	Round patch in sidewalk along State Street - likely former light pole.
458	8418-26-458-017	203 E STATE ST	Vacant lot	No notable observations
458	8418-26-458-018	205 E STATE ST	Commercial / Marshalltown Water Works	No notable observations

2022-131

RESOLUTION APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST FOR THE 2020 SANITARY SEWER REHABILITATION – CIPP PROJECT, IN THE CITY OF MARSHALLTOWN, IOWA, BEING PROJECT NO. SAN21001

WHEREAS, there was placed on file in the office of the Clerk of the City of Marshalltown, Iowa, proposed plans and specifications, proposed form of contract and estimated cost for a public improvement in the City of Marshalltown, Iowa, for the 2020 Sanitary Sewer Rehabilitation - CIPP Project, Project No. SAN21001, as fully set forth in the resolution ordering same, and that public notice of hearing on such plans, specifications and form of contract were duly published in the Marshalltown Times-Republican in time for hearing now before the Council, and

WHEREAS, written objections to the plans, specifications and form of contract have been called for and no such written objections have been filed with the City Clerk, and oral objections being called for and no oral objections being made in open Council, it is the decision of this Council that such plans, specifications, form of contract and estimate of cost should be approved.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, that the plans, specifications, form of contract and estimated cost heretofore placed on file and upon which public notice has been duly given and no objections thereto have been made either in writing or in open council, the Council does now adopt and approve the plans, specifications, form of contract and estimate of cost for Project No SAN21001, being the 2020 Sanitary Sewer Rehabilitation - CIPP Project in the city of Marshalltown, Iowa.

Passed this 9th day of May 2022, and signed this _____ day of May 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel T.S. Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: May 9, 2022
RE: 2020 Sanitary Sewer Rehabilitation Project - CIPP (SAN 21-001)

Policy Issue: City purchasing policy requires vertical infrastructure projects exceeding $139,000 to go through a competitive bidding process with City Council approval of plans, specifications, form of contract, and opinion of cost in addition to holding a public hearing.

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 2 – Develop comprehensive plans for City infrastructure and improvements

Recommendation: Staff recommends approving plans, specifications, form of contract, and opinion of probable cost for said improvements.

Budget Impact: This project is planned to be funded through a combination of a revenue bond planned to be joined with the WPC Headworks Project (letting later this summer) and Sanitary Sewer Enterprise Funding.

Description/Background: The city is under an administrative consent order through Iowa DNR, issued in 2012, to complete projects necessary to alleviate unauthorized bypassing throughout the sanitary sewer collection and conveyance system. Bypassing occurs because there is storm water and ground water ("clean water") that gets into the sanitary sewer system. This is frequently referred to as inflow and infiltration, or I/I. The sanitary sewer system was not designed to accommodate this amount of clean water flow; it also requires the treatment plant to treat more volume of wastewater.

This project is one of the phases within the plan of action that was identified to alleviate the unauthorized bypassing. The project will utilize cured-in-place-pipe lining (CIPP) to seal up underground sanitary sewer to reduce clean water entering the system. We also get a structural benefit that will extend the life of the sewer at a significantly lower cost than full replacement through open cutting / trenching. There are also several point repairs that will be dig up so areas can be repaired that the CIPP lining process can not be used until a repair has occurred.

Design Engineering for this project was performed by FoxStrand. Construction is estimated to cost $4,141,400.28. The substantial completion date is September 22nd, 2023.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

The following is the bid timeline:
- Receiving/Opening Bids at 11:00 AM, May 17th, 2022
- Awarding Bid at the May 23rd, 2022 council meeting.

Attachments: Official Notice of Hearing & Letting, Plans, Project Manual, Cost Estimate

i:\public works\council items\2022\sansewcipp bid\memo - accept plans - sansewcipp 22 05 09.docx

CITY OF MARSHALLTOWN, IOWA
OFFICIAL NOTICE OF HEARING AND LETTING

CITY OF MARSHALLTOWN, IOWA
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY PROJECT NO. SAN21001

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, PROPOSED FORM OF CONTRACT AND ESTIMATED COST FOR THE CITY OF MARSHALLTOWN, IOWA, 2020 SANITARY SEWER REHABILITATION PROJECT - CIPP IN THE CITY OF MARSHALLTOWN, IOWA, AND THE TAKING OF BIDS FOR SUCH IMPROVEMENTS.

A public hearing will be held at 5:30 p.m. local time on the **9th day of May, 2022** in the Council Chambers, 10 West State Street, Second Floor, Marshalltown, Iowa, on the proposed plans, specifications, proposed form of contract, and the estimated cost of improvements proposed to be constructed under Project No. SAN21001, the 2020 Sanitary Sewer Rehabilitation Project - CIPP now on file in the office of the City Clerk and at said hearing any interested person may appear and file objection thereto or to the bidding process.

Sealed proposals will be received by the City Clerk of the City of Marshalltown, Iowa at her office at 24 N. Center Street **until 11:00 a.m. local time**, on the **17th day of May, 2022** for the construction of the 2020 Sanitary Sewer Rehabilitation Project - CIPP as described in the plans and specifications for Project No. SAN21001 and which will be opened, read, and tabulated by the City Engineer or his designate at that time, will be acted upon by the City Council of said City at a meeting to be held in the Council Chambers on the **23rd day of May, 2022** or at such later time and place as may then be fixed. Each proposal shall be made out on a blank form furnished by the City and shall be submitted in a sealed envelope marked, **2020 Sanitary Sewer Rehabilitation Project - CIPP, Marshalltown, Iowa**.

The proposed work will involve furnishing the labor, equipment, and materials necessary for 2020 Sanitary Sewer Rehabilitation Project - CIPP in Marshalltown, Iowa. All work is to be done in strict compliance with the Plans and Specifications for said Project No. SAN21001 as proposed by the City Engineer. The extent of the work involved is as follows:

Sanitary sewer improvements shall include, but not be limited to approximately 70,000 linear feet of sanitary sewer CIPP pipe lining. This shall include sanitary sewer televising pre and post construction inspection televising, point repairs, manhole replacement, and associated other work for construction.

Each proposal must be accompanied either by a cashier's check or certified check in the amount of five percent (5%) drawn on an Iowa bank or a bank chartered under the laws of the United States, a Bid Bond or credit union certified share draft in the amount of five percent (5%) of the proposal, drawn on a credit union in Iowa or chartered under the laws of the United States and filed in an envelope separate from the one containing the proposal, made payable to the City of Marshalltown, Iowa, and said check or draft may be cashed or the Bid Bond declared forfeited by the City of Marshalltown, Iowa as liquidated damages in the event the successful bidder fails to enter into a contract within fifteen (15) days of the Notice of Award and post bond satisfactory to the City insuring the faithful fulfillment of the contract and maintenance of said improvements as required by law and the Specifications.

A pre-bid conference for the Project will not be held.

Payment to the Contractor for said construction will be made in cash from the following sources: Cash from any fund of City of Marshalltown, Iowa, which may be legally used for such purposes; proceeds derived from the sale and issuance of Utility Revenue Bonds, or Federal or State grants or loans.

The Contractor will be paid each month Ninety-five Percent (95%) of the Engineer's Estimate of the value of work completed at the end of the preceding month. Final payment will be made no sooner than thirty (30) days after completion of the work and acceptance by the Owner.

The work under the proposed contract shall commence within thirty (30) days of the written "Notice to Proceed". The "Notice to Proceed" is anticipated to be issued within seven (7) days of the Effective Date of the Agreement. The work shall be substantially completed by **September 22, 2023**. Final completion shall be by **November 3, 2023**. All work shall be completed by the substantial and final completion dates indicated, subject to any changes granted by the Owner.

The Owner and Contractor recognize that time is of the essence of this Agreement and that City will suffer financial loss if the Work is not completed within the times specified in paragraph above, plus any extensions thereof allowed. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by City if the Work is not completed on time. Accordingly, instead of requiring any such proof, City and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay the City of Marshalltown **$1,000.00** for each day that expires after the time specified for Substantial Completion for the contract until the work is certified by the Engineer as substantially complete and **$1,000.00** for each day after the time specified for certification of Final Completion if Contractor neglects, refuses or fails to complete the remaining Work within the contract time for Final Completion. The City shall deduct the accrued liquidated damages from the final payment due to the Contractor.

All proposals shall be made upon the official bidding blanks furnished by the City and any alteration in the Official Form of Proposal will entitle the Council, at its option, to reject the proposal involved from consideration. Each said proposal shall

be sealed and plainly identified.

Preference will be given to products and provisions grown and coal produced within the State of Iowa, by virtue of statutory authority, and to Iowa domestic labor in constructing said improvements.

The successful bidder will be required to furnish bonds as specified, said bonds to be issued by a responsible surety approved by the Owner and which shall guarantee a faithful performance of the Contract and the terms and conditions therein contained and shall guarantee the prompt payment of all materials and labor and protect and save harmless the Owner from claims and damages of any kind caused by the operations of the Contractor and shall also guarantee the maintenance of the improvements constructed for a period of four (4) years after completion and acceptance by the Owner.

The Owner reserves the right to defer acceptance of any proposal for a period not to exceed thirty (30) days from the date of receipt of proposals.

Complete digital project bidding documents are available at www.questcdn.com. Prospective bidders may download the digital plan documents at no cost by inserting the Quest project cost number **8122090** on the website's project search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, printing, and working with this digital project information. Website registration is necessary to ensure that prospective bidders remain informed of addendum and other essential communications prior to the bid date. If the prospective bidder has a concern about the validity of the digital information downloaded from www.questcdn.com, then prospective bidder shall access the paper copies on file at the Owner's or the Engineer's office to verify the information in question.

A paper copy of said Bidding Requirements and Contract Documents will be on file in the office of the City Clerk, City Hall, Marshalltown, Iowa, for examination by prospective bidders. An optional paper set of Bidding Requirements and Contract Documents may be obtained from FOX Strand, 414 South 17th Street, Suite 107, Ames, Iowa, 50010, (515) 233-0000. A deposit of $150 per paper set of Bidding Requirements and Contract Documents will be charged, all of which will be refunded if the paper documents are returned in reusable condition within 14 days of the Award of Contract. If all paper documents are not returned, unmarked, in reusable condition and within 14 days, the deposit shall be forfeited.

Paper documents may be acquired directly from the office of FOX Strand. without incurring a shipping and handling fee. However, a minimum prior notice of two business days is required for documents that will be picked up during FOX Strand normal business hours. Upon request, documents can be shipped at the lowest cost ground shipping rate and via a trusted carrier such as UPS or FEDEX.

The City Council reserves the right to reject any and all bids and to waive technicalities and irregularities and all bids must remain effective for a period of 30 days of opening same.

This Notice to Bidders is hereby published by authority of resolution duly adopted by the Council of the City of Marshalltown on the ___day of _____, 2022.

CITY OF MARSHALLTOWN, IOWA

By _____
Alicia Hunter, City Clerk

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

Marshalltown, Iowa
4/20/2022
2407-20A.420

BID ITEMS AND QUANTITIES				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS	
ITEM NO.	**BID ITEM**	**UNIT**	**QUANTITY**	**UNIT PRICE**	**TOTAL PRICE**
	DIVISION 1 - GENERAL PROVISIONS AND COVENANTS				
1.01	TRAFFIC CONTROL & STAGING	LS	1	$75,000.00	$75,000.00
1.02	EXPLORATORY DIGGING AND UTILITY POTHOLING	HR	40	$400.00	$16,000.00
1.03	UTILITY CROSSING	EA	5	$2,500.00	$12,500.00
1.04	DEWATERING	LS	1	$25,000.00	$25,000.00
1.05	RAILROAD PROTECTIVE LIABILITY INSURANCE	LS	1	$2,500.00	$2,500.00
1.06	RAILROAD FLAGGER	DAY	7	$2,000.00	$14,000.00
1.07	BYPASS PUMPING	LS	1	$25,000.00	$25,000.00
1.08	MISCELLANEOUS REMOVALS	LS	1	$1,500.00	$1,500.00
	Division Subtotal				*$171,500.00*
	DIVISION 2 - EARTHWORK				
2.01	CLEARING AND GRUBBING, TREE REMOVAL, TREE TRIMMING	LS	1	$2,500.00	$2,500.00
2.02	EARTHWORK, ROADWAY EXCAVATION	CY	150	$22.00	$3,300.00
2.03	EARTHWORK, UNSUITABLE SOILS REMOVAL, DISPOSAL, AND REPLACEMENT	CY	250	$55.00	$13,750.00
2.04	SUBGRADE PREPARATION, 8-INCH	SY	506	$5.00	$2,532.22
	Division Subtotal				*$22,082.22*
	DIVISION 3 - TRENCH AND TRENCHLESS CONSTRUCTION				
3.01	TRENCH FOUNDATION	TON	50	$35.00	$1,750.00
3.02	SPECIAL PIPE EMBEDMENT OR ENCASEMENT	CY	50	$150.00	$7,500.00
3.03	TRENCH COMPACTION TESTING	LS	1	$10,000.00	$10,000.00
	Division Subtotal				*$19,250.00*
	DIVISION 4 - SEWERS AND DRAINS				
4.01	SANITARY SEWER, MAIN REPLACEMENT, 6-INCH	LF	25	$385.00	$9,625.00
4.02	SANITARY SEWER, MAIN REPLACEMENT, 8-INCH	LF	40	$390.00	$15,600.00
4.03	SANITARY SEWER, MAIN REPLACEMENT, 10-INCH	LF	80	$400.00	$32,000.00
4.04	SANITARY SEWER, MAIN REPLACEMENT, 12-INCH	LF	10	$500.00	$5,000.00
4.05	SANITARY SEWER, MAIN REPLACEMENT, 15-INCH	LF	10	$560.00	$5,600.00
4.06	SANITARY SEWER, MAIN REPLACEMENT, 18-INCH	LF	10	$600.00	$6,000.00
4.07	SANITARY SEWER, MAIN REPLACEMENT, 24-INCH	LF	10	$750.00	$7,500.00
4.08	SANITARY SEWER, MAIN REPLACEMENT, 27-INCH	LF	10	$800.00	$8,000.00
4.09	SANITARY SEWER, MAIN REPLACEMENT, 30-INCH	LF	10	$850.00	$8,500.00
4.10	SANITARY SEWER, MAIN REPLACEMENT, 33-INCH	LF	10	$900.00	$9,000.00
4.11	SANITARY SEWER, MAIN REPLACEMENT, 36-INCH	LF	10	$950.00	$9,500.00
4.12	SANITARY SEWER SERVICE RECONNECTION, WYE REPLACEMENT	EA	10	$4,500.00	$45,000.00
4.13	SANITARY SEWER CLEANOUT	EA	5	$2,000.00	$10,000.00
4.14	CCTV 6-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,900	$1.25	$9,875.00
4.15	CCTV 8-INCH SANITARY SEWER, PREONSTRUCTION INSPECTION	LF	46,708	$1.50	$70,062.00
4.16	CCTV 10-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,093	$1.50	$10,639.50
4.17	CCTV 12-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	2,327	$1.75	$4,072.25
4.18	CCTV 15-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,231	$2.00	$2,462.00
4.19	CCTV 18-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,688	$2.50	$4,220.00
4.20	CCTV 24-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	482	$3.00	$1,446.00
4.21	CCTV 27-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	647	$3.50	$2,264.50
4.22	CCTV 30-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,182	$4.00	$4,728.00
4.23	CCTV 33-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	474	$4.50	$2,133.00
4.24	CCTV 36-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	852	$5.00	$4,260.00
4.25	CCTV 6-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,900	$0.75	$5,925.00
4.26	CCTV 8-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	46,708	$0.75	$35,031.00
4.27	CCTV 10-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,093	$1.00	$7,093.00
4.28	CCTV 12-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	2,327	$1.00	$2,327.00
4.29	CCTV 15-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,231	$1.25	$1,538.75
4.30	CCTV 18-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,688	$1.50	$2,532.00
4.31	CCTV 24-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	482	$1.75	$843.50
4.32	CCTV 27-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	647	$2.00	$1,294.00
4.33	CCTV 30-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,182	$2.25	$2,659.50
4.34	CCTV 33-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	474	$2.50	$1,185.00
4.35	CCTV 36-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	852	$3.00	$2,556.00
4.36	CCTV INSPECTION REVERSAL	EA	100	$500.00	$50,000.00
4.37	SANITARY SEWER MAIN LINE, HEAVY CLEANING	HR	100	$500.00	$50,000.00
4.38	HIGH PRESSURE JETTING AND ROBOTIC CUTTING	EA	2	$3,500.00	$7,000.00
4.39	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY ROOTS	HR	100	$100.00	$10,000.00
4.40	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY SCALE	HR	80	$500.00	$40,000.00
4.41	SANITARY SEWER MAIN LINE, PROTRUDING TAP CUT	EA	200	$250.00	$50,000.00
4.42	SANITARY SEWER CIPP POINT REPAIR DEBRIS CUTTING	HR	50	$1,000.00	$50,000.00
4.43	SANITARY SEWER CIPP POINT REPAIR, GROUTING VOID AROUND LATERAL INTERNALLY	EA	10	$1,000.00	$10,000.00
4.44	SANITARY SEWER CIPP POINT REPAIR, 6-INCH	LF	15	$750.00	$11,250.00
4.45	SANITARY SEWER CIPP POINT REPAIR, 8-INCH	LF	25	$1,000.00	$25,000.00
4.46	SANITARY SEWER CIPP POINT REPAIR, 10-INCH	LF	15	$1,250.00	$18,750.00
4.47	SANITARY SEWER CIPP POINT REPAIR, 12-INCH	LF	10	$1,300.00	$13,000.00
4.48	SANITARY SEWER CIPP POINT REPAIR, 15-INCH	LF	5	$1,400.00	$7,000.00
4.49	SANITARY SEWER CIPP POINT REPAIR, 18-INCH	LF	5	$1,500.00	$7,500.00
4.50	SANITARY SEWER CIPP POINT REPAIR, 24-INCH	LF	20	$2,000.00	$40,000.00
4.51	SANITARY SEWER CIPP POINT REPAIR, 27-INCH	LF	5	$2,200.00	$11,000.00
4.52	SANITARY SEWER CIPP POINT REPAIR, 30-INCH	LF	5	$2,400.00	$12,000.00
4.53	SANITARY SEWER CIPP POINT REPAIR, 33-INCH	LF	5	$2,800.00	$14,000.00
4.54	SANITARY SEWER CIPP POINT REPAIR, 36-INCH	LF	5	$3,000.00	$15,000.00
4.55	SANITARY SEWER CIPP LCR REPAIR, 5 FT	EA	34	$3,500.00	$119,000.00
4.56	SUBDRAIN, TYPE 1, CASE B, 6-INCH	LF	25	$35.00	$875.00
4.57	CIPP LINING, 6" O.D.	LF	7,900	$30.00	$237,000.00
4.58	CIPP LINING, 8" O.D.	LF	46,708	$25.00	$1,167,700.00
4.59	CIPP LINING, 10" O.D.	LF	7,093	$30.00	$212,790.00
4.60	CIPP LINING, 12" O.D.	LF	2,327	$35.00	$81,445.00
4.61	CIPP LINING, 15" O.D.	LF	1,231	$40.00	$49,240.00
4.62	CIPP LINING, 18" O.D.	LF	1,688	$85.00	$143,480.00
4.63	CIPP LINING, 24" O.D.	LF	482	$110.00	$53,020.00
4.64	CIPP LINING, 27" O.D.	LF	647	$133.00	$86,051.00
4.65	CIPP LINING, 30" O.D.	LF	1,182	$150.00	$177,300.00
4.66	CIPP LINING, 33" O.D.	LF	474	$170.00	$80,580.00
4.67	CIPP LINING, 36" O.D.	LF	852	$185.00	$157,620.00
4.68	CIPP LINING, SERVICE REINSTATEMENTS	EA	1,284	$75.00	$96,300.00
4.69	CIPP LINING, 36" CIPP TRANSITION TO 18" O.D.	EA	1	$2,500.00	$2,500.00
	Division Subtotal				*$3,456,873.00*
	DIVISION 5 - WATER MAIN AND APPURTENANCES				
5.01	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 4-INCH	LF	20	$80.00	$1,600.00
5.02	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 6-INCH	LF	20	$90.00	$1,800.00
5.03	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 8-INCH	LF	20	$105.00	$2,100.00
5.04	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 12-INCH	LF	20	$115.00	$2,300.00
5.05	FITTING, 45 DEGREE MJ BEND, 4-INCH	EA	4	$400.00	$1,600.00
5.06	FITTING, 45 DEGREE MJ BEND, 6-INCH	EA	4	$500.00	$2,000.00
5.07	FITTING, 45 DEGREE MJ BEND, 8-INCH	EA	4	$700.00	$2,800.00
5.08	FITTING, 45 DEGREE MJ BEND, 12-INCH	EA	4	$850.00	$3,400.00
5.09	FITTING, MJ SLEEVE, 4-INCH	EA	2	$450.00	$900.00

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

Marshalltown, Iowa
4/20/2022
2407-20A.420

BID ITEMS AND QUANTITIES				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS	
ITEM NO.	**BID ITEM**	**UNIT**	**QUANTITY**	**UNIT PRICE**	**TOTAL PRICE**
5.10	FITTING, MJ SLEEVE, 6-INCH	EA	2	$500.00	$1,000.00
5.11	FITTING, MJ SLEEVE, 8-INCH	EA	2	$650.00	$1,300.00
5.12	FITTING, MJ SLEEVE, 12-INCH	EA	2	$800.00	$1,600.00
5.13	WATER SERVICE RELOCATION AND REPLACEMENT	EA	5	$2,200.00	$11,000.00
	Division Subtotal				*$33,400.00*
	DIVISION 6 - STRUCTURES FOR SANITARY AND STORM SEWERS				
6.01	SANITARY SEWER MANHOLE, 48-INCH SW-301, 0 TO 5 VERTICAL FEET	EA	2	$6,000.00	$12,000.00
6.02	SANITARY SEWER MANHOLE, 48-INCH SW-301, 5 TO 10 VERTICAL FEET	EA	4	$8,000.00	$32,000.00
6.03	REMOVE EXISTING MANHOLE	EA	2	$2,100.00	$4,200.00
6.04	SANITARY SEWER MANHOLE, SW-307, DROP CONNECTION	EA	1	$3,500.00	$3,500.00
6.05	MANHOLE FIELD ADJUSTMENTS	EA	3	$2,000.00	$6,000.00
6.06	MANHOLE TESTING	LS	1	$500.00	$500.00
	Division Subtotal				*$58,200.00*
	DIVISION 7 - PAVEMENT AND APPURTENANCES				
7.01	REMOVAL AND DISPOSITION OF PAVEMENT	SY	506	$10.00	$5,064.44
7.02	PCC CURB AND GUTTER, 30-INCH	LF	50	$31.00	$1,550.00
7.03	HMA PAVEMENT SAMPLES AND TESTING	LS	1	$15,000.00	$15,000.00
7.04	DRIVEWAY PAVEMENT REMOVAL	SY	50	$11.50	$575.00
7.05	PCC PAVEMENT, DRIVEWAY, 6-INCH	SY	50	$80.00	$4,000.00
7.06	MODIFIED SUBBASE STONE, 8-INCH	TON	300	$28.00	$8,400.00
7.07	SUBBASE STABILIZATION, MACADAM STONE	TON	50	$27.00	$1,350.00
7.08	SIDEWALK REMOVAL	SY	25	$12.00	$300.00
7.09	SIDEWALK, PCC, 5-INCH	SY	25	$68.00	$1,700.00
7.10	PEDESTRIAN RAMPS, PCC, 6-INCH	SY	8	$92.00	$736.00
7.11	DETECTABLE WARNING PANELS	SF	10	$41.00	$410.00
7.12	CURB AND GUTTER REMOVAL	LF	50	$3.75	$187.50
7.13	ROADWAY GEOGRID	SY	506	$3.00	$1,519.33
7.14	HMA FULL DEPTH COMPOSITE PATCH	SY	161	$130.00	$20,987.78
7.15	PCC FULL DEPTH PATCH	SY	345	$75.00	$25,875.00
7.16	PCC SAMPLES AND TESTING	LS	1	$7,500.00	$7,500.00
7.17	SURFACING, REMOVE AND REPLACE, CLASS A ROADSTONE	TON	10	$27.00	$270.00
	Division Subtotal				*$95,425.06*
	DIVISION 8 - TRAFFIC SIGNALS (NOT USED)				
	DIVISION 9 - SITE WORK AND LANDSCAPING				
9.01	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 1	SQ	10	$150.00	$1,500.00
9.02	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 3	SQ	10	$8.00	$80.00
9.03	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 4	SQ	10	$4.00	$40.00
9.04	TEMPORARY ROLLED EROSION CONTROL PRODUCT, TYPE 2.D	SY	10	$5.00	$50.00
9.05	SILT FENCE	LF	100	$5.00	$500.00
9.06	FILTER SOCK	LF	100	$5.00	$500.00
9.07	STABILIZED CONSTRUCTION ENTRANCE, 3-INCH	TON	50	$40.00	$2,000.00
9.08	INLET PROTECTION, SURFACE APPLIED	EA	25	$200.00	$5,000.00
	Division Subtotal				*$9,670.00*
	DIVISION 10 - DEMOLITION (NOT USED)				
	DIVISION 11 - MISCELLANEOUS				
11.01	MOBILIZATION	LS	1	$200,000.00	$200,000.00
11.02	MOBILIZATION, MANHOLE INSTALLS AND POINT REPAIR LOCATIONS	EA	30	$2,500.00	$75,000.00
	Division Subtotal				*$275,000.00*
	OPINION OF PROBABLE CONSTRUCTION COST				***$4,141,400.28***
	Engineering Design, Survey, Permitting, & Bidding	**4%**			***$176,700.00***
	Construction Administration, Observation, and Record Drawings	**0.6%**			***$24,848.40***
	Legal Fees	**0.5%**			***$20,707.00***
	Construction Change Order Contingency	**1.5%**			***$62,121.00***
	TOTAL OPINION OF PROBABLE PROJECT COST				***$4,425,776.69***

PREPARED BY:
FOX STRAND
AMES, IOWA

PLANS OF PROPOSED IMPROVEMENTS FOR

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP

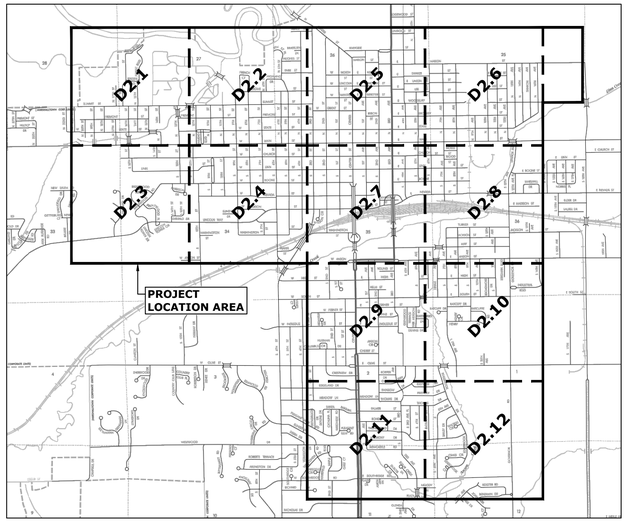
MARSHALLTOWN, IOWA

PN: SAN21001

LOCATION MAP

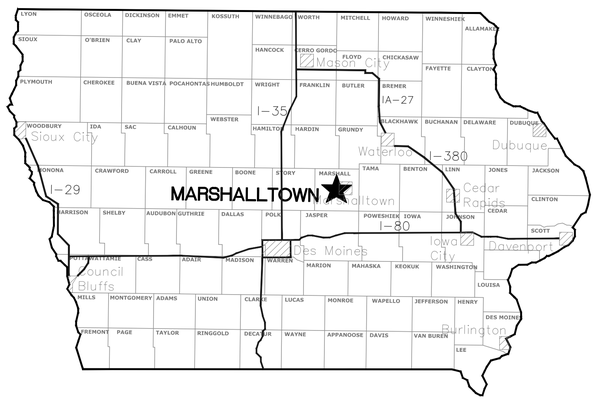
NORTH

NOT TO SCALE



INDEX OF SHEETS

No.	Description
A1.0	COVER SHEET/ LOCATION MAP/LEGEND
B1.0 - B1.8	DETAILS
C1.0	LEGEND & GENERAL NOTES
C2.0 - C2.3	ESTIMATE OF QUANTITIES/ ESTIMATE REFERENCE INFO/ GENERAL NOTES
C3.0 - C3.4	CIPP BID TABULATIONS
C3.5	MANHOLE REPAIR BID TABULATION
C4.1	PROJECT OVERVIEW MAP
D1.1 - D1.3	CURED IN PLACE PIPE PLAN - SHEET INDEX MAP
D2.1 - D2.12	CURED IN PLACE PIPE PLAN - SITE MAP
D3.1 - D3.3	POINT REPAIR & MANHOLE INSTALLATION LOCATION PLAN VIEW



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CITY HALL
24 N. CENTER ST
MARSHALLTOWN, IOWA 50158

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JEFF SCHNEIDER
GARY THOMPSON
MIKE LADEHOFF
GABRIEL ISOM
DEX WALKER
AL HOOP

MARSHALLTOWN
IOWA

STRAND ASSOCIATES®

GENERAL NOTE: ALL UTILITIES ARE ONLY GENERALLY LOCATED. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION BEFORE CONSTRUCTION BEGINS.

THIS PROJECT IS COVERED BY THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2. THE CONTRACTOR SHALL CARRY OUT THE TERMS AND CONDITIONS OF GENERAL PERMIT NO. 2 AND STORM WATER POLLUTION PREVENTION PLAN WHICH IS PART OF THESE CONTRACT DOCUMENTS. REFER TO SECTION 2602 OF THE DOT STANDARD SPECIFICATION FOR ADDITIONAL INFORMATION.

THE STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS 2022) AND THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS PLUS GENERAL SUPPLEMENTAL SPECIFICATIONS; AND APPLICABLE SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS, AND ALL APPROPRIATE ADDENDA AND REVISIONS SHALL APPLY TO THE CONSTRUCTION WORK ON THIS PROJECT UNLESS NOTED ON THE PLANS OR IN THE CONTRACT. CITY OF MARSHALLTOWN SUPPLEMENTAL SPECIFICATIONS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS.

LICENSED PROFESSIONAL ENGINEER
STEVEN P. SOUPIR P18924
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

STEVEN P. SOUPIR, P.E. 4/20/22
STEVEN P. SOUPIR, P.E. DATE
License number P18924

My license renewal date is December 31, 2023.

Pages or sheets covered by this seal:
All

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP

DRAWING FILENAME
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PLOT STYLE TABLE: FoxGreyScale.ctb
LAYER MNGR NAME
LAYOUT NAME: A1.0

DATE	REVISION	BY	DATE

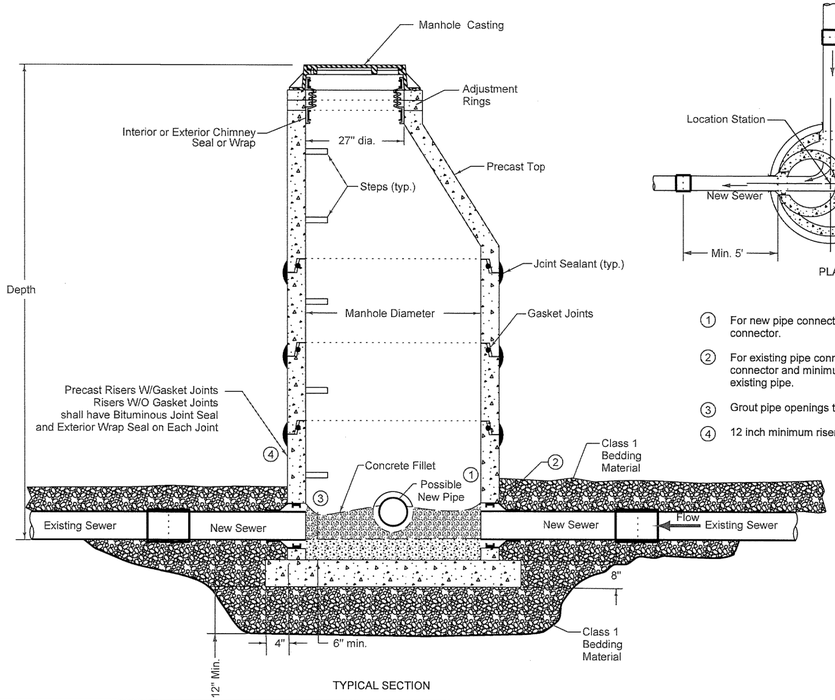
DESIGNED: SPS
DRAWN: ELT
CHECKED:
LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

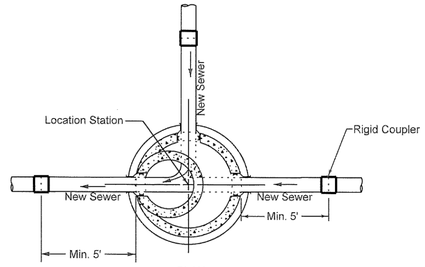
COVER SHEET
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
A1.0



TYPICAL SECTION



PLAN

1. For new pipe connections, provide cored opening with flexible pipe connector.
2. For existing pipe connections, provide cored opening with flexible pipe connector and minimum 5-feet of new pipe with rigid coupler to existing pipe.
3. Grout pipe openings to slope into flow line with fillet.
4. 12 inch minimum riser height above all pipe openings.

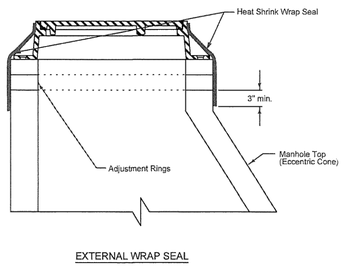
Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes ③	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

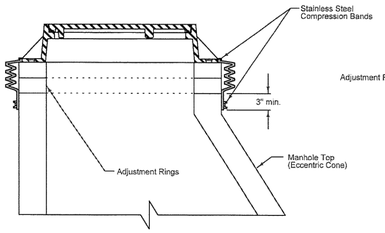
TYPICAL SANITARY SEWER MANHOLE DETAIL

DATE: 07/24/19

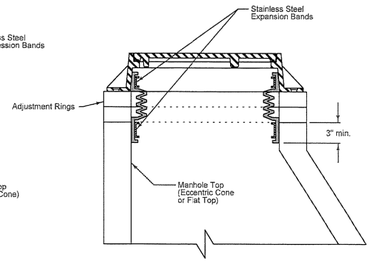
MP-5



EXTERNAL WRAP SEAL

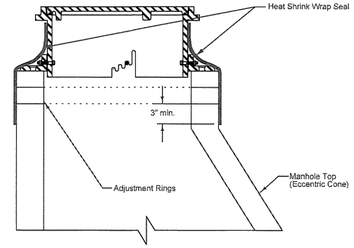


EXTERNAL CHIMNEY SEAL

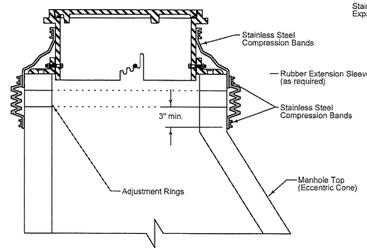


INTERNAL CHIMNEY SEAL

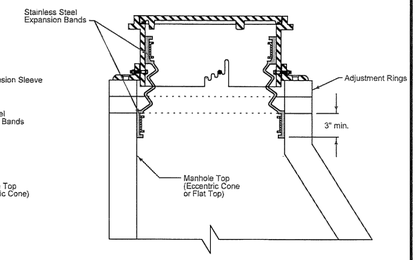
CASTING SEALS FOR 2-PIECE CASTINGS



EXTERNAL WRAP SEAL



EXTERNAL CHIMNEY SEAL



INTERNAL CHIMNEY SEAL

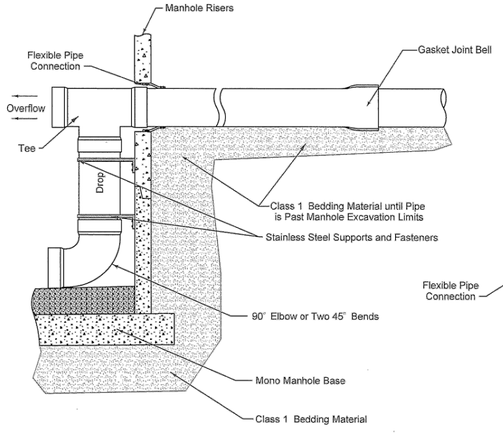
CASTING SEALS FOR 3-PIECE CASTINGS

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

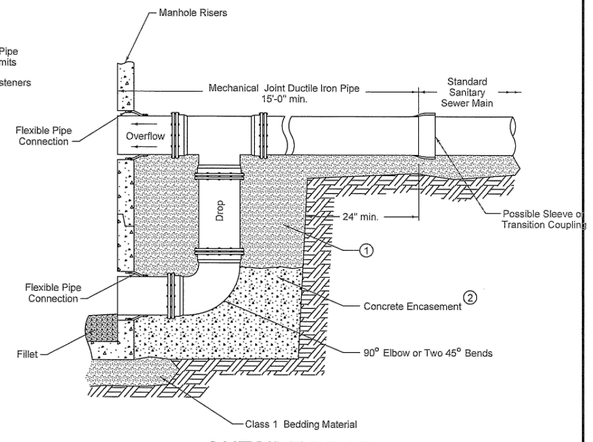
TYPICAL SANITARY SEWER MANHOLE CASTING SEAL DETAILS

DATE: 05/20/19

MP-7.2



INSIDE DROP



OUTSIDE DROP

Construct outside drop and overflow from ductile iron pipe of same diameter specified for sewer main. Provide mechanical joints for all ductile iron pipe and fittings.

Construct inside drop and overflow from same material and diameter specified for sewer main. All joints will be gasketed.

1. Place Class 1 bedding material, CLSM, flowable mortar, or concrete from top of elbow to bottom of sewer main.
2. Encase elbow in concrete. 12 inches minimum on all sides.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

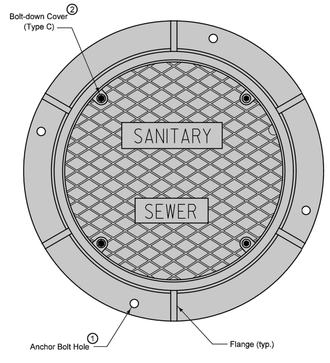
TYPICAL SANITARY SEWER DROP MANHOLE DETAILS

DATE: 07/24/19

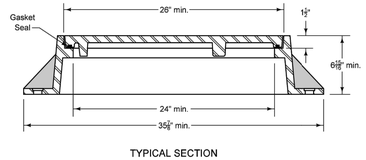
MP-6

TYPE A
Two-piece fixed casting

TYPE C
Two-piece fixed casting with bolt-down cover ②



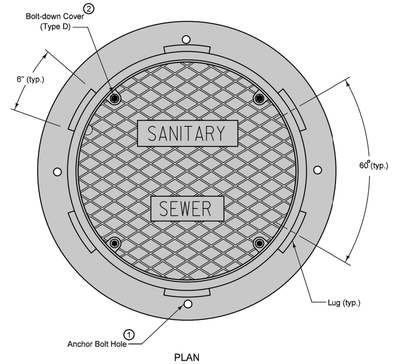
PLAN



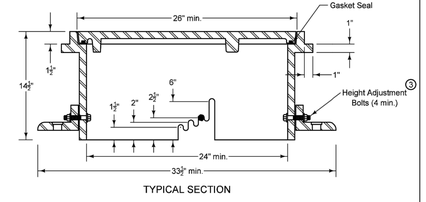
TYPICAL SECTION

TYPE B
Three-piece floating casting

TYPE D
Three-piece floating casting with bolt-down cover ②



PLAN



TYPICAL SECTION

Frame Notes:
Size and spacing of lugs and flanges may vary.

Cover Notes:
Roughness pattern and text style may vary.
Minimum one concealed pickhole.

1. When the contract documents require the frame to be attached to the structure, drill four ¾" diameter holes or slots, equally spaced around frame.
2. If specified, furnish bolt down frame and cover with four ¾" x 2½" stainless steel, hex head, recessed cap screws. Secure cover with screws, washers, and rubber gasket seals.
3. Set casting at proper grade using one of the adjustment slots. Remove bolts upon completion of paving.

SUDAS	IOWA DOT	REVISION 3 04-21-15
FIGURE 6010.601	STANDARD ROAD PLAN	SW-601
		SHEET 1 of 1

REVISIONS: Minor revision to depict adjustability of TYPE B and TYPE D casting. Modified circle note 3.

Brian D. Wigant — STANDARD DETAILS ENGINEER
Brian Smith — DESIGN METHODS ENGINEER

CASTINGS FOR SANITARY SEWER MANHOLES

FIGURE 6010.601 SHEET 1 OF 1

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LAYER MNGR NAME: LAYOUT NAME: B1.0
PLOT STYLE TABLE: foxGray-Scale.ctb

REVISION	BY	DATE
	DESIGNED: SPS	04/22
	DRAWN: ELT	04/22
	CHECKED:	
	LAST UPDATE: 3/30/22	

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
B1.0

Refer to the contract documents for specific material and placement requirements.

(1) Required only when specified in the contract documents or when directed by the Engineer.

Key

OD = Outside diameter of pipe

D = Inside diameter of pipe

TW = Trench width at top of pipe

d = Depth of bedding material below pipe

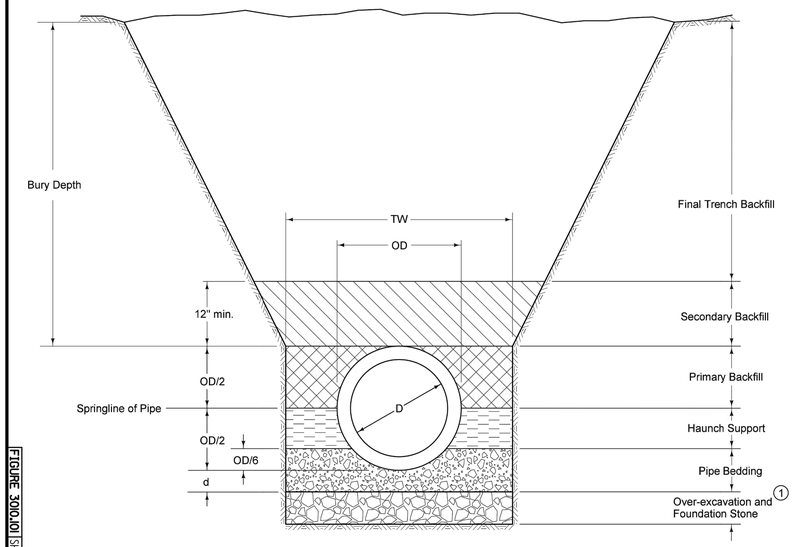


FIGURE 3010.001 SHEET 1 OF 1

SUDAS | IOWADOT | REVISION 1 04-17-18

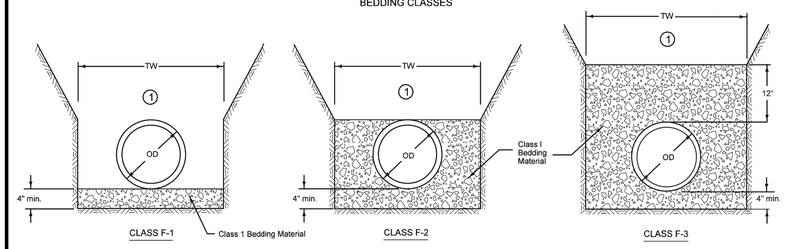
FIGURE 3010.101 | STANDARD ROAD PLAN | SW-101 | SHEET 1 of 1

REVISIONS: Replaced Iowa DOT and SUDAS logos.

Paul D. Wiegand, SUDAS DIRECTOR — Brian J. Smith, DESIGN METHODS ENGINEER

TRENCH BEDDING AND BACKFILL ZONES

BEDDING CLASSES



(1) Place remainder of bedding and backfill materials as specified in the contract documents.

(2) Minimum depth of bury 12 inches or as specified by the manufacturer.

ALLOWABLE BEDDING CLASSES

PIPE MATERIAL	STORM SEWER	SANITARY SEWER
Ductile Iron	F-1, F-2, F-3	F-1, F-2, F-3
HDPE	F-2, F-3	Not allowed
Polypropylene	F-2, F-3	F-3
PVC	F-2, F-3	F-3

Key

OD = Outside diameter of pipe

TW = Trench width at top of pipe:
Min. = OD+18 inches OR 1.25xOD+12 inches
(whichever is greater)

ALLOWABLE BURY DEPTH (2)

PVC PIPE

Pipe Diameter (in)	ASTM D 3034			ASTM F 679	ASTM F 949	ASTM F 1803	ASTM D 2680
	Solid Wall			Solid Wall	Corrug. Exterior	Closed Profile	Composite (Truss Type)
	SDR 23.5	SDR 26	SDR 35	SDR 35			
8	30'	28'	24'	---	24'	---	32'
10	30'	28'	24'	---	24'	---	32'
12	30'	28'	24'	---	24'	---	32'
15	30'	28'	24'	---	24'	---	32'
18	---	---	---	24'	24'	---	---
21	---	---	---	24'	24'	24'	---
24	---	---	---	24'	24'	24'	---
27	---	---	---	24'	---	24'	---
30	---	---	---	24'	24'	24'	---
33	---	---	---	24'	---	---	---
36	---	---	---	24'	24'	24'	---
42	---	---	---	24'	---	24'	---
48	---	---	---	24'	---	24'	---
54	---	---	---	---	---	24'	---
60	---	---	---	---	---	24'	---

DUCTILE IRON, AWWA C151, CLASS 52

Pipe Diameter (in)	Class F-1 Bedding	Class F-2 Bedding	Class F-3 Bedding
4	40'	40'	40'
6	40'	40'	40'
8	40'	40'	40'
10	40'	40'	40'
12	37'	40'	40'
14	31'	40'	40'
16	28'	37'	40'
18	25'	34'	40'
20	23'	32'	40'
24	20'	29'	38'
30	18'	23'	31'
36	18'	22'	30'
42	17'	21'	29'
48	16'	19'	27'
54	16'	19'	27'

HDPE PIPE

Pipe Diameter (in)	AASHTO M 294
12	8'
15	9'
18	9'
24	9'
30	9'
36	9'
42	8'
48	8'
54	8'
60	8'

POLYPROPYLENE PIPE

Pipe Diameter (in)	ASTM F 2736	ASTM F 2764
12	24'	---
15	25'	---
18	22'	---
24	20'	---
30	22'	22'
36	---	21'
42*	---	22'
48*	---	23'
54*	---	21'
60*	---	21'

*Storm Sewer Only

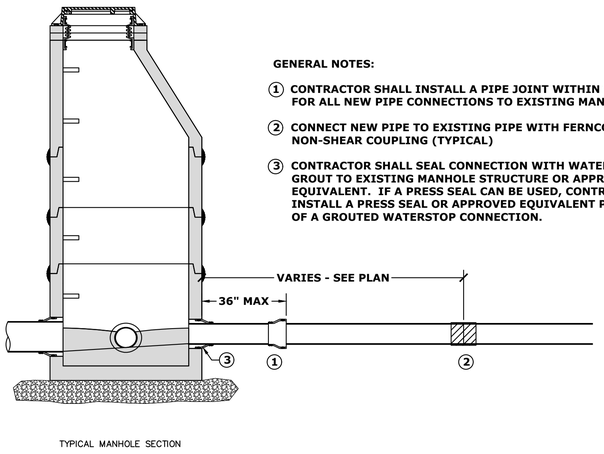
SUDAS | IOWADOT | REVISION 2 10-18-16

FIGURE 3010.103 | STANDARD ROAD PLAN | SW-103 | SHEET 1 of 1

REVISIONS: Added polypropylene pipe for storm sewer applications.

Paul D. Wiegand, SUDAS DIRECTOR — Brian J. Smith, DESIGN METHODS ENGINEER

FLEXIBLE GRAVITY PIPE TRENCH BEDDING



TYPICAL MANHOLE SECTION

GENERAL NOTES:

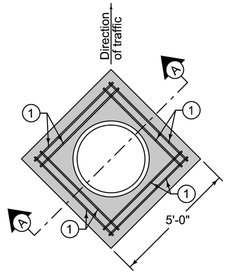
(1) CONTRACTOR SHALL INSTALL A PIPE JOINT WITHIN 36" OF MANHOLE FOR ALL NEW PIPE CONNECTIONS TO EXISTING MANHOLE

(2) CONNECT NEW PIPE TO EXISTING PIPE WITH FERNCO STAINLESS NON-SHEAR COUPLING (TYPICAL)

(3) CONTRACTOR SHALL SEAL CONNECTION WITH WATERSTOP AND GROUT TO EXISTING MANHOLE STRUCTURE OR APPROVED EQUIVALENT. IF A PRESS SEAL CAN BE USED, CONTRACTOR SHALL INSTALL A PRESS SEAL OR APPROVED EQUIVALENT PRIOR TO THE USE OF A GROUTED WATERSTOP CONNECTION.

1 **MANHOLE CONNECTION TO EXISTING SANITARY PIPES**

NOT TO SCALE



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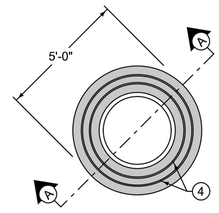

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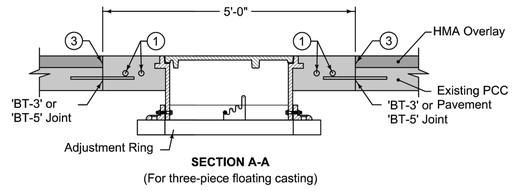
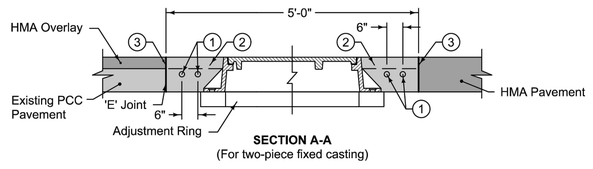


SECTION A-A
(For three-piece floating casting)



SECTION A-A
(For two-piece fixed casting)

Construct boxout with Class C concrete. Minimum 2 inches clear on reinforcement. Center casting within boxout area.

(1) 4 foot 8 inch (typ.) #4 bar. Place at mid-slab.

(2) If boxout is constructed prior to placement of HMA overlay or final lift of HMA pavement, boxout may be constructed low and then final lift or overlay placed.

(3) Apply tack coat.

(4) #4 hoops (variable length). Place at mid-slab.

SUDAS | Iowa Department of Transportation | REVISION New 04-19-11

FIGURE 7020.201 | STANDARD ROAD PLAN | PV-201 | SHEET 1 of 1

REVISIONS: New. Joint Standard with SUDAS.

Paul D. Wiegand, SUDAS DIRECTOR — Deanna Maifield, DESIGN METHODS ENGINEER

MANHOLE BOXOUTS IN HMA PAVEMENT AND HMA OVERLAYS

FIGURE 7020.201 SHEET 1 OF 1

DRAWING FILENAME
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PLOT STYLE TABLE: foxtrot\Scale.ctb | LAYER MNGR NAME | LAYOUT NAME: B1.1

DATE	BY	REVISION
	DESIGNED:	
	DRAWN:	
	CHECKED:	
LAST UPDATE: 3/30/22		
04/22	SPS	
04/22	ELT	

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

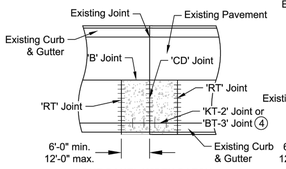
DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

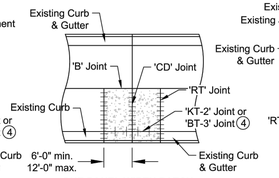
SHEET
B1.1

GUTTERLINE JOINTING

NO SCALE



ONE PANEL WIDTH PATCH WITH OPPOSING JOINT



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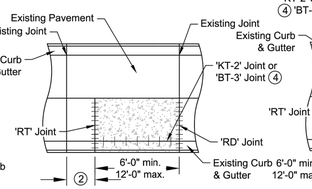
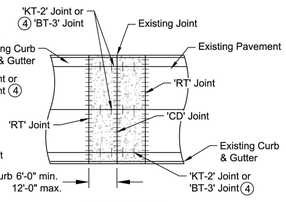
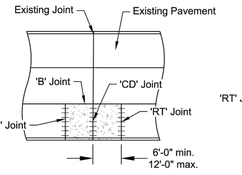


ONE PANEL WIDTH PATCH NO OPPOSING JOINT

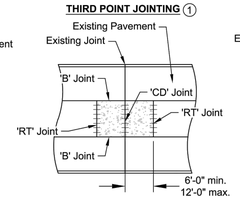


FULL ROADWAY WIDTH PATCH

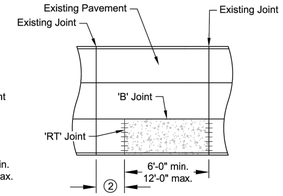
THIRD POINT JOINTING (1)



OUTSIDE PANEL PATCH WITH OPPOSING JOINT

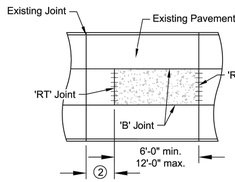


CENTER PANEL PATCH WITH OPPOSING JOINTS

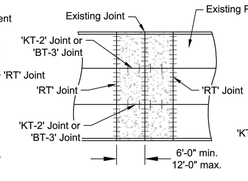


OUTSIDE PANEL PATCH NO OPPOSING JOINT

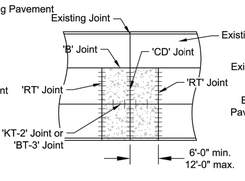
1. Patches on roadways with quarter point jointing will be similar to third point jointing details.
2. Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
3. If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
4. If curb is poured integral with the pavement, the joint will not require tie bars.



CENTER PANEL PATCH NO OPPOSING JOINT

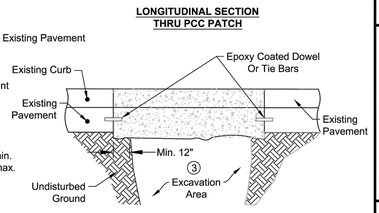


FULL ROADWAY WIDTH PATCH



ADJACENT PANELS PATCH

LONGITUDINAL SECTION THRU PCC PATCH



DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH: (641) 754-5734

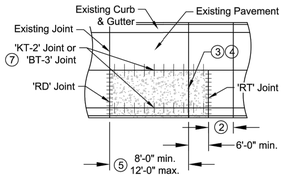
Drawn By: JCK
Code: NONE
Proj. No: 100
XR No: MS1
Date: 3/2021

MS-1 PAVEMENT RESTORATION JOINT LAYOUT
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

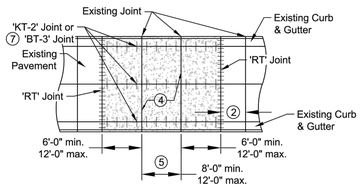
1 OF 4

GUTTERLINE JOINTING

NO SCALE

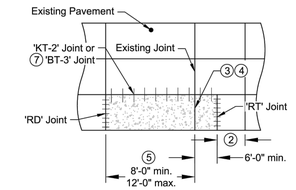


ONE PANEL WIDTH PATCH

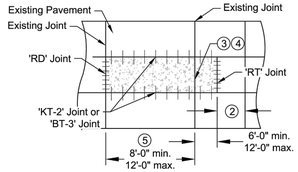


FULL ROADWAY WIDTH PATCH

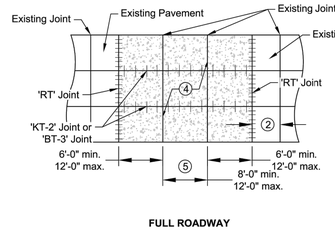
THIRD POINT JOINTING (1)



OUTSIDE PANEL PATCH



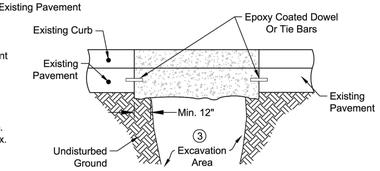
CENTER PANEL PATCH



FULL ROADWAY WIDTH PATCH

1. Patches on roadways with quarter point jointing will be similar to third point jointing details.
2. Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint and install a RD Joint.
3. Match existing joint type and locations.
4. 'CD' joint is required.
5. If existing joint spacing is greater than 12 feet, add a 'CT' joint at mid-panel.
6. If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
7. If curb is pour integral with the pavement panel, tie bars will not be required.

LONGITUDINAL SECTION THRU PCC PATCH



DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH: (641) 754-5734

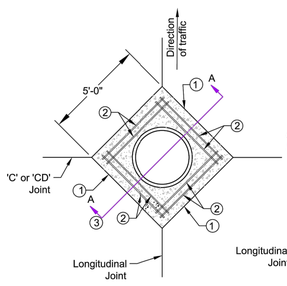
Drawn By: JCK
Code: NONE
Proj. No: 100
XR No: MS2
Date: 3/2021

MS-2 PAVEMENT RESTORATION JOINT LAYOUT
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

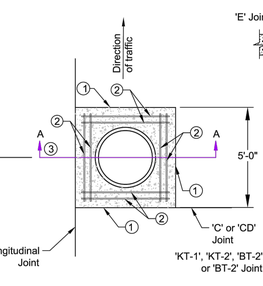
2 OF 4

GUTTERLINE JOINTING

NO SCALE

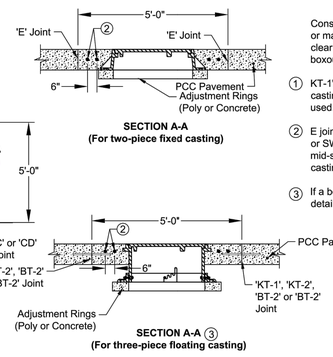


AT JOINT INTERSECTION



OFFSET AT JOINT INTERSECTION

THIRD POINT JOINTING (1)

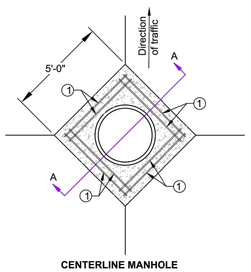


SECTION A-A (For two-piece fixed casting)

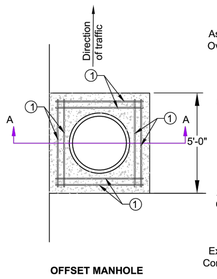
SECTION A-A (3) (For three-piece floating casting)

Construct boxout with 8" PCC, Class M or C concrete or match pavement class. Minimum 2-inches clear on reinforcement. Center casting within boxout area.

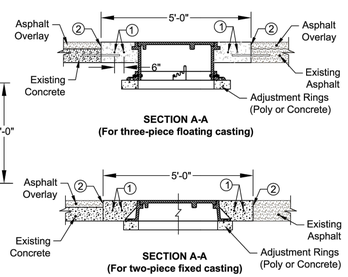
1. KT-1', KT-2', BT-1', or BT-2' joint if three-piece floating casting (SW 601 Type B and D or SW-602 Type F) is used.
2. E joint if two-piece fixed casting (SW 601 Type A and C or SW-602 Type E) is used. 4'-8" (typ.) #4 bar. Place at mid-slab. No boxout is required for three-piece floating castings (SW 601 Type B and D or SW-602 Type F).
3. If a boxout is used with a three-piece casting, construct as detailed in Section A-A for three-piece floating casting.



CENTERLINE MANHOLE



OFFSET MANHOLE



SECTION A-A (For three-piece floating casting)

SECTION A-A (For two-piece fixed casting)

Construct boxout with 8" PCC, Class M or C concrete. Minimum 2-inches clear on reinforcement. Center casting within boxout area.

1. 4'-8" (typ.) #4 bar. Place at mid-slab.
2. Apply tack coat.

DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
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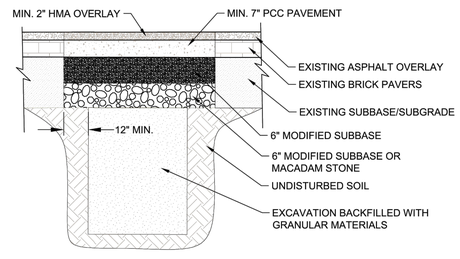
Proj. No: 100
XR No: MS3
Date: 3/2021

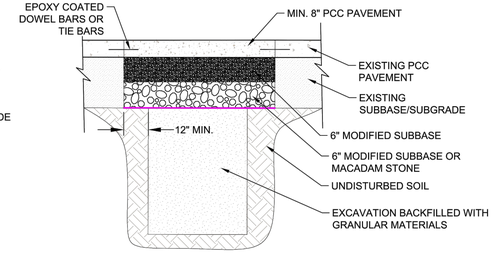
MS-3 MANHOLE BOXOUT DETAILS
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

3 OF 4

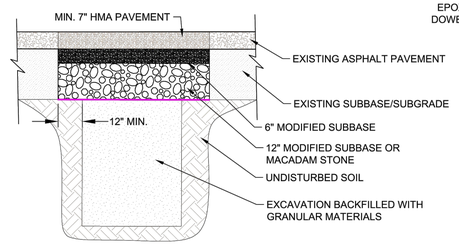
NO SCALE



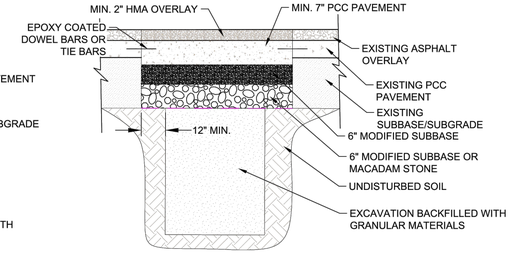
TYPICAL BRICK PAVER STREET REPAIR



TYPICAL CONCRETE STREET REPAIR



TYPICAL ASPHALT STREET REPAIR



TYPICAL ASPHALT OVERLAY ON CONCRETE STREET REPAIR

DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH: (641) 754-5734

Drawn By: JCK
Code: NONE
Proj. No: 100
XR No: MS4
Date: 3/2021

MS-4 PAVEMENT RESTORATION DETAILS
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

4 OF 4

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LAYER MNGR NAME:
LAYOUT NAME: B1.2

No.	Revision	By	Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of Hawaii.

Registration No.

REVISION

DATE	BY
	DESIGNED: SPS 04/22
	DRAWN: ELT 04/22
	CHECKED:
	LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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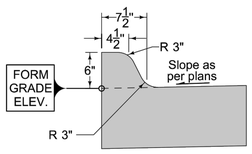
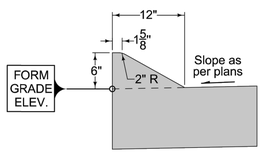
DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

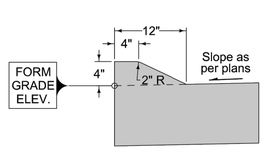
SHEET
B1.2



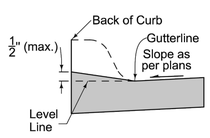
6" STANDARD CURB



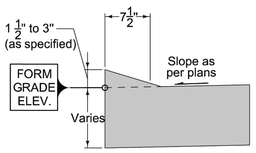
6" SLOPED CURB



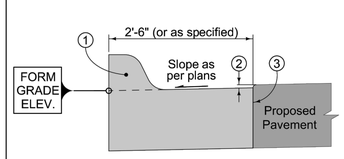
4" SLOPED CURB



DROP CURB AT SIDEWALK



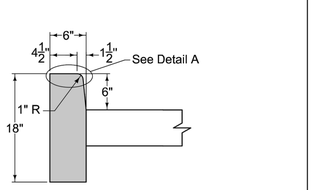
DRIVEWAY DROP CURB



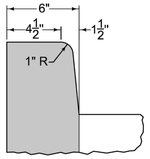
CURB AND GUTTER UNIT

For joint details, see PV-101.

1. 6" Standard Curb, 6" Sloped Curb, or 4" Sloped Curb as specified.
2. 1/8" if Proposed Pavement is HMA. No elevation difference if Proposed Pavement is PCC.
3. 'BT' , 'KT', or 'L' joint if Proposed Pavement is PCC. 'B' joint if Proposed Pavement is HMA.



BEAM CURB*
*For short replacement sections, match existing curb profile



DETAIL A

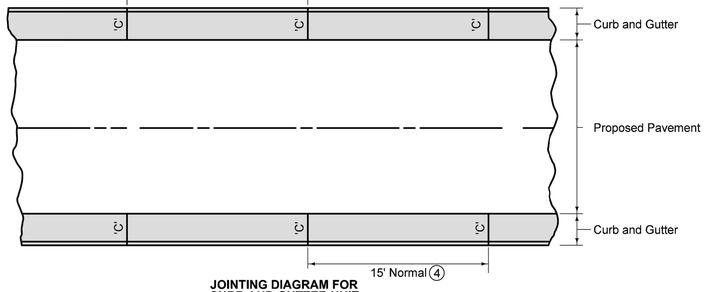
SUDAS	IOWADOT	REVISION 4 10-18-16
FIGURE 7010.102	STANDARD ROAD PLAN	PV-102 SHEET 1 of 2

REVISIONS: Added note, "Slope as per plans" on Drop Curb views on page 1. Updated DOT logo to new version.

Paul D. Wiegand — SUDAS DIRECTOR | Brian J. Smith — DESIGN METHODS ENGINEER

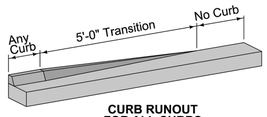
PCC CURB DETAILS

FIGURE 7010.102 SHEET 1 OF 2

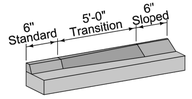


JOINTING DIAGRAM FOR CURB AND GUTTER UNIT

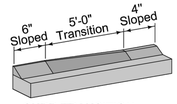
4. If proposed pavement is PCC, match joint spacing for proposed pavement. Place 'E' joints in curb and gutter section where expansion joints are to be placed in proposed pavement.



CURB RUNOUT FOR ALL CURBS



CURB TRANSITION FROM 6" STANDARD TO 6" SLOPED



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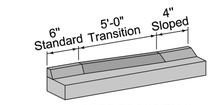

CURB TRANSITION FROM 6" STANDARD TO 4" SLOPED

SUDAS	IOWADOT	REVISION 4 10-18-16
FIGURE 7010.102	STANDARD ROAD PLAN	PV-102 SHEET 2 of 2

REVISIONS: Added note, "Slope as per plans" on Drop Curb views on page 1. Updated DOT logo to new version.

Paul D. Wiegand — SUDAS DIRECTOR | Brian J. Smith — DESIGN METHODS ENGINEER

PCC CURB DETAILS

FIGURE 7010.102 SHEET 2 OF 2

DATE	BY	REVISION	DATE
	DESIGNED: SPS		04/22
	DRAWN: ELT		04/22
	CHECKED:		

LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
B1.3

DRAWING FILENAME
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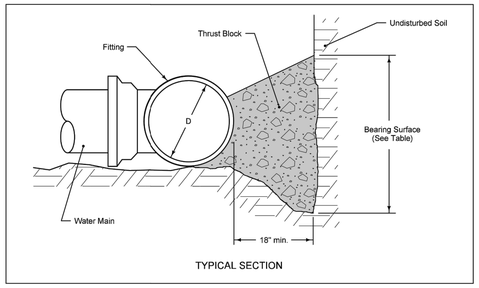
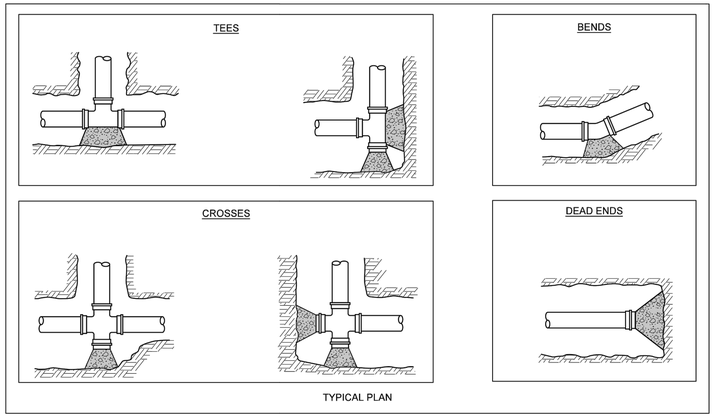


TYPICAL SECTION



TYPICAL PLAN

Extend thrust blocks to undisturbed soil. Excavation into trench wall may be necessary.

Form vertical surfaces of poured concrete thrust blocks except on bearing surface.

Encase all fittings in polyethylene wrap. Do not allow concrete to directly contact joints or fitting bolts.

Diameter of Pipe, D (inches)	MINIMUM BEARING SURFACE (sf)				
	Bends				Tees and Dead Ends
	11¼°	22½°	45°	90°	
4	1	1	2	4	3
6	1	2	4	8	6
8	2	4	7	14	10
10	3	6	11	21	15
12	4	8	16	29	21
14	5	11	21	39	28
16	7	14	27	50	36
18	9	17	34	63	45
20	11	21	42	78	55
24	15	31	60	111	78
30	24	47	92	171	120
36	34	67	132	244	173

Minimum surface area based on water pressure of 150 psi and allowable soil pressure of 1,000 psf.

FIGURE 5010.101 SHEET 1 OF 2

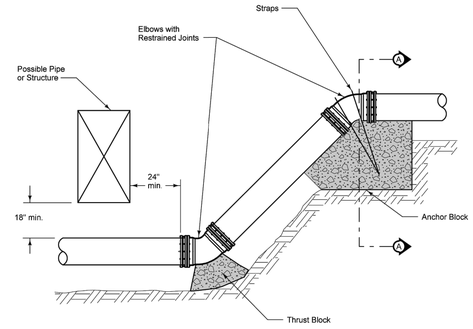
SUDAS	IOWADOT	REVISION 1 10-18-16
FIGURE 5010.101	STANDARD ROAD PLAN	WM-101 SHEET 1 of 2

REVISIONS: Replaced Iowa DOT and SUDAS logos with new logos.

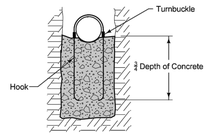
Paul D. Wiegand, SUDAS DIRECTOR — Brian Smith, DESIGN METHODS ENGINEER

THRUST BLOCKS

CHANGES IN PIPE DEPTH



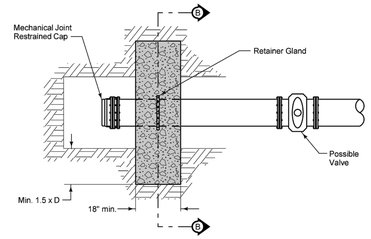
ELEVATION



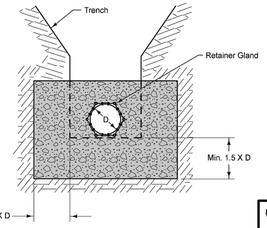
SECTION A-A

DEAD ENDS (ALTERNATE METHOD)

Use only when allowed by the Engineer, or when specified in the contract documents.



PLAN



SECTION B-B

FIGURE 5000.101 SHEET 2 OF 2

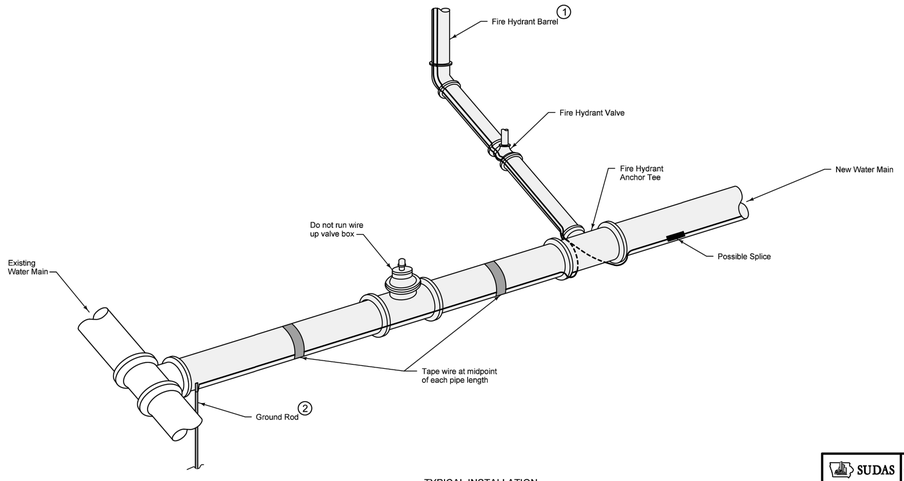
SUDAS	IOWADOT	REVISION 1 10-18-16
FIGURE 5010.101	STANDARD ROAD PLAN	WM-101 SHEET 2 of 2

REVISIONS: Replaced Iowa DOT and SUDAS logos with new logos.

Paul D. Wiegand, SUDAS DIRECTOR — Brian Smith, DESIGN METHODS ENGINEER

THRUST BLOCKS

1. Extend tracer wire up fire hydrant barrel to internal terminals of tracer wire station and back down. Refer to WM-201 for details of fire hydrant assembly.
2. Clamp tracer wire to ground rod at system termination points.



TYPICAL INSTALLATION

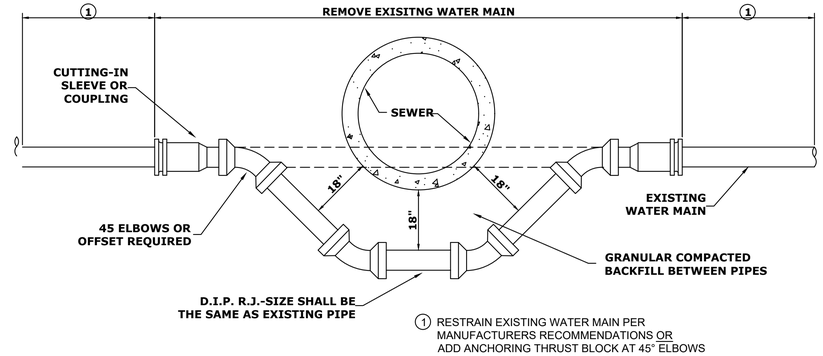
FIGURE 5000.102 SHEET 1 OF 1

SUDAS	IOWADOT	REVISION 1 10-18-16
FIGURE 5010.102	STANDARD ROAD PLAN	WM-102 SHEET 1 of 1

REVISIONS: Replaced Iowa DOT and SUDAS logos with new logos.

Paul D. Wiegand, SUDAS DIRECTOR — Brian Smith, DESIGN METHODS ENGINEER

TRACER SYSTEM



1. RESTRAIN EXISTING WATER MAIN PER MANUFACTURERS RECOMMENDATIONS OR ADD ANCHORING THRUST BLOCK AT 45° ELBOWS

1 **WATER MAIN LOWERING DETAIL**

NOT TO SCALE

DRAWING FILENAME
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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
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REVISION	BY	DATE
DESIGNED:	SPS	04/22
DRAWN:	ELT	04/22
CHECKED:		
LAST UPDATE: 3/30/22		

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

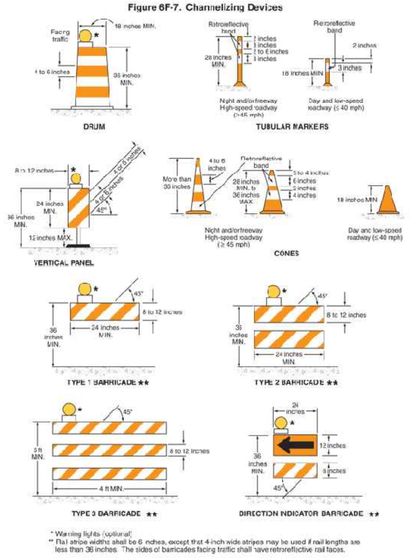
SHEET
B1.4

LEGEND

- TRAFFIC SIGN
- DRUM
- 42" CHANNELIZER
- ARROW BOARD
- DIRECTION OF TRAFFIC
- BARRICADE
- WATER LINE
- WATER VALVE
- UGP — BURIED POWER
- X — FENCE
- FO — FIBER OPTIC
- FM — FORCE MAIN
- G — GAS LINE
- GAS METER
- GAS VALVE
- HYDRANT
- LIGHT POST
- OT — OVERHEAD COMMUNICATION
- OHP — OVERHEAD POWER
- POWER POLE
- PROPERTY PIN
- PROPERTY/RIGHT-OF-WAY LINE
- SANITARY MANHOLE
- SAN — SANITARY SEWER
- T — BURIED COMMUNICATION
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL

2009 Edition Part 6 Figure 6F-7. Channelizing Devices

Figure 6F-7. Channelizing Devices

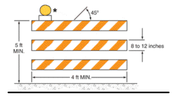


* Warning lights (optional).
** Flat stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

1 TRAFFIC CONTROL DEVICE DETAILS

① ROAD CLOSED ASSEMBLY

- 3 TYPE III BARRICADES ALL WITH FLASHERS
- IOWA DOT SECTION 2518 ROAD CLOSURE
- R11-2 SIGN MOUNTED ON CENTER TYPE III BARRICADE



TYPE III BARRICADE

② ROAD CLOSED TO THRU TRAFFIC ASSEMBLY

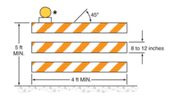
- 2 TYPE III BARRICADES WITH FLASHERS (STAGGERED)
- R11-4 SIGN MOUNTED ON TYPE III BARRICADE

R11-2
48" x 30"
BLACK ON WHITE

R11-4
60" x 30"
BLACK ON WHITE

③ ROAD CLOSED ASSEMBLY

- TYPE III BARRICADE WITH FLASHER
- R11-2 SIGN MOUNTED ON TYPE III BARRICADE



TYPE III BARRICADE

R11-2
48" x 30"
BLACK ON WHITE

2 STREET CLOSURE SIGNAGE DETAIL

NOT TO SCALE

TRAFFIC CONTROL PLAN

THE CONTRACTOR SHALL EMPLOY SOUND PRACTICES OF SAFETY & TRAFFIC CONTROL. THESE METHODS AND PRACTICES SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1	ACCESS TO PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
2	CONTRACTOR IS RESPONSIBLE TO PROTECT THE TRAVELING PUBLIC AND PEDESTRIANS FROM CONSTRUCTION EQUIPMENT, MATERIALS AND CONSTRUCTION ACTIVITIES. PROVIDE APPROPRIATE DEVICES (SIGNS, CHANNELIZERS, BARRICADES, SAFETY CLOSURES, HAZARD WARNINGS, ETC.) TO KEEP THE PUBLIC SAFE. PROVIDE SIGNAGE WHEN CLOSING SIDEWALKS.
3	TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SPECIFIC LAYOUTS SHOWN ON THESE PLANS. TRAFFIC CONTROL DEVICES, PROCEDURES AND LAYOUTS SHALL CONFORM TO CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
4	ALL TRAFFIC CONTROL DEVICES T BE FURNISHED BY THE CONTRACTOR
5	THE PROPOSED SIGNING MAY BE MODIFIED TO MEET FIELD CONDITIONS, PREVENT OBSTRUCTIONS AND ACCOMMODATE CONSTRUCTION SCHEDULE AS APPROVED BY THE ENGINEER
6	THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CITY A MINIMUM OF 5 DAYS PRIOR TO CHANGES IN THE TRAFFIC CONTROL PLANS.
7	SIGNS AFFIXED TO TYPE III BARRICADES SHOULD NOT COVER MORE THAN 50% OF THE TOP 2 RAILS.
8	ALL TYPE III BARRICADES SHALL HAVE HIGH INTENSITY FLASHING LIGHTS. THE BACK SIDE OF THE TYPE III BARRICADE SHALL BE REFLECTORIZED BY A MINIMUM OF SIX YELLOW REFLECTORS, ONE AT EACH END OF EACH RAIL
9	SIGNS SHALL HAVE RETRO-REFLECTIVE SHEETING MEETING IOWA DOT 4186 FOR ALL COLORS.
10	SIGNS, LATERAL OFFSETS AND ELEVATIONS SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF MUTCD
11	TEMPORARY SIGN POSTS SHALL BE 2-1/4" SQUARE, 14 GAUGE GALVANIZED SQUARE TELESPAR OR EQUIVALENT
12	SIGN POSTS SHALL BE ANCHORED INTO THE GROUND TO A MINIMUM DEPTH OF 3-FT.
13	SIGN WASHING SHALL BE CONSIDERED INCIDENTAL TO TRAFFIC CONTROL AND REQUIRED AS DIRECTED BY THE PROJECT ENGINEER
14	THE CONTRACTOR SHALL REMOVE ALL SIGNS AND POSTS ON THE PROJECT SITE (AS REQUIRED FOR CONSTRUCTION) AND SALVAGE TO THE CITY
15	AT THE TIME OF INITIAL SETUP OR AT THE TIME OF MAJOR STAGE CHANGES, 100% OF EACH TYPE OF DEVICE (SIGNS, CONES, TUBULAR MARKERS, DRUMS, BARRICADES, VERTICAL PANELS, CHANGEABLE MESSAGE SIGNS AND PAVEMENT MARKINGS) SHALL BE CLASSIFIED AS ACCEPTABLE BY THE REQUIREMENTS OF THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), "QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES - 1992".
16	THE BID ITEM "TRAFFIC CONTROL" SHALL INCLUDE THE COST OF ALL TRAFFIC CONTROL MEASURES REQUIRED OF THE CONTRACTOR. MINOR CHANGES TO THE TRAFFIC CONTROL PLAN SHALL BE CONSIDERED INCIDENTAL.
17	TEMPORARY FLOODLIGHTING, IF NECESSARY FOR NIGHTTIME WORK, SHALL BE INCIDENTAL.
18	ALL SIDE STREETS ADJACENT TO THE CONSTRUCTION ZONE SHALL HAVE TRAFFIC SIGNAGE FOR URBAN SITUATIONS AS PER THE TRAFFIC CONTROL DETAILS.
19	PERMANENT SIGNING CONVEYING A MESSAGE CONTRARY TO TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORK CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE ENGINEER.

DRAWING FILENAME
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LAYER MNGR NAME:
LAYOUT NAME: B1.5

DATE	BY	REVISION
	DESIGNED:	
04/22	SPS	
04/22	DRAWN: ELT	
	CHECKED:	

LAST UPDATE: 3/30/22

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414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

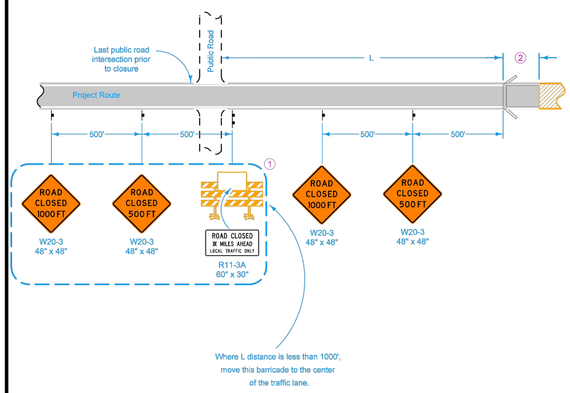
SHEET
B1.5

SIGN PLACEMENT ON
TYPE III BARRICADES

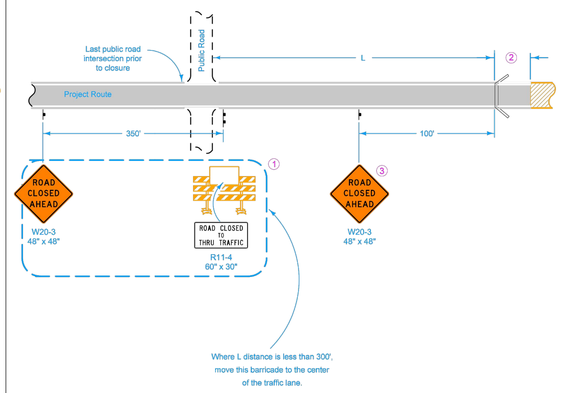
Typical Sign Placement

Sign Placement with
Supplemental Sign

SITUATION 1 (RURAL)
Project Route Closure



SITUATION 1 (URBAN)
Project Route Closure



LEGEND
- Traffic Sign
- Type III Barricade
- Work Area
- Road Closure

1. In situation 1, if the intersection is the point of detour these signs and barricade will become the responsibility of the contracting authority to fit detour signing.
2. When possible, a 100' buffer is desirable.
3. When L is less than 300 feet, omit the ROAD CLOSED AHEAD sign.

Possible Contract Items:

Traffic Control
Safety Closures

Possible Tabulation:

108-13A

IOWADOT
STANDARD ROAD PLAN
TC-252
SHEET 1 of 3

REVISION	
6	04-19-16

REVISIONS: Added circle note 3 to page 2 and changed circle note 3 to 4 on page 3. Modified the SITUATION 1 (URBAN) detail on page 2.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

ROUTES CLOSED TO TRAFFIC

IOWADOT
STANDARD ROAD PLAN
TC-252
SHEET 2 of 3

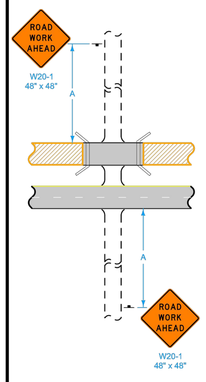
REVISION	
6	04-19-16

REVISIONS: Added circle note 3 to page 2 and changed circle note 3 to 4 on page 3. Modified the SITUATION 1 (URBAN) detail on page 2.

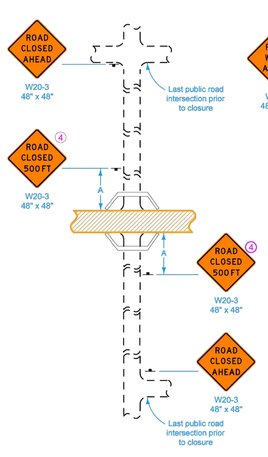
Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

ROUTES CLOSED TO TRAFFIC

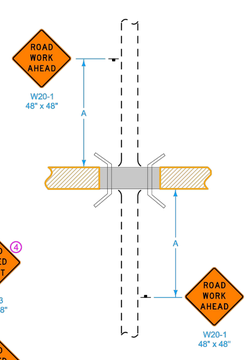
SITUATION 2
Public cross-traffic maintained.
No access to project.



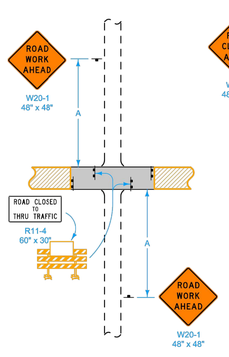
SITUATION 3
No access to project
(Applicable to T-intersections)



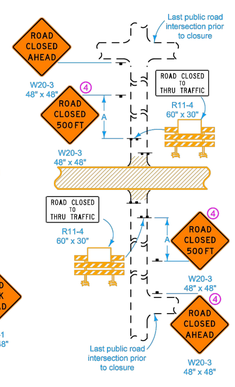
SITUATION 4
Public cross-traffic maintained.
No access to project.



SITUATION 5
Public cross-traffic maintained.
Contractor and resident access.



SITUATION 6
No public access. Contractor and resident access only. (Applicable to T-intersections)



During suspension of work, (such as over winter):

- Use Situation 2 on two-lane to four-lane projects.
- Situation 5 is preferred where cross-traffic is maintained.

4. When the distance between the last public road intersection and the ROAD CLOSED or ROAD CLOSED TO THRU TRAFFIC barricade is less than 1,000 feet, omit the ROAD CLOSED 500 FT sign.

LEGEND
- Traffic Sign
- Type III Barricade
- Work Area
- Road Closure

Location	A
Urban	200'
Rural	500'

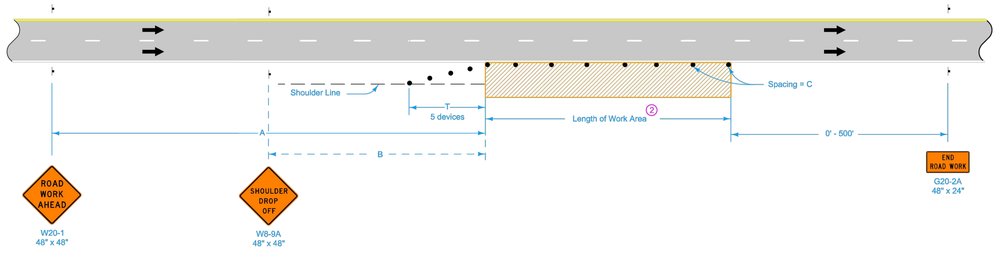
IOWADOT
STANDARD ROAD PLAN
TC-252
SHEET 3 of 3

REVISION	
6	04-19-16

REVISIONS: Added circle note 3 to page 2 and changed circle note 3 to 4 on page 3. Modified the SITUATION 1 (URBAN) detail on page 2.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

ROUTES CLOSED TO TRAFFIC



LEGEND
- Traffic Sign
- 42" Channelizer
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	B	C (2)	T
40 or less	500'	250'	40'	100'
45 - 50	700'	350'	80' (1)	200'
55 - 60	1500'	500'	100' (1)	200'
65 - 70	1500'	500'	100' (1)	230'

When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.L2 of the Standard Specifications.

For work lasting less than one hour, refer to TC-1.

1. When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.
2. For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.

Possible Contract Item:
Traffic Control

IOWADOT
STANDARD ROAD PLAN
TC-402
SHEET 1 of 1

REVISION	
8	04-21-15

REVISIONS: Modified general notes, changed title and replaced the DOT logo in the title block with the new version.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

WORK WITHIN 15 FT
OF TRAVELED WAY

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LAYOUT NAME: B1.6

REVISION	BY	DATE
DESIGNED:	SPS	04/22
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414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
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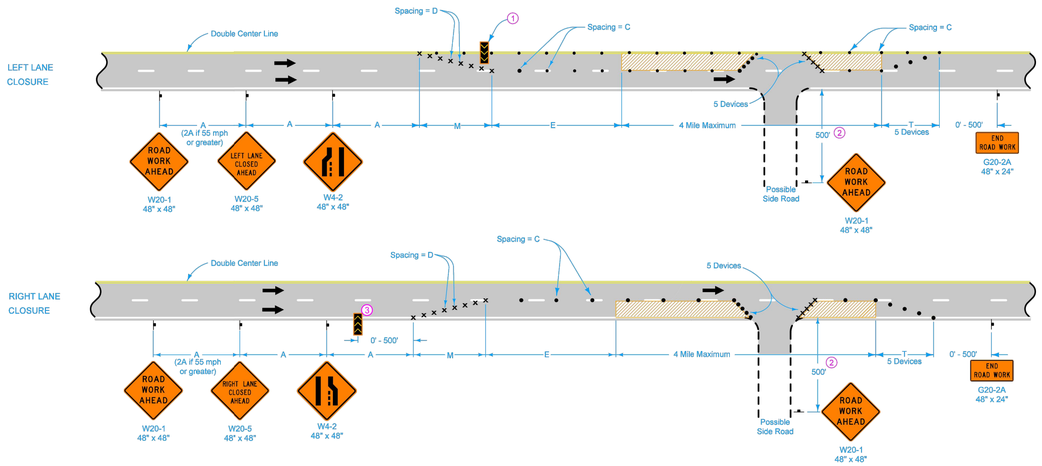

LEGEND

- Traffic Sign
- Drum
- 42" Channelizer
- Arrow Board
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	C	D	E	M	T
35 or less	250'	40'	35'	0'-200'	245'	50'
40	500'	80'	40'	0'-300'	320'	50'
45	700'	80'	45'	0'-400'	630'	100'
50	700'	80'	45'	400'	630'	100'
55 - 60	1000'	100'	55'	600'	770'	100'

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

1. Place arrow board within the closed lane behind the drums and as close to the beginning of the taper as practical.
2. Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.
3. When there is no shoulder, place arrow board within the closed lane behind the drums and as close to the beginning of the taper as practical.

Possible Contract Item:

Traffic Control

IOWADOT

STANDARD ROAD PLAN

REVISION 7 04-19-16

TC-419

SHEET 1 of 1

REVISIONS: Added circle note 3.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

LANE CLOSURE ON UNDIVIDED HIGHWAY

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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
FoxGrayScale.ctb		B1.7

DATE	REVISION	BY	DATE
	DESIGNED:	SPS	04/22
	DRAWN:	ELT	04/22
	CHECKED:		

LAST UPDATE: 3/30/22

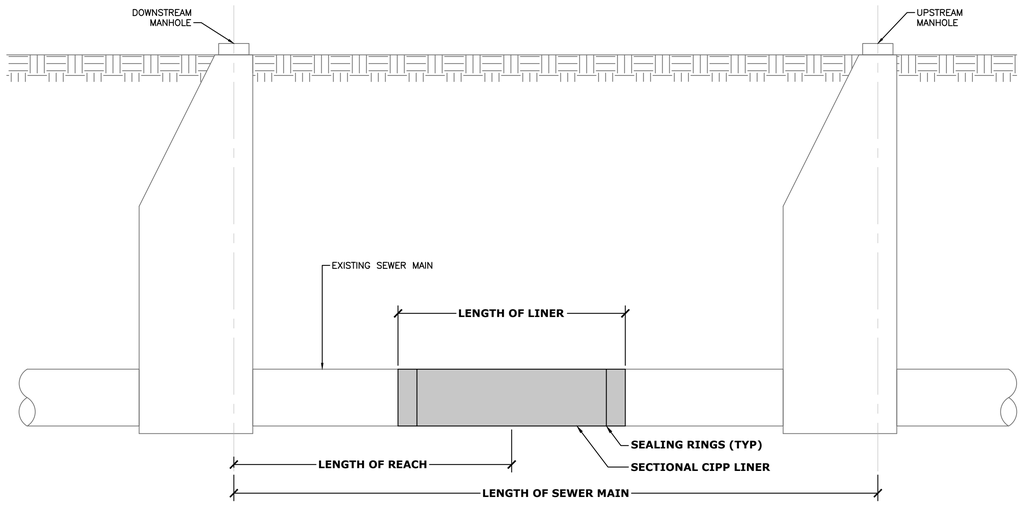
FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

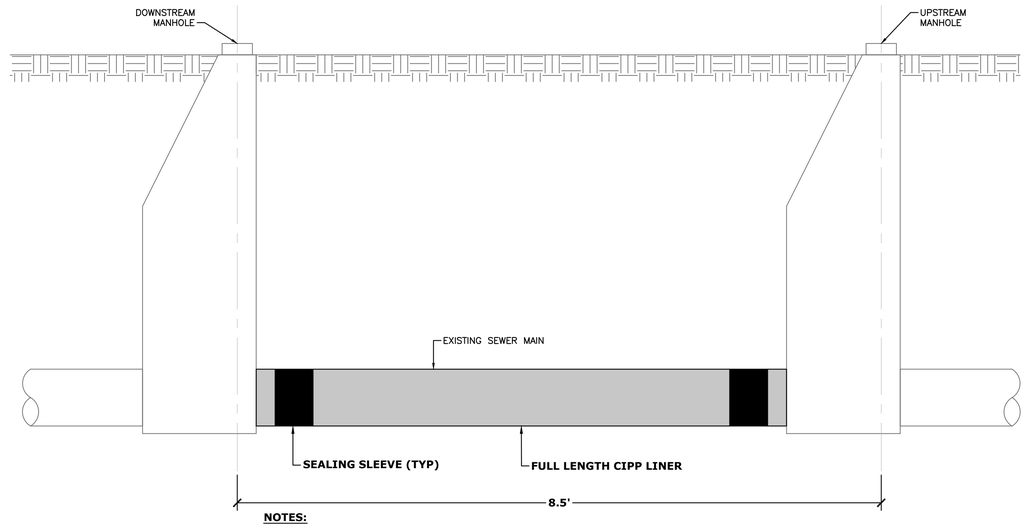
SHEET
B1.7



NOTES:
1. LINER SHALL CONSIST OF ONE-PIECE HOMOGENEOUS SEWER MAIN CIPP SECTIONAL LINER.
2. LINER SHALL PROVIDE WATERTIGHT SEALING GASKETS AT BOTH ENDS OF SEWER MAIN SECTIONAL CIPP LINER.
3. LINER SHALL PROVIDE A SMOOTH TAPERED TRANSITION TO THE HOST PIPE TO MINIMIZE DEBRIS ACCUMULATION.
4. LENGTH OF REACH IDENTIFIES THE LOCATION OF THE DEFECT BEING REHABILITATED AND IS GIVEN FROM THE DOWNSTREAM MANHOLE UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL FIELD VERIFY THE DEFECT LOCATION PRIOR TO INSTALLATION OF THE SECTIONAL LINER. LINER SHALL BE CENTERED ON THE DEFECT UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL FIELD VERIFY THE DIAMETER AND MATERIAL OF THE SEWER MAIN PRIOR TO ORDERING CIPP LINER.

1 / B1.7 **DETAIL - SEWER MAIN SECTIONAL CIPP LINER**

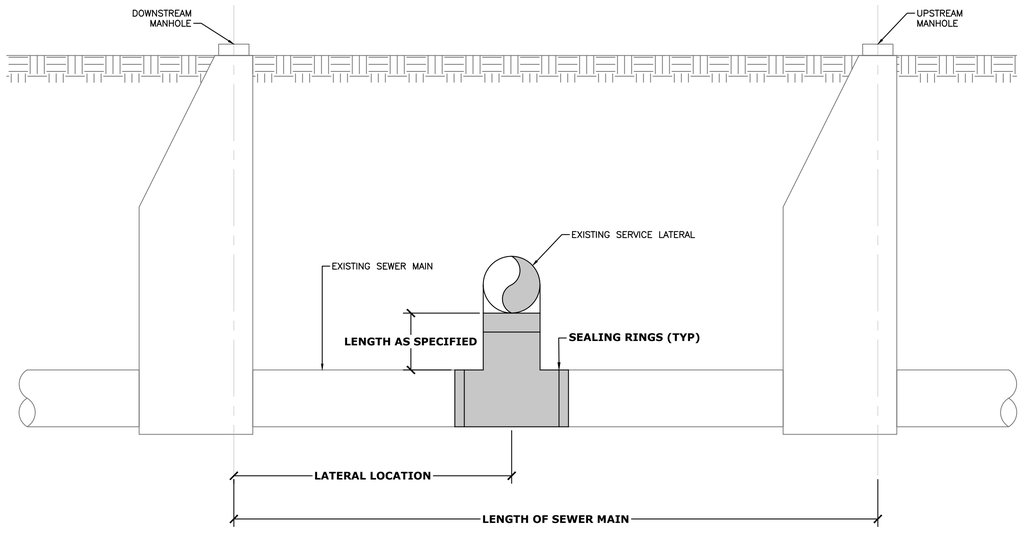
NOT TO SCALE



NOTES:
1. LINER SHALL CONSIST OF ONE-PIECE HOMOGENEOUS SEWER MAIN CIPP LINER.
2. LINER SHALL PROVIDE WATERTIGHT SEALING GASKETS AT BOTH ENDS OF SEWER MAIN CIPP LINER PRIOR TO LINER ENTRY ENTRY INTO UPSTREAM OR DOWNSTREAM MANHOLE.
3. LINER SHALL PROVIDE A SMOOTH TAPERED TRANSITION TO THE HOST PIPE TO MINIMIZE DEBRIS ACCUMULATION.
4. CONTRACTOR SHALL FIELD VERIFY THE DIAMETER AND MATERIAL OF THE SEWER MAIN PRIOR TO ORDERING CIPP LINER.

2 / B1.7 **DETAIL - SEWER MAIN FULL LENGTH CIPP LINER**

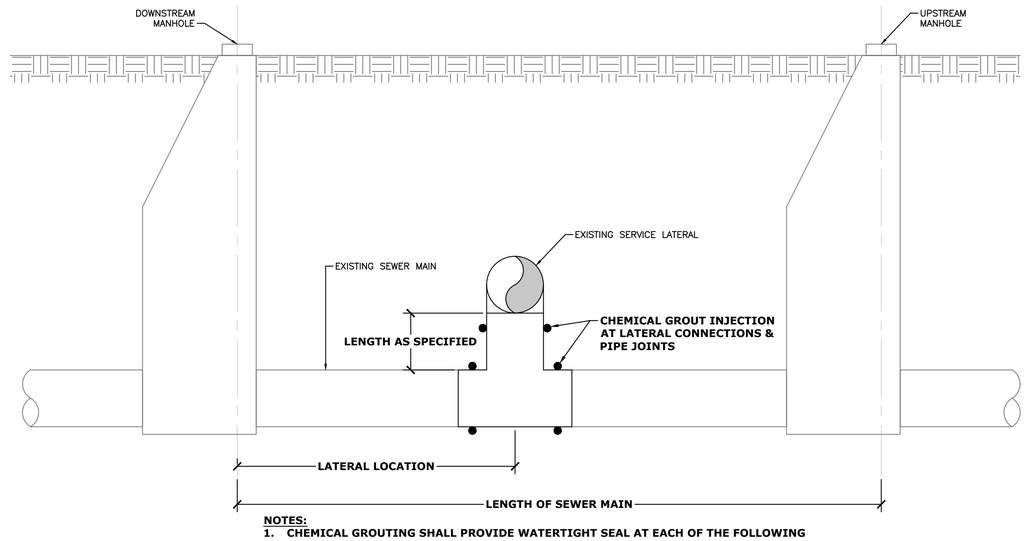
NOT TO SCALE



NOTES:
1. LINER SHALL CONSIST OF ONE-PIECE HOMOGENEOUS SEWER MAIN AND LATERAL CIPP CONNECTION LINER.
2. LINER SHALL PROVIDE WATERTIGHT SEALING GASKETS AT BOTH ENDS OF SEWER MAIN CIPP LINER AND AT END OF LATERAL CIPP LINER.
3. LINER SHALL PROVIDE A SMOOTH TAPERED TRANSITION TO THE HOST PIPE TO MINIMIZE DEBRIS ACCUMULATION.
4. LATERAL LOCATION IS GIVEN FROM THE DOWNSTREAM MANHOLE UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL FIELD VERIFY THE DIAMETER, MATERIAL,AND ORIENTATION OF THE SEWER MAIN AND SERVICE LATERAL PRIOR TO ORDERING LATERAL CONNECTION CIPP LINER.

3 / B1.7 **DETAIL - LATERAL CONNECTION CIPP LINER**

NOT TO SCALE



NOTES:
1. CHEMICAL GROUTING SHALL PROVIDE WATERTIGHT SEAL AT EACH OF THE FOLLOWING LOCATIONS: LATERAL PIPE JOINTS FOR THE LENGTH SPECIFIED, LATERAL CONNECTION JOINT, AND CIPP/SEWER MAIN ANNULAR SPACE.
2. CHEMICAL GROUT SHALL BE INJECTED INTO THE JOINT AND SURROUNDING SOIL AS NEEDED TO PROVIDE LONG LASTING AND STABLE SEAL. SEE SPECIFICATIONS FOR DETAILS.
3. INTERIOR PIPE SURFACE AT GROUTING LOCATIONS SHALL PROVIDE SMOOTH TAPERED TRANSITIONS TO THE HOST PIPE TO MINIMIZE DEBRIS ACCUMULATION. ADDITIONALLY, GROUTED SURFACE SHALL NOT CONTAIN LOSE HANGERS AND/OR PROTRUSIONS.
4. LATERAL LOCATION IS GIVEN FROM THE DOWNSTREAM MANHOLE UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL FIELD VERIFY THE DIAMETER, MATERIAL, AND ORIENTATION OF THE SEWER MAIN AND SERVICE LATERAL PRIOR TO ORDERING GROUT MATERIAL.

4 / B1.7 **DETAIL - LATERAL CONNECTION & JOINT GROUTING**

NOT TO SCALE

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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
FoxGray5Scale.ctb		B1.9

DATE	BY	REVISION	DATE

DESIGNED: SPS 04/22
DRAWN: ELT 04/22
CHECKED:
LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

DETAILS
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
B1.8

CIVIL LEGEND

LINEWORK

EXISTING	PROPOSED	
		BUILDING
		CONCRETE PAVING
		ASPHALT PAVING
		SIDEWALK
		PROPERTY LINE
		EASEMENT
		BUILDING SETBACK LINE
x x x	x x x	FENCE –BARBED WIRE
		FENCE –CHAIN LINK
		FENCE –VINYL
		FENCE –WOOD
		FENCE –SILT
W	W	WATER MAIN
		STORM SEWER / CULVERT
		STORM SEWER SUBDRAIN
SAN	SAN	SANITARY SEWER
FM	FM	FORCE MAIN
OHP	OHE	ELECTRIC –OVERHEAD
UGP	UGE	ELECTRIC –UNDERGROUND
OT		TELEPHONE –OVERHEAD
T		TELEPHONE –UNDERGROUND
FO		FIBER OPTIC
G	G	NATURAL GAS
		TREE LINE
		CROP LINE
		RAIL ROAD TRACK
881 880	880 881	GROUND SURFACE CONTOURS
	LOC	LIMITS OF CONSTRUCTION
		TRAFFIC BARRICADES

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED	
		BOLLARD			STORM SEWER INTAKE, SW–501/ 502
		BUSH			
T		CABLE TV PEDESTAL			STORM SEWER INTAKE, SW–503/ 504
		CONTROL/ TRAVERSE POINT			
S	S	CURB STOP			STORM SEWER INTAKE, SW–505
E		ELECTRICAL PEDESTAL			
		ELECTRICAL MANHOLE			STORM SEWER INTAKE, SW–506
		ELECTRICAL TRANSFORMER			
FO		FIBER OPTIC PEDESTAL			STORM SEWER INTAKE, SW–507/ 508
		GAS METER			
GV		GAS VALVE			STORM SEWER INTAKE, SW–509/ 510
		FIRE HYDRANT			STORM SEWER INTAKE, SW–511
J/B		JUNCTION BOX			STORM SEWER INTAKE, SW–512/ BEEHIVE
		LIGHT POLE			STORM SEWER INTAKE, SW–513
		MAIL BOX			
MH		MANHOLE (UNKNOWN)			STORM SEWER, FLARED END SECTION
		PROPERTY CORNER –FOUND			STORM SEWER MANHOLE
		POWER POLE			STORM SEWER SUBDRAIN CLEANOUT
R		RIGHT OF WAY RAIL			
		SANITARY CLEANOUT	T		TELEPHONE MANHOLE
S	S	SANITARY MANHOLE	T		TELEPHONE PEDESTAL
		SECTION CORNER –FOUND			TRAFFIC POLE
		SIGN	W		WATER MANHOLE
		STUMP	W		WATER METER
		TREE –DECIDUOUS	WV		WATER VALVE
					WITNESS POST
		TREE –EVERGREEN			YARD HYDRANT

ABBREVIATIONS

FG –	FORM GRADE (GUTTER)	FL –	FLOWLINE	BOP –	BEGINNING OF PROJECT
TOC –	TOP OF CURB	INV –	INVERT	EOP –	END OF PROJECT
TOW –	TOP OF WALK	PL –	PROPERTY LINE	PC –	POINT OF CURVATURE
FFE –	FINISH FLOOR ELEVATION	ROW –	RIGHT OF WAY	PT –	POINT OF TANGENCY
TOB –	TOP OF BANK	PUE –	PUBLIC UTILITY EASEMENT	PI –	POINT OF INTERSECTION
TOE –	TOE OF SLOPE	CL –	CENTER LINE		

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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
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GENERAL CONSTRUCTION NOTES

1. Confirm location and depth of all existing utilities prior to construction to eliminate conflicts. Locations of underground utilities are provided by utility companies. Owner and Engineer do not guarantee correctness of alignments shown. Call 1-800-292-8989 for utility locations 48 hours prior to digging. It shall be the duty of the Contractor to ascertain whether any additional facilities other than those shown on the plans may be present. The Contractor shall immediately notify the Engineer of any potential conflicts. Utilities damaged or broken by the Contractor's operations shall be repaired at no additional cost to the Owner.
2. Utility Warning: The Utilities shown have been located from field survey information and/or records obtained. The Engineer makes no guarantee that the utilities shown comprise all such utilities in the area, either in service or abandoned. The Engineer further does not warrant that the utilities shown are in the exact location indicated. Verify location of all utilities before construction.
3. Existing utility facilities such as utility poles underground conduit, guy wires, underground carrier pipe, and service lines shall be relocated, removed or adjusted by the respective utility companies. All utility work does not appear on the plans. Coordination with utility companies for the location and access for relocation of their lines shall be the responsibility of the Contractor.
4. Any and all discrepancies shall be reported to the Engineer immediately. All quantities are for Contractor convenience. Where conflicts occur, drawings shall prevail.
5. All Bench Mark elevations are to NAVD 88 datum and are to be provided by FOX Strand.
6. Removal of existing features shall be considered incidental to other items of work on the project if not outlined specifically as a bid item. Contractor shall legally and properly dispose of all materials removed as part of this project.
7. The contractor shall take care not to remove or damage public or private property not marked for removal on the plan. Items not scheduled for removal shall be replaced at no cost to the Owner if removed or damaged.
8. The cost incurred when a section of removal is skipped or where paving is done in sections in order to maintain access to adjacent properties shall be incidental to the project. Contractor shall maintain access to residences at all times, unless noted otherwise on the plans.
9. The contractor is cautioned not to obstruct or remove unnecessary pavement or to disturb the existing traffic pattern more than necessary for the proper execution of work.
10. The means of the work and the safety of the Contractor's employees are solely the responsibility of the Contractor. The Contractor has a contractual obligation to comply with all applicable laws and regulations including those of OSHA. At no time will either the Owner or the Owner's representative take responsibility for either the means of the work or the safety of the contractor's employees.
11. The contractor shall be responsible for protection of existing valves, fire hydrants, manholes, trees, poles, guys, and existing facilities.
12. Contractor will not be compensated for any quantity over-runs unless prior approval is obtained from the engineer.
13. Any work required to complete the scope of the project as specified or shown on the plans, but not set forth as a specific bid item shall be considered incidental to the project.
14. Construction fence is required around all unattended open excavations. Fence shall be constructed and maintained in an upright position at all times. Contractor shall use extreme caution while installing fence not to damage underground utilities. Temporary fencing is incidental to the work and is not a paid bid item.
15. All construction and tree protection fence shall be installed by the contractor and approved by owner prior to start of construction activities.
16. Care shall be taken when working around trees to prevent damage. The contractor shall minimize the operation of heavy equipment under the drip line of the trees not designated for removal.
17. All landscaping including trees, shrubs, bushes, and grass or turf not called out to be removed on the drawings shall be replaced if damaged during construction. Where trees, bushes, and shrubs are not protected, or are otherwise destroyed or damaged by the contractor, the trees, bushes, and shrubs shall be replaced with new plants of the same variety and size as the plant damaged or destroyed. Where grass or turf is destroyed or damaged during construction, the surface shall be restored to the condition that existed prior to construction.
18. Contractor shall be responsible for a licensed surveyor resetting any monuments, property corners, et. disturbed by construction. The Contractor is responsible for preservation and/or replacement of property pins damaged or removed by construction.
19. All disturbed areas shall be restored in accordance with the specifications.
20. Construction activities are to be limited to the existing right-of-way, easements, and work limits as shown on plans. If additional areas are needed for staging, storage, etc. it is the contractors' responsibility to obtain written permission from the property owner(s). Copies of the agreements shall be submitted to the owner's representative prior to use of the property.
21. All roadways and drives shall be kept open at all times unless noted otherwise in the plans. The contractor must perform the work in a manner that will maintain uninterrupted vehicular and pedestrian traffic.
22. Where a section of pavement, curb, and gutter or sidewalk is cut or otherwise damaged by contractor, the entire section shall be removed and replaced. Pavement, curbs, gutters, and sidewalks shall be removed to the nearest joint (A minimum of two feet beyond the edge of the trench cut). Contractor and owner's representative are to document (or Photograph) all cracked PCC pavement or damaged ACC pavement prior to construction. If new cracks in PCC pavement develop or ACC pavement is damaged due to construction traffic (extends beyond construction limits). Contractor shall replace damaged area at no additional cost to the owner.
23. Site cleanup shall be performed on a daily basis. Public roadways shall be kept clean at all times.

GENERAL UTILITY NOTES

Coordinate all utility connections. Wherever possible, sewer mains shall be laid at least 10 feet, horizontally, from any existing or new waterline main. Should local conditions prevent a lateral separation of 10 feet, the sewer line may be laid as close as 6 feet provided that the line is in a separate trench and the top of the sewer line is installed at least 18 inches below the bottom of the waterline.

Water line and building sewer laterals shall be separated by undisturbed or compacted earth. Water service and building sewer shall not be placed in the same trench unless the bottom of the water service at all points is a min. of 12 inches above the top of the highest point of the sewer; and the water service line is placed on a solid shelf excavated at one side of the common trench.

Underground utilities shall be installed in trenches with bedding as per SUDAS specifications, and as indicated on the plans and details.

All utility work shall be visually observed by the City prior to backfilling trenches, with all deficiencies corrected by the Contractor. The Contractor shall be responsible for notification of appropriate officials prior to commencement of work.

Final acceptance shall not be made until all work shown on approved utility plans is completed included grading, and all required adjustments and shall be subject to approval by the City.

UTILITY NOTES

1. It shall be the contractor's responsibility to contact each utility's operating authority and schedule joint meet locates. The contractor shall verify with each utility's operating authority that locates have been performed. Iowa one call system: 1-800-292-8989. The contractor shall protect all existing utilities. The contractor shall work to explore and verify the location or elevation of all utilities at least 100 feet in advance of the excavation work. In the event that a utility is discovered that was not shown on the drawings or a substantial deviation in location or elevation of a known utility exists, the contractor shall report it to the owner's representative as soon as discovered. It is the contractor's responsibility to repair all damaged utilities that have been located properly.
2. Notify utility companies whose facilities are shown on the plans or known to be within construction limits of the schedule prior to each stage of construction.
3. The contractor shall be responsible for the coordination of existing utilities as required for the improvements and shall coordinate temporary disruption of service with the City of Marshalltown and affected utility company.
4. Shoring is incidental to utility installation. Shoring for utility installation may not be shown on the plans. It is the contractor's responsibility to ascertain if shoring is needed in addition to what is shown on the drawings based on the owner's requirements for vegetation, structure, and paving protection. It is the contractor's responsibility to plan all shoring, submit design of shoring prepared by and sealed by a licensed engineer to the owner and FOX Engineering for review prior to installation. No additional compensation will be provided from the owner for shoring or shoring design.
5. All pipes must be temporarily capped overnight with water tight fittings.
6. Coordinate all utility outages with owner of utility. Phase work to meet utility outage and project schedule requirements. Provide a 3 day notice to owner and engineer of any utility outage.
7. The contractor is responsible to furnish and install all utilities unless specifically indicated to be installed by others.
8. Contractor shall use extreme caution when working within the vicinity of the high pressure gas mains. A natural gas representative shall be contacted prior to excavating within 100-feet of the utilities. Heavy wheeled or track driven equipment shall not be allowed to operate over the gas pipelines unless otherwise approved by the natural gas utility.
9. Contractor shall locate proposed water main in the field and adjust alignment as approved by the engineer to avoid existing utilities and structures.

TESTING INFORMATION

1. Soils compaction testing, pavement testing, and trench backfill testing will be the responsibility of the Owner. Contractor shall coordinate all testing with the Owner's testing consultant.

SITE RESTORATION & GRADING NOTES

1. All disturbed areas shall be final graded in preparation for seeding.
2. Seed all disturbed areas. See restoration plans for seeding limits. Seed all disturbed areas prior to May 31. If additional areas are disturbed beyond May 31 the remainder of the permanent seeding will be allowed to be planted between August 10 and September 30. Contractor shall install temporary type 4 seed mix on disturbed areas between May 31 and August 10. Contractor must maintain SWPPP and erosion control until final restoration is complete.
3. Site to be graded to match existing unless otherwise stated in the plans. Grading shall be done in a manner which maintains positive site drainage at all times. Fulfillment of the grading requirements will be at the owner's discretion.
4. Adjust all new and existing valves, hydrants, castings, pull boxes, etc to match the finished elevations indicated on the plans. All rim elevations within paved surfaces shall be adjusted to match finished paving.

WORK TO BE COMPLETED PRIOR TO CONSTRUCTION:

Joint utility locate meeting. Contractor shall set up a One-Call meeting.

Preconstruction meeting with the Contractor, the Engineer, City, utilities and other parties that may have interest in the construction. Contractor shall complete exploratory digging and/or potholing at all potential utility conflict locations prior to beginning construction.

COORDINATION REQUIREMENTS

Any conflicts between Contractors, subcontractors, City, utilities or others may be reconciled by the Engineer/ Owner.

WORK BY PUBLIC UTILITIES

Work by public utilities shall be coordinated by the Contractor. This shall include, but not be limited to, the relocation of overhead power lines, telephone lines, fiber optic lines, cable, etc.

LAND FOR CONSTRUCTION PURPOSES

Contractor will be permitted to use available land belonging to or leased by the Owner, on or near the site of the Work, for construction purposes and for the storage of materials and equipment. The location and extent of the areas available to the Contractor shall be as indicated on the Drawings. Any additional right-of-way desired by the Contractor shall be acquired at their expense, and the Contractor shall hold harmless the Owner and Engineer from claims for damages made by the owners of such additional right-of-way. Disturbed areas shall be restored upon final project completion. Refer to plan sheets for restoration plan.

SITE ACCESS

All construction access shall be from available public access areas as shown on the plans. No construction traffic shall be allowed through residential areas unless otherwise indicated on the plans. Contractor shall maintain access for emergency vehicles to the greatest extent practical.

NOTICES

Contractor shall notify owners of adjacent properties and utilities when prosecution of the Work may affect them. When it is necessary to temporarily deny access by owners or tenants to their property, or when any utility service connection must be interrupted, the Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices whether given orally or in writing shall include appropriate information concerning the interruption and instruction on how to limit their inconvenience.

LINES AND GRADES

All Work shall be done to the lines, grades, and elevations indicated on the Drawings. Survey and staking shall be completed the the owner's representative. The Contractor shall verify all match points during the phasing of the work and maintain drainage paths during the work to prevent ponding of water.

CONNECTIONS TO EXISTING FACILITIES

Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drainlines, and utilities such as water, sanitary sewer, gas, telecommunications, storm sewer and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.

Connections to existing facilities, which are in service, shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously if necessary to complete connections in the minimum time possible. Operations of valves, hydrants, or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to work, which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions, which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the work in a proper and satisfactory manner.

CLEAN UP

Contractor shall keep the premises occupied by the Contractor free from accumulations of waste materials and rubbish at all times. Contractor shall provide separate recycling and trash receptacles about the work site, promptly empty containers when filled, and properly dispose of waste materials at his expense. Waste shall not be buried or burned on the site or disposed of in trenches, storm drains, sewer, streams, or waterways.

Construction materials such as forms and scaffolding shall be neatly stacked by Contractor when not in use. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.

DETERMINATION OF QUANTITIES

See bid item descriptions. The Contractor may request a digital copy of the plans by calling Steve Soupir at FOX Engineering at 515-233-0000. The Engineer does not assume any liability for providing the digital drawing to the Contractor.

SITE EROSION NOTES

Seed, fertilize, and mulch all disturbed areas. Temporary seeding mixture for areas that will not be disturbed for 14 days or greater shall be seeded as per SUDAS.

Outside the normal fall seeding window, temporary erosion control measures shall be placed and maintained until seeding can begin.

UTILITY CONTACTS:

PUBLIC WORKS DEPARTMENT
Heather Thomas
Public Works Director
36 N Center Street
Marshalltown, IA 50158

Public Works Office
641-754-5734

Sewer Maintence
Troy McGahuey
641-754-5749

Street Superintendent
Rick Legg
641-754-5746

Utilities Division
Dave Daters
641-754-5734

WATER POLLUTION CONTROL PLANT
Bob Ranson
Superintendent
1001 Woodland ST.
Marshalltown, IA 50158
641-754-5709

TELEPHONE AND FIBEROPTIC
Century Link
James Reason
2103 East University Ave.
Des Moines, IA 50317
515-263-7320

Windstream
Joel Schroeder
1450 North Center Point Road
Hiawatha, IA 52233
1-800-289-1901
1-319-791-1514
Joel.Schroeder@paetac.com

CABLE
Mediacom Communications Corporation
Curt Hodges
1201 Industrial Boulevard
Marshalltown, IA 50158
515-669-3647

ELECTRICAL AND GAS
Alliant Energy
Mathew Deam
1911 Anson St.
Marshalltown,IA 50158-3668
641-754-5805

WATER
Marshalltown Waterworks
Steve Sincox
General Manager
205 E. State Street
Marshalltown, IA 50158
641-753-7913

UNION PACIFIC RAILROAD
Tchapo B. Tchaya
Manager of Track Maintenance
508 East Nevada Street
Marshalltown, IA 50158
402-290-0843

DATE	REVISION	DESIGNED:	DRAWN:	CHECKED:	BY	DATE
		SPS	ELT		SPS	04/22
						04/22

ITEM NO.	BID ITEMS AND QUANTITIES	UNIT	BID QUANTITY
	DIVISION 1 - GENERAL PROVISIONS AND COVENANTS		
1.01	TRAFFIC CONTROL & STAGING	LS	1
1.02	EXPLORATORY DIGGING AND UTILITY POTHOLING	HR	40
1.03	UTILITY CROSSING	EA	5
1.04	DEWATERING	LS	1
1.05	RAILROAD PROTECTIVE LIABILITY INSURANCE	LS	1
1.06	RAILROAD FLAGGER	DAY	7
1.07	BYPASS PUMPING	LS	1
1.08	MISCELLANEOUS REMOVALS	LS	1
	DIVISION 2 - EARTHWORK		
2.01	CLEARING AND GRUBBING, TREE REMOVAL, TREE TRIMMING	LS	1
2.02	EARTHWORK, ROADWAY EXCAVATION	CY	150
2.03	EARTHWORK, UNSUITABLE SOILS REMOVAL, DISPOSAL, AND REPLACEMENT	CY	250
2.04	SUBGRADE PREPARATION, 8-INCH	SY	506
	DIVISION 3 - TRENCH AND TRENCHLESS CONSTRUCTION		
3.01	TRENCH FOUNDATION	TON	50
3.02	SPECIAL PIPE EMBEDMENT OR ENCASEMENT	CY	50
3.03	TRENCH COMPACTION TESTING	LS	1
	DIVISION 4 - SEWERS AND DRAINS		
4.01	SANITARY SEWER, MAIN REPLACEMENT, 6-INCH	LF	25
4.02	SANITARY SEWER, MAIN REPLACEMENT, 8-INCH	LF	40
4.03	SANITARY SEWER, MAIN REPLACEMENT, 10-INCH	LF	80
4.04	SANITARY SEWER, MAIN REPLACEMENT, 12-INCH	LF	10
4.05	SANITARY SEWER, MAIN REPLACEMENT, 15-INCH	LF	10
4.06	SANITARY SEWER, MAIN REPLACEMENT, 18-INCH	LF	10
4.07	SANITARY SEWER, MAIN REPLACEMENT, 24-INCH	LF	10
4.08	SANITARY SEWER, MAIN REPLACEMENT, 27-INCH	LF	10
4.09	SANITARY SEWER, MAIN REPLACEMENT, 30-INCH	LF	10
4.10	SANITARY SEWER, MAIN REPLACEMENT, 33-INCH	LF	10
4.11	SANITARY SEWER, MAIN REPLACEMENT, 36-INCH	LF	10
4.12	SANITARY SEWER SERVICE RECONNECTION, WYE REPLACEMENT	EA	10
4.13	SANITARY SEWER CLEANOUT	EA	5
4.14	CCTV 6-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,900
4.15	CCTV 8-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	46,708
4.16	CCTV 10-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,093
4.17	CCTV 12-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	2,327
4.18	CCTV 15-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,231
4.19	CCTV 18-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,688
4.20	CCTV 24-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	482
4.21	CCTV 27-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	647
4.22	CCTV 30-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,182
4.23	CCTV 33-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	474
4.24	CCTV 36-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	852
4.25	CCTV 6-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,900
4.26	CCTV 8-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	46,708
4.27	CCTV 10-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,093
4.28	CCTV 12-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	2,327
4.29	CCTV 15-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,231
4.30	CCTV 18-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,688
4.31	CCTV 24-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	482
4.32	CCTV 27-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	647
4.33	CCTV 30-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,182
4.34	CCTV 33-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	474
4.35	CCTV 36-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	852
4.36	CCTV INSPECTION REVERSAL	EA	100
4.37	SANITARY SEWER MAIN LINE, HEAVY CLEANING	HR	100
4.38	HIGH PRESSURE JETTING AND ROBOTIC CUTTING	EA	2
4.39	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY ROOTS	HR	100
4.40	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY SCALE	HR	80
4.41	SANITARY SEWER MAIN LINE, PROTRUDING TAP CUT	EA	200
4.42	SANITARY SEWER CIPP POINT REPAIR DEBRIS CUTTING	HR	50
4.43	SANITARY SEWER CIPP POINT REPAIR, GROUTING VOID AROUND LATERAL INTERNALLY	EA	10
4.44	SANITARY SEWER CIPP POINT REPAIR, 6-INCH	LF	15
4.45	SANITARY SEWER CIPP POINT REPAIR, 8-INCH	LF	25
4.46	SANITARY SEWER CIPP POINT REPAIR, 10-INCH	LF	15
4.47	SANITARY SEWER CIPP POINT REPAIR, 12-INCH	LF	10
4.48	SANITARY SEWER CIPP POINT REPAIR, 15-INCH	LF	5
4.49	SANITARY SEWER CIPP POINT REPAIR, 18-INCH	LF	5
4.50	SANITARY SEWER CIPP POINT REPAIR, 24-INCH	LF	20
4.51	SANITARY SEWER CIPP POINT REPAIR, 27-INCH	LF	5
4.52	SANITARY SEWER CIPP POINT REPAIR, 30-INCH	LF	5
4.53	SANITARY SEWER CIPP POINT REPAIR, 33-INCH	LF	5
4.54	SANITARY SEWER CIPP POINT REPAIR, 36-INCH	LF	5
4.55	SANITARY SEWER CIPP LCR REPAIR, 5 FT	EA	34
4.56	SUBDRAIN, TYPE 1, CASE B, 6-INCH	LF	25
4.57	CIPP LINING, 6" O.D.	LF	7,900
4.58	CIPP LINING, 8" O.D.	LF	46,708
4.59	CIPP LINING, 10" O.D.	LF	7,093
4.60	CIPP LINING, 12" O.D.	LF	2,327
4.61	CIPP LINING, 15" O.D.	LF	1,231
4.62	CIPP LINING, 18" O.D.	LF	1,688
4.63	CIPP LINING, 24" O.D.	LF	482
4.64	CIPP LINING, 27" O.D.	LF	647
4.65	CIPP LINING, 30" O.D.	LF	1,182
4.66	CIPP LINING, 33" O.D.	LF	474
4.67	CIPP LINING, 36" O.D.	LF	852
4.68	CIPP LINING, SERVICE REINSTATEMENTS	EA	1,284
4.69	CIPP LINING, 36" CIPP TRANSITION TO 18" O.D.	EA	1
	DIVISION 5 - WATER MAIN AND APPURTENANCES		
5.01	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 4-INCH	LF	20
5.02	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 6-INCH	LF	20
5.03	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 8-INCH	LF	20
5.04	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 12-INCH	LF	20
5.05	FITTING, 45 DEGREE MJ BEND, 4-INCH	EA	4
5.06	FITTING, 45 DEGREE MJ BEND, 6-INCH	EA	4
5.07	FITTING, 45 DEGREE MJ BEND, 8-INCH	EA	4
5.08	FITTING, 45 DEGREE MJ BEND, 12-INCH	EA	4
5.09	FITTING, MJ SLEEVE, 4-INCH	EA	2
5.10	FITTING, MJ SLEEVE, 6-INCH	EA	2
5.11	FITTING, MJ SLEEVE, 8-INCH	EA	2
5.12	FITTING, MJ SLEEVE, 12-INCH	EA	2
5.13	WATER SERVICE RELOCATION AND REPLACEMENT	EA	5
	DIVISION 6 - STRUCTURES FOR SANITARY AND STORM SEWERS		
6.01	SANITARY SEWER MANHOLE, 48-INCH SW-301, 0 TO 5 VERTICAL FEET	EA	2
6.02	SANITARY SEWER MANHOLE, 48-INCH SW-301, 5 TO 10 VERTICAL FEET	EA	4
6.03	REMOVE EXISTING MANHOLE	EA	2
6.04	SANITARY SEWER MANHOLE, SW-307, DROP CONNECTION	EA	1
6.05	MANHOLE FIELD ADJUSTMENTS	EA	3
6.06	MANHOLE TESTING	LS	1
	DIVISION 7 - PAVEMENT AND APPURTENANCES		
7.01	REMOVAL AND DISPOSITION OF PAVEMENT	SY	506
7.02	PCC CURB AND GUTTER, 30-INCH	LF	50
7.03	HMA PAVEMENT SAMPLES AND TESTING	LS	1
7.04	DRIVEWAY PAVEMENT REMOVAL	SY	50
7.05	PCC PAVEMENT, DRIVEWAY, 6-INCH	SY	50
7.06	MODIFIED SUBBASE STONE, 8-INCH	TON	300
7.07	SUBBASE STABILIZATION, MACADAM STONE	TON	50
7.08	SIDEWALK REMOVAL	SY	25
7.09	SIDEWALK, PCC, 5-INCH	SY	25
7.10	PEDESTRIAN RAMPS, PCC, 6-INCH	SY	8
7.11	DETECTABLE WARNING PANELS	SF	10
7.12	CURB AND GUTTER REMOVAL	LF	50
7.13	ROADWAY GEOGRID	SY	506
7.14	HMA FULL DEPTH COMPOSITE PATCH	SY	161
7.15	PCC FULL DEPTH PATCH	SY	345
7.16	PCC SAMPLES AND TESTING	LS	1
7.17	SURFACING, REMOVE AND REPLACE, CLASS A ROADSTONE	TON	10
	DIVISION 8 - TRAFFIC SIGNALS (NOT USED)		
	DIVISION 9 - SITE WORK AND LANDSCAPING		
9.01	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 1	SQ	10
9.02	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 3	SQ	10
9.03	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 4	SQ	10
9.04	TEMPORARY ROLLED EROSION CONTROL PRODUCT, TYPE 2.D	SY	10
9.05	SILT FENCE	LF	100
9.06	FILTER SOCK	LF	100
9.07	STABILIZED CONSTRUCTION ENTRANCE, 3-INCH	TON	50
9.08	INLET PROTECTION, SURFACE APPLIED	EA	25
	DIVISION 10 - DEMOLITION (NOT USED)		
	DIVISION 11 - MISCELLANEOUS		
11.01	MOBILIZATION	LS	1
11.02	MOBILIZATION, MANHOLE INSTALLS AND POINT REPAIR LOCATIONS	EA	30

NOTE:

ITEMS NOT LISTED IN THE TABULATIONS ARE PROVIDED TO ESTABLISH A UNIT PRICE SHOULD CONDITIONS EXISTING DURING CONSTRUCTION THAT WOULD REQUIRE ADDITIONAL WORK ITEMS TO BE COMPLETED IN THE FIELD. PAYMENT OF THESE ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

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REVISION	DATE	BY

DESIGNED: | DRAWN: | CHECKED:

LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

ESTIMATE OF QUANTITIES
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C2.0

SPECIFICATIONS

ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND ANY CITY OF MARSHALLTOWN SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS, OR MODIFICATIONS PREPARED AS MODIFIED BY THESE PLANS AND SPECIFICATIONS BY FOX STRAND. ANY REFERENCE TO IDOT SPECIFICATIONS SHALL BE THE IOWA DEPARTMENT OF TRANSPORTATION ENGLISH STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2022 AND ALL APPROPRIATE SUPPLEMENTAL SPECIFICATIONS.

BID ITEM NO. **UNIT** **BID ITEMS AND DESCRIPTIONS:**

DIVISION 1 - GENERAL PROVISIONS AND COVENANTS

1.01 LS TRAFFIC CONTROL & STAGING

The Contractor shall submit a traffic control and staging plan to the Engineer prior to the start of construction. Site access to construct the utilities shall be from public rights-of-way and easements, or as shown on the drawings. Work limits are shown on the plans and shall not be modified unless directed by the Engineer. Staging areas shall remain within the limits of construction unless otherwise approved by the Engineer. The Contractor shall maintain vehicular access to properties at all times. Maintaining access to properties shall consist of grading the site and providing temporary surfacing where necessary so that property owners/tenants may enter/exit the property. There may be property owners/tenants with disabilities that may not be able to move from the designated parking areas to their homes or places of business because of construction. This item shall include all communication and resources necessary to allow disabled or otherwise unable pedestrians to get to their homes and/or places of business required during construction. Property owner needs shall be assessed during each phase of construction at progress meetings.

This item includes full compensation for furnishing and maintaining all materials, labor and equipment necessary to control traffic for the duration of the project. Temporary rock surfacing for transitioning grades between stages for parking of construction vehicles, and for stabilization of grade is included under this item of construction. This item includes furnishing, storing, installing, maintaining, moving, relocating, and removing all traffic control devices including barricades, drums, channelizers, diverters, lights, standard signs, flaggers, uniformed officers, temporary pavement markings, and safety fence. The Traffic Control and Staging Plan shall comply with the current edition (including supplements and revisions) of the Manual on Uniform Traffic Control Devices (MUTCD) and plan details. Contractor shall utilize Iowa DOT Standard Road Plans when work is within 15-ft of the traveled way along IDOT ROW. The construction plans shall not be considered a complete listing of all the traffic control signing and devices that may be required for construction of this project. All temporary traffic control measures will be considered incidental. The Contractor is encouraged to preserve, and maintain one lane of the existing roadway for adjacent property owners access when possible. The Contractor shall close no more than 400' of roadway at a given time. Payment shall be lump sum and will be paid based on the percentage complete of the lump sum base bid price.

1.02 HR EXPLORATORY DIGGING AND UTILITY POTHOLING

This item shall include all work for equipment, materials, labor, and digging of existing utilities that may conflict with the proposed improvements. Payment shall be per hour and include all exploratory digging required to complete the project. All necessary equipment, labor, and materials to complete the exploratory digging shall be considered incidental. Contractor shall locate all utilities such as water main, water services, franchise utilities, storm sewer, etc. Contractor shall field locate conflicts and critical crossings prior to construction, report finding to the Engineer, and coordinate utility locates with franchise utilities and shall be considered incidental. Payment shall be per hour to complete exploratory excavation of utilities.

1.03 EA UTILITY CROSSING

This item shall include all work and material necessary for installation of footings, placement of uniformly moistened pipe bedding material placed on subgrade and compacted, and placement of compressible material where proposed sanitary sewer crosses over existing utilities as per detail 3010.901 in the plans. The width of base material shall be the width of the trench created from pipe installation. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as established during construction. Payment is per each crossing.

1.04 LS DEWATERING

This items shall include all dewatering necessary to remove and/or lower the water level during construction in open and trench areas to below the construction per the specifications and special provisions. This shall include pumping and/or diversion of surface waters from the project construction area. Payment shall be lump sum for work completed per the specifications and special provisions.

1.05 LS RAILROAD PROTECTIVE LIABILITY INSURANCE

Contractor shall purchase Railroad Protective Liability Insurance as required by the Union Pacific Railroad (UPRR) for any work completed within UPRR property. Provide proof of insurance that includes the necessary requirements by the UPRR. Payment is lump sum.

1.06 DAY RAILROAD FLAGGER

The Contractor shall notify the UPRR and Engineer at least 15 working days in advance of the commencement of work and at least 10 working days in advance of proposed performance of any work by the Contractor in which any person or equipment will be within 25 feet of any track, or near enough to any track that any equipment extension is within 25 feet of any track. It is the Contractors sole responsibility to coordinate work with the UPRR and to notify them of work within the UPRR ROW. This item shall cover the cost to provide all necessary flaggers as required by the UPRR. Payment is per day.

No work shall be performed, and no person, equipment, machinery, tools, materials, vehicles, or things shall be located, operated, placed, or stored within 25 feet of any of UPRR's track at any time, for any reason, unless and until a railroad flagger has been coordinated with the UPRR and is provided to watch for trains.

The Contractor shall provide the UPRR a minimum of 2 working days notice prior to the completion of work for which the flagging services were requested.

1.07 LS BYPASS PUMPING

Includes all work, equipment, labor, and materials necessary to complete sanitary sewer bypassing to complete the work indicated in the plans and specifications. Payment shall be lump sum.

1.08 LS MISCELLANEOUS REMOVALS

This item includes all equipment, labor and materials necessary for removing and replacing miscellaneous items required for completing construction activities. Items may include, but are not limited to; fence, mailboxes, street signs, etc. Payment is lump sum.

DIVISION 2 - EARTHWORK

2.01 LS CLEARING AND GRUBBING, TREE REMOVAL, TREE TRIMMING

Per SUDAS. This item shall be full compensation for clearing and grubbing of all trees, tree branches, and bushes noted for removal on the plans and within the limits of construction. This shall include all trees, tree branches, trimming, removal, cutting, stump removal, and vegetation required to be removed or trimmed to allow the Contractor to complete all work and shall be considered incidental. The tree and the root ball shall be removed and the surface repaired, stabilized, and reseeded and shall be considered incidental. Brush shall be removed or cut off at the ground surface and a brush killer applied immediately after cut. Cutting down of trees shall take place after October 1 and before April 1. All cleared trees and brush shall become the property of the Contractor and shall be disposed of off-site at a location approved by the Engineer and meeting the requirements of the City. The limits of construction shall be confined to that indicated on the plans. Removal, salvaging and replacement of existing fences shall be incidental. Payment shall be lump sum.

2.02 CY EARTHWORK, ROADWAY EXCAVATION

Per SUDAS. Includes removal and transport off-site excavated soil material considered to be reused for fill material and/or waste as part of the excavation to final subgrade elevation. The contract unit price shall be full compensation to provide excavation as required by the contract documents to the grades shown on the plans and staked in the field by the Owner or Engineer. Summary of Earthwork quantities are as indicated on the bid form.

The Engineers quantity estimate for excavation is based on proposed finish site elevations prior to any topsoil re-spread. This quantity does NOT include any over-excavation and/or fill required as a result of encountering unsuitable soil conditions. The bid price for this item shall reflect the Contractor's own estimation of earthwork quantities based upon the information provided and the type of soil to be encountered. All structural fill shall be placed in 8 inch lifts and shall be considered incidental. Six inches of topsoil stripping and respread in grass areas shall be considered incidental and shall be provided from a borrow site if not available on-site. Fill soils shall be compacted to 95% of maximum standard proctor within pavement areas and shall be within 0-3% of optimum moisture content. Dewatering shall be considered incidental. All aggregate subbase underlying existing pavement shall be removed and disposed of off site and considered incidental. Payment shall be per cubic yard and shall be per the plan quantity indicated on the bid form.

2.03 CY EARTHWORK, UNSUITABLE SOILS REMOVAL, DISPOSAL, AND REPLACEMENT

Per SUDAS. This item shall include all equipment, labor, and materials to remove and transport off-site excavated unsuitable soil material, rock, waste, and other debris. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as established during construction. Payment shall be per cubic yard of material excavated, transported off-site, and structural fill material placed in 6 to 8-inch lifts. Aggregate fill material shall be macadam stone and shall be paid per bid items. Payment shall be per cubic yard as evidenced by weight tickets.

2.04 SY SUBGRADE PREPARATION, 8-INCH

Per SUDAS. Work under this item includes all equipment, labor, and materials to bring the subgrade of all paved areas to grade (plus or minus 2 inches). Subgrade scarification shall be in general conformance with Section 2109 of the IADOT Standard Specifications and SUDAS. The width of preparation is 2 feet beyond the edge of the pavement or to the edge of pavement removal in pavement patch areas. The depth of scarification is a minimum of 8-inches. Subgrade preparation may be completed in one 8-inch lift upon approval of the Engineer. The prepared subgrade shall be knocked down to a level surface with no more than 4-inches of elevation change. All soft subgrade shall be determined by proof rolling of subgrade immediately after subgrade preparation. Over excavate soft subgrade and replace with stabilization material that shall be paid for as per unsuitable soils excavation and replacement and as directed by the Engineer. Subgrade preparation under curbing areas shall be compacted to 95% standard proctor density to a distance of one foot from the extents of the curb section. Payment is per square yard of subgrade preparation as measured in the field.

DIVISION 3 - TRENCH AND TRENCHLESS CONSTRUCTION

3.01 TON TRENCH FOUNDATION

Per SUDAS 3010. Trench stabilization shall be placed where unstable pipe or manhole bedding conditions exist. Trench stabilization rock shall be as per the Pipe Embedment Detail or as directed by the Engineer and shall be per SUDAS 3010 stabilization (foundation) materials section. This item shall include all equipment, labor, and materials to remove and transport off-site excavated soil material and for placement and compaction of trench stabilization rock. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as determined during construction and approved by the Engineer. Complete the work in accordance with the plans and specifications and any special provisions included in the Contract Documents. Payment shall be per ton as evidenced by weight ticket and as approved by the Engineer.

3.02 CY SPECIAL PIPE EMBEDMENT OR ENCASEMENT

Per SUDAS Section 3010. Special pipe embedment or encasement shall be placed where required by the engineer for unstable pipe bedding conditions exist. This item shall include all equipment, labor, and materials to remove and transport off-site excavated soil material and for placement of special concrete embedment and encasement material (CLSM). Material specifications shall be submitted to the Engineer and shall be a minimum of 50 to 100 psi backfill material with Type 'C' fly ash and shall be designed to allow backfill within 12 hours of placement. The flowable fill shall be installed as to completely cover the trench bottom and sides to a minimum of 1 foot above the top of the pipe. Testing of the pipe material in areas requiring CLSM shall be completed prior to CLSM material installation and again after final backfill and shall be considered incidental to pipe installation. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as the quantity used during construction and approved by the Engineer. Payment shall be per cubic yard of CLSM placed as approved by the Engineer.

3.03 LS TRENCH COMPACTION TESTING

As per SUDAS Section 3010. The Contractor is responsible for trench compaction testing performed by an independent testing laboratory. Contractor shall complete compaction testing periodically during the construction process prior to completion of backfill operations. The Contractor will be responsible for payments associated with all retesting resulting from failure of initial tests. Engineer shall be notified immediately when conditions exist that prohibit proper trench compaction. It will be necessary for the Contractor to rework, recompact and retest as necessary until specified compaction and moisture content is achieved in all areas of the trench. The Engineer may require retesting as deemed necessary. Payment shall be lump sum.

DIVISION 4 - SEWERS AND DRAINS

4.01 LF SANITARY SEWER, MAIN REPLACEMENT, 6-INCH

As per SUDAS Section 4010 and the City of Marshalltown Supplemental Specifications. This item shall include all equipment, labor, and materials necessary for construction of the sanitary sewer as indicated on the drawings. Work includes temporary bypassing of sanitary sewer flows, locating existing taps for transfer, excavation, removal and disposal of existing sanitary sewer main, new sanitary sewer pipe installation, bedding, backfill and dewatering as necessary for construction. At the end of each working day, the Contractor shall temporarily connect sanitary sewer to existing to allow normal flows through the night and during non-working days. The sanitary sewer pipe material shall be Solid Wall PVC (SDR 26) or PVC Truss and bedded as per SUDAS. Where the sewer crosses less than 18-inches below or above a water main, one full length of sewer pipe of water main material shall be located so both joints are as far as possible from the water main and shall be considered incidental. The sewer and water pipes must be adequately supported and have watertight joints. A low permeability soil shall be used for backfill material within 10 feet of the point of crossing. Additional pipe length of up to 5 LF installed shall be incidental to the pipe length for each location. The Contractor is responsible for locating and supporting water services during construction. If the Contractor hits or damages in any way existing water services, they are responsible for all repairs at no cost to the owner and shall be completed by a licensed plumber according to the City of Marshalltown Water Works specifications. All work and materials for sewer-water crossings shall be incidental to sewer installation item. Work also includes testing of all sanitary sewers as specified in section 4060 (sewer testing) and shall be considered incidental to installation. The sewer testing shall consist of CCTV and deflection testing. The Engineer shall be present at the time of testing. The Contractor shall perform deflection testing just prior to paving (30 day wait period is waived). Two copies of the CCTV video and reports shall be made available to the City after project is completed and shall be completed per the specifications. Sanitary sewer leakage testing is NOT required. Sewer televising shall be completed under a separate bid item and shall be required for all sanitary sewer sections where repairs have been completed including complete pipe section inspections. Payment for this item shall be based on the actual linear footage of 6-inch sanitary sewer installed as measured to the center of manholes by the Engineer.

4.02 LF SANITARY SEWER, MAIN REPLACEMENT, 8-INCH

Same as item 4.01.

4.03 LF SANITARY SEWER, MAIN REPLACEMENT, 10-INCH

Same as item 4.01.

4.04 LF SANITARY SEWER, MAIN REPLACEMENT, 12-INCH

Same as item 4.01.

4.05 LF SANITARY SEWER, MAIN REPLACEMENT, 15-INCH

Same as item 4.01.

4.06 LF SANITARY SEWER, MAIN REPLACEMENT, 18-INCH

Same as item 4.01.

4.07 LF SANITARY SEWER, MAIN REPLACEMENT, 24-INCH

Same as item 4.01.

4.08 LF SANITARY SEWER, MAIN REPLACEMENT, 27-INCH

Same as item 4.01.

4.09 LF SANITARY SEWER, MAIN REPLACEMENT, 30-INCH

Same as item 4.01.

4.10 LF SANITARY SEWER, MAIN REPLACEMENT, 33-INCH

Same as item 4.01.

4.11 LF SANITARY SEWER, MAIN REPLACEMENT, 36-INCH

Same as item 4.01.

4.12 EA SANITARY SEWER SERVICE RECONNECTION, WYE REPLACEMENT

As per Section 4010 of SUDAS and special provisions. Contractor shall field determine (coordinate with property owner) if existing services are active prior to connection. All sanitary sewer service replacements shall PVC (SDR 21) preformed wyes. All sanitary sewer services shall PVC (SDR 21) and extend 5 feet minimum outside the back of curb or as shown on the plans. Payment is per each sanitary sewer service replacement.

4.13 EA SANITARY SEWER CLEANOUT

Per SUDAS. Install sanitary sewer cleanout where indicated on the plans. Payment shall be per each cleanout installed.

4.14 LF CCTV 6-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Per SUDAS 4050, 4060 and City of Marshalltown Supplemental Specifications. Work under this item shall include cleaning, televising, and televising reports as per Section 4060 of SUDAS and Supplemental Specifications of the City of Marshalltown to verify location of repairs. Inspection camera system shall be 100% digital and shall include a locate sonde to verify location of repairs from the ground surface for segments containing required repairs. Contractor shall verify repair locations prior to construction and document location with CCTV. A preconstruction pipe cleaning consisting of two passes of 900 min - 2500 max psi @ 80 GPM with normal cleaning equipment is required. Contractor shall submit televising videos, labeled as per the Supplemental Specifications of the City of Marshalltown, for each preconstruction locate and provide a summary table of the CCTV pipe section indicating location, direction of CCTV footage, verification of pipe size, length of televising pipe segment, repair location, and repair length required prior to submittal for payment. Contractor shall identify in the written reports services that are in need lateral connection repairs (LCR) by rating connections from 1 to 5 as per the supplemental specifications. LCRs are a bid item and shall be reviewed and approved by the Engineer prior to the work being completed. Payment for this item shall be per linear foot of sewer CCTV and shall be measured from structure to structure as indicated by the video system software used to inspect the sewer and as per the Contract Documents.

4.15 LF CCTV 8-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.16 LF CCTV 10-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.17 LF CCTV 12-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.18 LF CCTV 15-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

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	LAST UPDATE: 3/30/22		

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

ESTIMATE REFERENCE INFO
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C2.1

4.19 LF CCTV 18-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.20 LF CCTV 24-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.21 LF CCTV 27-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.22 LF CCTV 30-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.23 LF CCTV 33-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.24 LF CCTV 36-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION

Same as bid item 4.14

4.25 LF CCTV 6-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Per SUDAS 4050, 4060 and City of Marshalltown Supplemental Specifications. Work under this item shall include cleaning, televising, and televising reports as per Section 4060 of SUDAS and Supplemental Specifications of the Marshalltown. Inspection camera system shall be 100% digital. A preconstruction pipe cleaning consisting of three passes of 900 min - 2500 max psi @ 80 GPM with normal cleaning equipment is required. Contractor shall submit televising videos, labeled as per Supplemental Specifications of the Marshalltown, for each post construction inspection and provide a summary table of the CCTV pipe section indicating the information as required in Supplemental Specifications of the Marshalltown, prior to submittal for payment. Contractor shall identify in the written reports services that need lateral connection repairs (LCR) upon completion of CIPP work. LCRs may be required for gushing services or defective connections between the existing host pipe, service tap, and liner. LCRs are a bid item and shall be reviewed and approved by the Engineer prior to the work being completed. Payment for this item shall be per linear foot of sewer inspected and reported upon and shall be measured from structure to structure as indicated by the video system software used to inspect the sewer and as per the Contract Documents.

4.26 LF CCTV 8-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.27 LF CCTV 10-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.28 LF CCTV 12-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.29 LF CCTV 15-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.30 LF CCTV 18-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.31 LF CCTV 24-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.32 LF CCTV 27-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.33 LF CCTV 30-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.34 LF CCTV 33-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.35 LF CCTV 36-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION

Same as bid item 4.25

4.36 EA CCTV INSPECTION REVERSAL

A reversal is defined as a situation during a line segment inspection that requires accessing the line segment in the reverse direction to complete the inspection. Examples include camera inspection blocks caused by protruding service connections, pipe offsets, etc. Contractor shall verify with Engineer if a tap cut or other action is required prior to completing a reversal. After encountering a block and as approved by the engineer, the Contractor shall complete the inspection from the opposite end of the segment. Each reversal will be a flat rate charge as per the bid document. Payment for this item shall be per each reversal as described herein and documented in the report generation.

4.37 HR SANITARY SEWER MAIN LINE, HEAVY CLEANING

This bid item includes work to clean material that will not be easily moved by jet cleaning. May include bricks, rocks or hardened material. The engineer shall be notified prior to any heavy cleaning. The paid time for this item will be agreed to when notification of need is made to the engineer. Additional time cleaning without confirmed notification to the engineer will NOT be paid for. Payment shall be per hour as agreed during construction for heavy cleaning.

4.38 EA HIGH PRESSURE JETTING AND ROBOTIC CUTTING

This bid item includes work to clean material that will not be removed by heavy cleaning for the locations indicated on the plans. Jetting shall be 40,000 psi for concrete removal and include robotic cutting necessary to remove materials in the main or protruding into the main. Additional locations of high pressure cleaning will not be paid unless approved by the engineer prior to the work. Payment shall be per each location noted in the plans.

4.39 HR SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY ROOTS

Payment for this item shall be per hour or partial hour spent removing heavy roots unable to be removed with normal cleaning. Contractor shall utilize "best practice" methods to avoid damage to adjacent pipe, materials, connections, services, wyes, and properties. Payment for time spent moving between pipe segments shall be paid under the Mobilization and Demobilization bid item.

4.40 HR SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY SCALE

Payment for this item shall be per hour or partial hour spent removing heavy scale, often found in cast iron pipe and unable to be removed with normal cleaning. Contractor shall utilize "best practice" methods to avoid damage to adjacent pipe and properties. Payment for time spent moving between pipe segments shall be paid under the Mobilization and Demobilization bid item.

4.41 EA SANITARY SEWER MAIN LINE, PROTRUDING TAP CUT

The engineer shall be notified prior to protruding tap cuts; cuts made without notification to the engineer will NOT be paid. Contractor shall utilize "best practice" methods to avoid damage to adjacent pipe and properties. Post televising verification and inspection shall be completed under a separate bid item. It is not intended that all protruding taps be cut; if an Inspection Reversal or re-setting the camera to a lower height will allow completion of a segment's filming the protruding tap shall not to be cut unless directed by the engineer. If two protruding taps keep the segment from being completely inspected, cut both taps while doing the tap cutting. Payment will be for each protruding tap cut.

4.42 HR SANITARY SEWER CIPP POINT REPAIR DEBRIS CUTTING

Per SUDAS Section 4060. Contractor shall completing cutting of debris and other materials in the sanitary sewer main that must be removed prior to CIPP of the sanitary sewer main. Cutting shall be completed as to not damage the exiting sanitary sewer and remove to the extent to prevent damage to the installed liner. Payment shall be per each location of cutting within a 10 LF section of pipe. This item does not include root and tap cutting, which shall be paid under a separate bid item.

4.43 EA SANITARY SEWER CIPP POINT REPAIR, GROUTING VOID AROUND LATERAL INTERNALLY

Includes filling void sanitary sewer main with grout as per SUDAS 4050. Work shall be completed within the existing main by grouting void around lateral service while ensuring service remains in place. Payment shall be per each location of grouting within a 5 LF section of pipe.

4.44 LF SANITARY SEWER CIPP POINT REPAIR, 6-INCH

Per SUDAS and Section 4050 and City of Marshalltown Supplemental Specifications. This item shall include all equipment, labor, and materials necessary to complete an internal CIPP point repair of mainline pipes where indicated on the plans. Point repairs required to be completed by new pipe and couplings (trenching) shall be per other bid items as approved by the Engineer. Trenchless internal CIPP point repairs shall be completed according to the manufacturer's recommendations. The Contractor is responsible to verify which areas of the main shall be repaired prior to lining and shall submit a list with videos and photographs to the Engineer for approval prior to completing the work and shall be paid under other bid items. Payment shall be per linear foot of point repair using internal trenchless CIPP point repair methods.

4.45 LF SANITARY SEWER CIPP POINT REPAIR, 8-INCH

Same as item 4.44.

4.46 LF SANITARY SEWER CIPP POINT REPAIR, 10-INCH

Same as item 4.44.

4.47 LF SANITARY SEWER CIPP POINT REPAIR, 12-INCH

Same as item 4.44.

4.48 LF SANITARY SEWER CIPP POINT REPAIR, 15-INCH

Same as item 4.44.

4.49 LF SANITARY SEWER CIPP POINT REPAIR, 18-INCH

Same as item 4.44.

4.50 LF SANITARY SEWER CIPP POINT REPAIR, 24-INCH

Same as item 4.44.

4.51 LF SANITARY SEWER CIPP POINT REPAIR, 27-INCH

Same as item 4.44.

4.52 LF SANITARY SEWER CIPP POINT REPAIR, 30-INCH

Same as item 4.44.

4.53 LF SANITARY SEWER CIPP POINT REPAIR, 33-INCH

Same as item 4.44.

4.54 LF SANITARY SEWER CIPP POINT REPAIR, 36-INCH

Same as item 4.44.

4.55 EA SANITARY SEWER CIPP LCR REPAIR, 5 FT

Per SUDAS and Section 4050. This item shall include all equipment, labor, and materials necessary to complete an internal Lateral Connection Repair (LCR) of sanitary sewer service pipes where indicated on the plans. Point repairs required to be completed by new pipe and couplings (trenching) shall be per other bid items as approved by the Engineer. Stated warranties shall apply. The Contractor is responsible to verify which areas of the main shall be repaired prior to repair and shall submit a list with verified videos and photographs to the Engineer for approval prior to completing the work. Payment shall be per each repair for a 5-foot LCR repair of the sanitary sewer service lateral using trenchless repair methods without a cleanout.

4.56 LF SUBDRAIN, TYPE 1, CASE B, 6-INCH

Per SUDAS and Section 4040. This item includes all equipment, labor, and materials necessary for installing 6-in perforated subdrain, non-shrink grout, non-shear coupling bands, rodent guards, connection to existing subdrain piping, elbows, tees, cleanouts, trench excavation, furnishing and placing backfill material, furnishing and placing bedding, engineering fabric, connectors, soil compaction to 95% standard proctor or as otherwise indicated on the plans, and compacted granular material. Install subdrain at a location 2' outside of the back of curb or 3' underneath the pavement (from the back of curb) unless indicated otherwise on the drawings. Engineering fabric IS required. Slots shall be placed in the down orientation. Connections to storm sewer pipe shall be made with "inserta-tee" fittings which shall be considered incidental to subdrain item. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as quantities used during construction. Lengths of elbows and tees will be included in length of pipe measured. Cleanouts and caps shall be considered incidental. Payment will be measured per linear foot from the end of pipe to end of pipe along the centerline of pipe.

4.57 LF CIPP LINING, 6" O.D.

Per SUDAS 4050 and City of Marshalltown Supplemental Specifications. This item shall include all equipment, labor and materials necessary to place a cured in place lining in the existing sanitary sewer lines as indicated in the drawings. All Cured in Place Pipe shall be per SUDAS. Minimum modulus shall be EL=350,000, full depth water table, H20 loading conditions, and full pipe deterioration. The liner shall be designed by the contractor in accordance with ASTM F 1216 and F 2019. Contractor shall submit their calculations for approval by the Engineer. Recorded CCTV videos, available reports, and photos may be reviewed at the office of FOX Strand. Call 515-233-0000 to arrange a time to view CCTV videos. These reports may be used to further establish existing conditions and service locations. Contractor should note service locations as indicated on the plans. Service reconnections are paid for as a separate bid item.

4.58 LF CIPP LINING, 8" O.D.

Same as item 4.57.

4.59 LF CIPP LINING, 10" O.D.

Same as item 4.57.

4.60 LF CIPP LINING, 12" O.D.

Same as item 4.57.

4.61 LF CIPP LINING, 15" O.D.

Same as item 4.57.

4.62 LF CIPP LINING, 18" O.D.

Same as item 4.57.

4.63 LF CIPP LINING, 24" O.D.

Same as item 4.57.

4.64 LF CIPP LINING, 27" O.D.

Same as item 4.57.

4.65 LF CIPP LINING, 30" O.D.

Same as item 4.57.

4.66 LF CIPP LINING, 33" O.D.

Same as item 4.57.

4.67 LF CIPP LINING, 36" O.D.

Same as item 4.57.

4.68 EA CIPP LINING, SERVICE REINSTATEMENTS

This item shall include all equipment, labor, and material necessary to identify and reconnect active sanitary services by cutting the CIPP liner according CIPP manufacturer's recommendations and the specifications. See SUDAS 4050 and City of Marshalltown Supplemental Specifications. Payment shall be per each service reinstatement.

4.69 EA CIPP LINING, 36" CIPP TRANSITION TO 18" O.D.

This item shall cover all costs, labor, and materials associated with installing a 36-inch to 18-inch transition in the CIPP liner for the segment between K07-006 to K07-005.

DIVISION 5 - WATER MAIN AND APPURTENANCES

5.01 LF RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 4-INCH

Per SUDAS 5010 and the details. Contractor shall field verify location and elevation of water main prior to construction and shall be considered incidental. All pipe material shall be a minimum of AWWA Class 350 Ductile Iron pipe with polyethylene encasement and nitrile gaskets. Work shall include all work necessary for crossing and relocation of water main including, but not limited to, excavation, bedding, backfill, tracer wire, tracer wire splices, restrained joints, caps, disinfection, affected property notifications, flushing, and testing. Existing pipe that conflicts with installation shall be removed and shall be incidental to this item. Fittings shall be paid for under other items of work. Restrained joints, soil compaction to 95% standard proctor or as otherwise indicated on the plan, and/or thrust blocking shall be considered incidental. All work shall be completed in conformance to Marshalltown Waterworks Regulations and Specifications. Trench bedding requirements shall be P-2 and bedding rock shall be incidental. Payment shall be per linear foot installed and as approved by the Engineer.

5.02 LF RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 6-INCH

Same as item 5.01.

5.03 LF RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 8-INCH

Same as item 5.01.

5.04 LF RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 12-INCH

Same as item 5.01.

5.05 EA FITTING, 45 DEGREE MJ BEND, 4-INCH

Per SUDAS 5010. Fittings shall be ductile iron for water main, and shall have restrained mechanical joints. Install thrust blocks in addition to restrained joints and shall be considered incidental. Payment shall be per each.

5.06 EA FITTING, 45 DEGREE MJ BEND, 6-INCH

Same as item 5.05.

5.07 EA FITTING, 45 DEGREE MJ BEND, 8-INCH

Same as item 5.05.

5.08 EA FITTING, 45 DEGREE MJ BEND, 12-INCH

Same as item 5.05.

5.09 EA FITTING, MJ SLEEVE, 4-INCH

Per SUDAS 5010. This item is for installation of restrained joint sleeves to connect to existing water main, as necessary. Payment shall be per each.

DRAWING FILENAME
K:\proj\2000\2407-20A Marshalltown 2020 CIPP\Drawings\General\2407-20A_COVER.dwg

PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
FoxGreyScale.ctb		C2.2

DATE	REVISION	BY	DATE
		SPS	04/22
	DESIGNED:		
	DRAWN:	ELT	04/22
	CHECKED:		
		LAST UPDATE:	3/30/22

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414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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MARSHALLTOWN, IOWA
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5.10 EA FITTING, MJ SLEEVE, 6-INCH

Same as item 5.09.

5.11 EA FITTING, MJ SLEEVE, 8-INCH

Same as item 5.09.

5.12 EA FITTING, MJ SLEEVE, 12-INCH

Same as item 5.09.

5.13 EA WATER SERVICE RELOCATION AND REPLACEMENT

Per SUDAS and The City of Marshalltown Waterworks Specifications and Requirements. This item shall include all equipment and labor necessary for relocating and lowering existing water services as necessary for the construction of the sanitary sewer. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as quantities used during construction. Payment for this item shall be per each complete water service installation.

DIVISION 6 - STRUCTURES FOR SANITARY AND STORM SEWERS

6.01 EA SANITARY SEWER MANHOLE, 48-INCH SW-301, 0 TO 5 VERTICAL FEET

Per SUDAS and Section 6010 and City of Marshalltown Supplemental Specifications. Unit price includes excavation, furnishing and placing bedding and backfill material, soil compaction to 95% standard proctor, base, structural concrete, reinforcing steel, precast units (if used), castings, grate or lid (as per plans), connections, spacer rings, posts and covers, adjustment rings, temporary seeding, soil removal/disposal. Sanitary sewer pumping and bypassing shall be paid under a separate bid item. Manhole adjustments in height of plus or minus 12-inches shall be considered incidental. All casting shall be Type A unless otherwise indicated on the plans. Compaction shall be 95% standard proctor unless otherwise indicated on the plans. Connection of proposed and existing sanitary sewer pipe(s) to manhole, along with all pipe materials and couplings required for connection to existing pipes, shall be incidental to this item and shall conform to SUDAS 6010 and City special provisions. Grouting and plugging of existing sanitary sewer pipes shall be considered incidental and shall include a water stop to prevent infiltration. Manholes shall not have steps. All manholes shall have exterior Wrapid Seal manhole encapsulating system for the manhole rings sections, top, and castings, or interior chimney seals where indicated on the plans, and base width extensions a minimum of 12-inches outside the manhole per the details and shall be considered incidental. Dewatering shall be paid under a separate bid item. Payment is per each manhole installed in conformance with the specifications and special provisions.

6.02 EA SANITARY SEWER MANHOLE, 48-INCH SW-301, 5 TO 10 VERTICAL FEET

Same as item 6.01.

6.03 EA REMOVE EXISTING MANHOLE

Per SUDAS and Section 6010 and City of Marshalltown Supplemental Specifications. Unit price includes excavation, removal and disposal of existing manhole, cutting of existing sanitary sewer pipes, repairing sanitary sewer pipes in area where manhole was removed, furnishing and placing bedding and backfill material, and soil compaction to 95% standard proctor. Compaction shall be 95% standard proctor unless otherwise indicated on the plans. Items where manholes are to be removed and replaced shall be paid under a separate item. Payment shall be per each manhole removed per the specifications and special provisions.

6.04 EA SANITARY SEWER MANHOLE, SW-307, DROP CONNECTION

Per SUDAS and Section 6010 and City of Marshalltown Supplemental Specifications. This item includes all equipment, labor, and materials necessary to construct the sanitary sewer drop. All excavation, piping, fittings, elbows, tees, bedding, backfill, connections, posts and covers, soil compaction to 95% standard proctor, base, structural concrete, reinforcing steel, precast units (if used), grouting, temporary seeding, soil removal/disposal, sanitary sewer pumping and pump around, and bypassing shall be considered incidental. Dewatering shall be paid under a separate bid item. Compaction shall be 95% standard proctor unless otherwise indicated on the plans. Sanitary sewer manholes shall be paid under a separate bid item. Pipe material shall be per the city of Marshalltown specifications and connection of existing sanitary sewer pipe(s) shall be with stainless steel non-shear couplings or approved equivalent and shall be incidental to this item. Payment is per each drop installed in conformance with the specifications and special provisions.

6.05 EA MANHOLE FIELD ADJUSTMENTS

As per Section 6010 of SUDAS and City of Marshalltown Supplemental Specifications. This item includes all equipment, labor, and materials necessary to adjust manhole hole locations and elevations, as well as to make adjustments to rim elevation for ground conditions beyond 18 inches. Payment shall be per manhole where field adjustments are necessary.

6.06 LS MANHOLE TESTING

Per SUDAS 6030 and City and City of Marshalltown Supplemental Specifications. Payment shall be per each.

DIVISION 7 - PAVEMENT AND APPURTENANCES

7.01 SY REMOVAL AND DISPOSITION OF PAVEMENT

All work shall be as per Section 7040 of the SUDAS Specifications, City of Marshalltown Supplemental Specifications, and the Special Provisions and as indicated on the Drawings. This item includes removal of existing street pavement and adjacent side street pavement, and any miscellaneous pavement encountered that necessitates removal during construction.

Existing pavement thickness and material is variable. Fluctuations in pavement depth due to curb and gutter, patches or other repairs will not be paid for as extra and shall be included within this item. Pavement removal boundary shall be as shown on the plans or as approved by the Engineer. Small deviations in removal limits are allowed based on field determined existing joint line locations as approved by Engineer. All removals will require clean sawcut joints where proposed paving will abut existing pavement. Contractor shall double saw cut all edges to maintain a smooth, clean edge prior to replacement and shall be considered incidental. The Contractor is responsible for disposal of the removed material. On-site disposal is NOT allowed. Payment for this item shall be per square yard of paving removed and disposed of off-site.

7.02 LF PCC CURB AND GUTTER, 30-INCH

Per SUDAS and Section 7010. Includes placement of PCC curb section as indicated on the plans and details, final subgrade/subbase preparation, bars and reinforcement, joints and sealing, surface curing and pavement protection, and boxouts for fixtures. Payment is per linear foot of PCC curb and gutter installed per the specifications.

7.03 LS HMA PAVEMENT SAMPLES AND TESTING

Per SUDAS and Section 7020. This item is for all equipment, labor, and materials to provide samples and testing as per the specifications.

7.04 SY DRIVEWAY PAVEMENT REMOVAL

Per SUDAS and Section 7030. This item shall include , but not limited to, saw cutting, breaking, removal, hauling, and disposal off-site. Payment shall be per square yard of driveway removed and disposed of off-site.

7.05 SY PCC PAVEMENT, DRIVEWAY, 6-INCH

Per SUDAS and Section 7030. Includes excavation, subgrade preparation, jointing, sampling, and testing. The Engineer must approve jointing patterns selected by the Contractor. Payment is per square yard of PCC driveway installed per the specifications.

7.06 TON MODIFIED SUBBASE STONE, 8-INCH

Per SUDAS. This item shall include placement of modified subbase as indicated on the plans and required for construction. Contractor shall place stone compacted as required to provide the stone thickness as indicated on the plans. Removal, disposal, stockpiling, compaction, delivery, and placement shall be considered incidental. Complete the work in accordance with the plans and these technical specifications and any special provisions included in the Contract Documents. Payment is per ton of stone placed as measured in the field and as evidenced by truck tickets (less any stone delivered and stockpiled but not used).

7.07 TON SUBBASE STABILIZATION, MACADAM STONE

Per SUDAS and Section 7030. Includes excavation, preparation to subgrade, placement of stabilization stone, and compaction. Payment is per ton of stone placed as measured in the field and as evidenced by truck tickets (less any stone delivered and stockpiled but not used).

7.08 SY SIDEWALK REMOVAL

Per SUDAS 7030. This item shall include, but is not limited to, saw cutting, breaking, removal, hauling, and disposal off-site, of PCC sidewalk and pedestrian ramps. Payment shall be per square yard.

7.09 SY SIDEWALK, PCC, 5-INCH

Per SUDAS 7030. This item includes minor grade adjustments at driveways and other intersections, subgrade preparation, formwork, additional thickness at thickened edges, and jointing. Contraction joints shall be placed at 4' intervals. Contractor shall submit jointing plan to the Engineer for approval. Payment shall be per square yard.

7.10 SY PEDESTRIAN RAMPS, PCC, 6-INCH

Per SUDAS 7030. Work under this item includes constructing sidewalk pedestrian ramps as shown on the plans. Payment shall be per square yard.

7.11 SF DETECTABLE WARNING PANELS

Per SUDAS 7030. This item includes minor grade adjustments at driveways and other intersections, subgrade preparation, formwork, additional thickness at thickened edges, and jointing. Contractor shall submit jointing plan to the Engineer for approval. Payment shall be per square yard.

7.12 LF CURB AND GUTTER REMOVAL

Per SUDAS and Section 7040. This item shall include , but not limited to, saw cutting, breaking, removal, hauling, and disposal off-site. Payment shall be per linear foot of curb and gutter removed and disposed of off-site.

7.13 SY ROADWAY GEOGRID

Per SUDAS. Work under this item shall include the installation of triangular Type 3 geogrid, Tensar TriAx TX140 or equivalent as approved by the engineer. The geogrid shall be used as indicated in the plans and specifications, for stabilization of the roadway subgrade, and as directed by the Engineer. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as quantities used during construction. Payment shall be per square yard installed as measured in the field.

7.14 SY HMA FULL DEPTH COMPOSITE PATCH

This item is for the restoring the subgrade or subbase, furnishing tack coat, furnishing and installation of HMA patch material, and class 'M' PCC, and curing as per SUDAS Sections 7010, 7021, 7040, and the special provisions. HMA shall be 300k ESAL mix with ¾-inch aggregate and binder shall be PG 64-22. Minimum depth of patch shall be 8-inches. This shall include a minimum of 6 inch PCC patch with 2 inch HMA overlay. Patch shall abut a sawcut, clean edge. If unstable material or material with excessive moisture is encountered under existing pavement in patch area, material must be replaced with suitable backfill and shall be considered incidental. Contractor may place temporary concrete patch over permanent concrete as temporary surfacing until HMA patch is to be completed as long as the work is completed within 60 days. Contractor shall maintain temporary surfacing until HMA pavement is placed. Remove all class A roadstone and clean existing pavement prior to HMA placement. Full depth composite patch shall include a PCC boxout. Complete the work in accordance with the plans and these technical specifications and any special provisions included in the Contract Documents. Note that per the details and specifications, 8-inches of rock and geogrid are required within the patch area and are paid for under separate items. Payment is per square yard of pavement placed.

7.15 SY PCC FULL DEPTH PATCH

Per SUDAS and Section 7040. This item shall include all equipment, labor, and materials necessary for removal and replacement of pavement called out in the plans as per Section 7010 of the SUDAS Specifications and as indicated on the drawings. Patch depth shall be full depth and a minimum of 7-inches. Concrete mix design shall be C-3WR, C-4 or C-4WR. Use Type "M" mix in high traffic areas where approved by the Engineer and shall be considered incidental. Coarse aggregate shall be Class 3 durability. Fly ash and/or GGBFS may be used to replace Portland cement up to 10%. Modulus of Rupture for cured concrete shall meet or exceed 600 psi as determined by beam tests (paid for under testing item). Joints shall be as shown in the details, and transverse joints spaced at approximately 15 ft or as required for construction per SUDAS jointing details. Alternate jointing patterns designed by the Contractor must be approved by the Engineer. Surface curing and temperature protection covering are incidental. Saw cutting shall be completed by a wet saw or early saw method unless approved by Engineer and shall be considered incidental. The slurry shall be removed from the pavement prior to curing. The slurry cannot be discharged into the storm sewer. Note that per the details and specifications, 8-inches of rock and geogrid are required within the patch area and are paid for under separate items. Payment is per square yard of pavement placed.

7.16 LS PCC SAMPLES AND TESTING

Section 7010 of SUDAS Specifications shall apply. This item shall include cylinders, beams, and the taking of cores for depth measurement testing by the Contractor. Smoothness test shall be completed with a 10-foot straight edge. Refer to SUDAS Section 7010 for listing of responsibilities and frequencies of testing. Contractor shall be responsible to retain an independent testing laboratory for all testing and samples. Cores shall be taken by Contractor and shall be considered incidental. Core depths shall be reported to Engineer immediately. Payment shall be lump sum.

7.17 TON SURFACING, REMOVE AND REPLACE, CLASS A ROADSTONE

Per SUDAS and Section 7030. This item shall include all equipment, labor, and materials necessary for the permanent placement of 4" nominal depth rock for access to properties, alleys, shoulders, and City right of way, or as shown on the plans. Item shall include grading, Class 'A' roadstone, backfill and maintenance during construction. The extent of the gravel access shall be in general conformance with the drawings. Removal and disposal of rock is incidental to this item. Payment is per ton of Class 'A' roadstone placed as evidenced by delivery tickets less any material stockpiled on site or used for other parts of the project.

DIVISION 8 - TRAFFIC SIGNALS (NOT USED)

DIVISION 9 - SITE WORK AND LANDSCAPING

9.01 SQ HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 1

Per SUDAS and Section 9010. This item applies to the seed bed preparation, hydro seeding, fertilizing, and hydro mulching of all the disturbed lawn areas (areas as indicated on plans, details, and as directed by the Engineer). The seed mixture shall be urban seed mix Type 1 unless otherwise indicated on the plans. PRIOR to seeding, the Engineer shall observe that all disturbed areas were left in a prepared seedbed condition. Work includes removal of rock and other debris from the area, repairing rills and washes, preparing the seedbed, furnishing and placing seed, including any treatment required including furnishing and placing fertilizer and mulch. Topsoil borrow and placement of 6-inches of topsoil in seeding areas shall be considered incidental where existing topsoil is not adequate. Seed bed shall be prepared so that all rocks larger than 1/2-inch and all lumps larger than one inch are removed. The seed shall be placed conventionally on the finished seedbed, and then hydro mulched using a wood cellulose mulch. Full coverage of the soil surface is required. The responsibility of watering is up to the property owner. The property owner will be responsible for mowing. Payment is per square with one square equivalent to 100 square feet. Areas outside of construction limits or easement limits will not be measured for payment unless prior approval is provided by the Engineer.

9.02 SQ HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 3

Same as item 9.01.

9.03 SQ HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 4

Same as item 9.01 except SUDAS Type 4 Seed Mix. Apply in areas where temporary seeding will not take place for more than the allocated days allowed per the SWPPP as well as local and state requirements. Payment shall be per square with on square equivalent to 100 square feet.

9.04 SY TEMPORARY ROLLED EROSION CONTROL PRODUCT, TYPE 2.D

Per SUDAS. Work under this item shall include the installation of erosion control blanket RECP, Type 2.C as approved by the Engineer. The blanket is for stabilization of areas as directed by the Engineer and as required for stabilization of seeded areas. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as quantities used during construction. Complete the work in accordance with the plans and these technical specifications and any special provisions included in the Contract Documents. Payment shall be per square yard.

9.05 LF SILT FENCE

Per SUDAS Section 9040, the Storm Water Pollution Prevention Plan (SWPPP), and the plans. The Contractor shall maintain the silt fence until the City has accepted all work and the site has been seeded, fertilized, mulched, and fully stabilized. Cleaning and removal of silt fence shall be considered incidental and shall be completed as required by the SWPPP and as directed by the Engineer. Payment shall be per linear foot.

9.06 LF FILTER SOCK

Per SUDAS and Section 9040, the Storm Water Pollution Prevention Plan (SWPPP), and the plans. The Contractor shall maintain the filter sock until the City has accepted all work and the site has been seeded, fertilized, mulched, and fully stabilized. Cleaning and removal of filter sock shall be considered incidental and shall be completed as required by the SWPPP and as directed by the Engineer. Payment is per linear foot of filter sock installed as measured in the field by the Engineer.

9.07 TON STABILIZED CONSTRUCTION ENTRANCE, 3-INCH

Per SUDAS 9040. Item shall include placement of stabilized construction entrances into the project site, to prevent tracking onto public right-of-way or private property. This item shall include all equipment, labor, and materials to remove and transport off-site excavated soil material and for placement and compaction of stabilization rock. After completion of work, Contractor shall remove all rock, debris, and all other construction related disturbances and return the are to the condition prior to construction. Disturbed areas in agricultural fields shall be deep ripped 24-inches. Final grading shall include eliminating all soil lumps larger than 2-inches, removal of all rock and debris, and preparation surface for planting and shall be considered incidental. All grading, soil import/placement, compaction, drainage pipe, temporary fencing, and removal and disposal of entrance materials after construction shall be considered incidental. Contractor shall protect existing surfaces as necessary to prevent contamination and transport of soil materials offsite. The Engineer has provided the Contractor an estimated quantity in order to establish a unit price and shall be paid as installed during construction and approved by the Engineer. Payment shall be per ton as evidenced by weight ticket and as approved by the Engineer.

9.08 EA INLET PROTECTION, SURFACE APPLIED

Per SUDAS and Section 9040. Furnish all materials and install, construct, maintain, and remove specified erosion control devices at the locations specified in the contract documents, or where specified by the Engineer. Payment shall be per each installed.

DIVISION 10 - DEMOLITION (NOT USED)

DIVISION 11 - MISCELLANEOUS

11.01 LS MOBILIZATION

Mobilization shall consist of preparatory work and operations for all items under the contract, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project sites; bonds and insurance; equipment and product storage; and for the establishment of all offices, buildings, and other facilities which must be performed or costs incurred prior to beginning of work on the various items on the project site. Incidental items include placement, maintenance and removal of temporary surfacing necessary for maintaining property access during construction. Temporary surfacing must be in general conformance with the Iowa DOT Standard Specifications. This item shall include demobilization costs and all work required for phasing of construction that is not called out in the measurement and payment under other items of work including minor removals. Payment shall be lump sum and progress payments shall be as per Division 1 specifications.

11.02 EA MOBILIZATION, MANHOLE INSTALLS AND POINT REPAIR LOCATIONS

This item shall cover the cost of mobilization to each dig point repair or new manhole location. Payment shall be per EACH location and include all time and materials associated with mobilizing equipment to a DIG location as indicated on the plans. Internal point repairs or LCRs are not included in this item and are incidental to other bid items. Point repair 4 is to be considered one location.

DRAWING FILENAME
K:\proj\2000\2407-20A Marshalltown 2020 CIPP\Drawings\General\2407-20A_COVER.dwg
PLOT STYLE TABLE: FoxGreyScale.ctb | LAYER MNGR NAME | LAYOUT NAME: C2.3

REVISION	DATE	BY	DATE
	DESIGNED:	SPS	04/22
	DRAWN:	ELT	04/22
	CHECKED:		
		LAST UPDATE:	3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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ESTIMATE REFERENCE INFO
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C2.3

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR	Comments:	PIPE SIZE	GIS FOOTAGE	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	
1	G06-024	G06-023	N 18TH ST	8	308	11	4	2	0	2015 TV Complete-needs Liner	8	308	0	308	0	0	0	0	0	0	0	0	0	0	0	
2	G06-027	G06-026	N 19TH ST & FREMONT ST	8	207	8	1	2	1	LCR @ 105'	8	207	0	207	0	0	0	0	0	0	0	0	0	0	0	
3	G07-018	H07-052	ORCHARD DRIVE	8	199	1	1	0	0	2015 TV Complete-needs Liner	8	199	0	199	0	0	0	0	0	0	0	0	0	0	0	
4	H06-012	H06-011	N 14TH & W STATE	18	404	2	0	0	0	2015 TV Complete-needs Liner	18	404	0	0	0	0	0	404	0	0	0	0	0	0	0	
5	H06-023A	H06-023	W MAIN ST	8	452	15	2	0	0	Holes in top of pipe, but covered with tile pipe. Linable	8	452	0	452	0	0	0	0	0	0	0	0	0	0	0	
6	H06-024	H06-023	1312 W MAIN	8	378	5	1	0	0	Backslope at repair into MH H06-023, 95% sag @ 190'	8	378	0	378	0	0	0	0	0	0	0	0	0	0	0	
7	H06-032	H06-031	W MAIN ST & S 17TH ST	8	240	10	0	0	0	Line through Offset Joint @ 238'	8	240	0	240	0	0	0	0	0	0	0	0	0	0	0	
8	H06-033	H06-023A	W MAIN ST	8	129	2	1	0	0	2015 TV Complete-needs Liner	8	129	0	129	0	0	0	0	0	0	0	0	0	0	0	
9	H06-037	H06-020	N 12TH ST	10	318	9	3	0	0	2015 TV Complete-needs Liner	10	318	0	0	318	0	0	0	0	0	0	0	0	0	0	
10	H06-038A	H06-038	S 12TH AVE & FREMONT ST	8	165	4	0	0	0	2015 TV Complete-needs Liner	8	165	0	165	0	0	0	0	0	0	0	0	0	0	0	
11	H06-044	H06-043	SUMMITT ST	10	126	0	0	0	0	2015 TV Complete-needs Liner	10	126	0	0	126	0	0	0	0	0	0	0	0	0	0	
12	H06-046	H06-045	SUMMIT ST	8	616	8	0	0	0	was Linable in 2011	8	616	0	616	0	0	0	0	0	0	0	0	0	0	0	
13	H06-048	H06-047	SUMMIT ST	10	357	9	0	1	0	A MH exists between H06-048 and 047, near MH H06-048. It is accessable and will be lined through and should NOT be opened	10	357	0	0	357	0	0	0	0	0	0	0	0	0	0	
14	H06-049	H06-048	SUMMIT ST	10	322	11	0	0	0	2019 TV Complete-needs Liner	10	322	0	0	322	0	0	0	0	0	0	0	0	0	0	
15	H06-074A	H06-074	KIWANIS PARK & 14TH ST	10	106	0	0	0	0	2015 TV Inspection Segments-All have issues	10	106	0	0	106	0	0	0	0	0	0	0	0	0	0	
16	H06-075	H06-074A	N 14TH STREET EASEMENT	10	95	0	0	0	0	30' outside MH 74A needs replaced due to backfall	10	95	0	0	95	0	0	0	0	0	0	0	0	0	0	
17	H06-077	H06-076	N 14TH ST	8	363	12	0	1	0	2019 TV Complete-needs Liner	8	363	0	363	0	0	0	0	0	0	0	0	0	0	0	
18	H06-078	H06-076	N 14TH ST	8	109	2	0	0	1	LCR @ 80'	8	109	0	109	0	0	0	0	0	0	0	0	0	0	0	
19	H06-086	H05-012	N 16TH ST	8	284	5	0	2	0	42' alignment issue, Heavy Roots @ 245 +	8	284	0	284	0	0	0	0	0	0	0	0	0	0	0	
20	H06-088	H05-014	N 15TH ST	8	104	1	1	0	0	2015 TV Complete-needs Liner	8	104	0	104	0	0	0	0	0	0	0	0	0	0	0	
21	H06-089	H06-088	N 15TH ST	8	201	7	0	0	0	2019 TV Complete-needs Liner	8	201	0	201	0	0	0	0	0	0	0	0	0	0	0	
22	H06-093	H06-011	W STATE ST	8	27	0	0	0	0	CIPP THROUGH BEND IF POSSIBLE	8	27	0	27	0	0	0	0	0	0	0	0	0	0	0	
23	H06-094	H06-093	W STATE ST	8	261	3	0	0	0	2015 TV Complete-needs Liner	8	261	0	261	0	0	0	0	0	0	0	0	0	0	0	
24	H06-096	H06-020	N 13TH ST	6	221	4	0	0	0	CLEAN AND CIPP HOLES	6	221	221	0	0	0	0	0	0	0	0	0	0	0	0	
25	H06-098	H06-097	N 13TH ST	10	280	5	1	0	0	Liner-will replace Manhole H06-097	10	280	0	0	280	0	0	0	0	0	0	0	0	0	0	
26	H06-099	H06-098	N 13TH ST	8	85	0	0	0	0	2015 TV Complete-needs Liner	8	85	0	85	0	0	0	0	0	0	0	0	0	0	0	
27	H07-001B	H07-001	13TH ST & CHURCH	8	233	8	0	0	0	Line thru 001A(do Not Open). Consider 001T a service connection (reinstate like all other services). Per Steve Simons.	8	233	0	233	0	0	0	0	0	0	0	0	0	0	0	
28	H07-005	H07-003	W BOONE ST / S 13TH ST	8	413	10	0	0	0	2021 TV Complete-needs Liner	8	413	0	413	0	0	0	0	0	0	0	0	0	0	0	
29	H07-014	H07-013	BRENTWOOD RD/ BRENTWOOD TERR	8	137	1	0	0	0	2015 TV Complete-needs Liner	8	137	0	137	0	0	0	0	0	0	0	0	0	0	0	
30	H07-022	H07-021	BRENTWOOD PL	8	290	3	0	0	0	2015 TV Complete-needs Liner	8	290	0	290	0	0	0	0	0	0	0	0	0	0	0	
31	H07-027	H07-003	S 12TH ST/ W LINN ST	8	447	13	0	0	0	Liner, will replace Manhole H07-027	8	447	0	447	0	0	0	0	0	0	0	0	0	0	0	
32	H07-028	H07-027	S 12TH ST/ W LINN ST	8	435	7	1	2	1	LCR @ 263' FROM DS MH	8	435	0	435	0	0	0	0	0	0	0	0	0	0	0	
33	H07-033	H07-032	12TH ST & NEVADA	8	32	3	0	0	0	2019 TV Complete-needs Liner	8	32	0	32	0	0	0	0	0	0	0	0	0	0	0	
34	H07-034	H07-027	S 12TH ST	6	294	5	1	0	0	2015 TV Inspection Segments-All have issues	6	294	294	0	0	0	0	0	0	0	0	0	0	0	0	
35	H07-039	H07-038	N 12TH ST	8	224	5	0	0	0	2015 TV Inspection Segments-All have issues	8	224	0	224	0	0	0	0	0	0	0	0	0	0	0	
36	H07-052	H07-050	1505 BRENTWOOD TERR., ACCESS OFF W LINN & S 16TH	8	161	0	0	0	0	2015 TV Complete-needs Liner	8	161	0	161	0	0	0	0	0	0	0	0	0	0	0	
37	H07-054	H07-043	W CHURCH ST	8	180	4	0	0	0	2019 TV Complete-needs Liner	8	180	0	180	0	0	0	0	0	0	0	0	0	0	0	
38	H07-058	H07-053	1503 W CHURCH	8	249	6	0	0	0	2015 TV Complete-needs Liner	8	249	0	249	0	0	0	0	0	0	0	0	0	0	0	
39	I06-005	I06-004	N 9TH ST & JEROME STREET	10	440	6	3	0	0	2015 TV Complete-needs Liner	10	440	0	0	440	0	0	0	0	0	0	0	0	0	0	
40	I06-006	I06-005A	N 8TH ST / SUMMITT ST	10	221	3	0	0	0	CCTV & CIPP	10	221	0	0	221	0	0	0	0	0	0	0	0	0	0	
41	I06-005A	I06-005	N 9TH ST / SUMMITT ST	10	212	1	0	0	0	CCTV & CIPP	10	212	0	0	212	0	0	0	0	0	0	0	0	0	0	
42	I06-007	I06-006	FREMONT ST & N 8TH ST	10	435	11	3	0	0	2015 TV Complete-needs Liner	10	435	0	0	435	0	0	0	0	0	0	0	0	0	0	
43	I06-008	I06-007	STATE ST & 8TH ST	10	440	15	3	0	0	2015 TV Complete-needs Liner	10	440	0	440	0	0	0	0	0	0	0	0	0	0	0	
44	I06-009	I06-008	W STATE ST	6	293	9	0	0	0	2019 TV Complete-needs Liner	6	293	293	0	0	0	0	0	0	0	0	0	0	0	0	
45	I06-011	I06-008A	W STATE ST	6	139	4	0	0	0	2015 TV Complete-needs Liner	6	139	139	0	0	0	0	0	0	0	0	0	0	0	0	
46	I06-008A	I06-008	W STATE ST	6	150	5	0	0	0	2019 TV Complete-needs Liner	6	150	150	0	0	0	0	0	0	0	0	0	0	0	0	
47	I06-012	I06-007	N 8TH ST & FREMONT ST	8	235	9	1	1	0	2019 TV Complete-needs Liner	8	235	0	235	0	0	0	0	0	0	0	0	0	0	0	
48	I06-036A	I06-036	N 9TH ST & W STATE ST	8	181	4	0	0	0	2019 TV Complete-needs Liner	8	181	0	181	0	0	0	0	0	0	0	0	0	0	0	
49	I06-036	I06-030	N 9TH ST & W MAIN ST	8	217	2	0	0	1	LCR @ 117'	8	217	0	217	0	0	0	0	0	0	0	0	0	0	0	
50	I06-038	I06-028	N 7TH ST	8	439	9	3	1	0	2019 TV Complete-needs Liner	8	439	0	439	0	0	0	0	0	0	0	0	0	0	0	
51	I06-040	I06-039	418 N 9TH ST	8	241	5	0	1	0	2019 TV Complete-needs Liner	8	241	0	241	0	0	0	0	0	0	0	0	0	0	0	
52	I06-043	H06-039	1110 W FREMONT	8	196	3	0	0	0	2015 TV Complete-needs Liner	8	196	0	196	0	0	0	0	0	0	0	0	0	0	0	
53	I06-044	I06-043	108 N 11TH ST	8	301	4	0	0	0	2019 TV Complete-needs Liner	8	301	0	301	0	0	0	0	0	0	0	0	0	0	0	
54	I06-046	I06-045	W STATE ST & N 10TH ST	8	425	7	0	0	0	2015 TV Inspection Segments-All have issues	8	425	0	425	0	0	0	0	0	0	0	0	0	0	0	
55	I06-048	I06-045	N 11TH ST	8	228	9	0	0	0	2019 TV Complete-needs Liner	8	228	0	228	0	0	0	0	0	0	0	0	0	0	0	
56	I06-049	I06-044	N 11TH ST	8	73	5	0	0	0	2019 TV Complete-needs Liner	8	73	0	73	0	0	0	0	0	0	0	0	0	0	0	
57	I06-050	I06-043	DENMEND BLVD	8	221	1	0	0	0	Goes under house	8	221	0	221	0	0	0	0	0	0	0	0	0	0	0	
58	I06-051	I06-050	DENMEND BLVD	8	334	12	0	0	0	2019 TV Complete-needs Liner	8	334	0	334	0	0	0	0	0	0	0	0	0	0	0	
59	I06-056	J06-020	SUMMIT	8	350	15	0	1	0	2019 TV Complete-needs Liner	8	350	0	350	0	0	0	0	0	0	0	0	0	0	0	
60	I06-060	I06-057A	JEROME ST	8	249	7	0	0	0	2019 TV Complete-needs Liner	8	249	0	249	0	0	0	0	0	0	0	0	0	0	0	
61	I06-063	I06-062	418 9TH ST	8	323	3	1	0	0	2019 TV Complete-needs Liner	8	323	0	323	0	0	0	0	0	0	0	0	0	0	0	
62	I06-064	I06-063	9TH ST & FRENCH CT	8	403	16	0	1	0	2019 TV Complete-needs Liner	8	403	0	403	0	0	0	0	0	0	0	0	0	0	0	
63	I06-065	I06-062	406 N 8TH ST	8	371	11	0	0	0	MH I06-062 needs replaced	8	371	0	371	0	0	0	0	0	0	0	0	0	0	0	
64	I06-070	H06-037	N 12TH ST	8	85	2	0	0	0	2019 TV Complete-needs Liner	8	85	0	85	0	0	0	0	0	0	0	0	0	0	0	
65	I06-073	J06-060	W STATE & N 6TH ST	8	511	11	2	0	0	2015 TV Complete-needs Liner	8	511	0	511	0	0	0	0	0	0	0	0	0	0	0	
66	I07-035	J07-066	6TH ST & NEVADA	8	431	9	2	0	0	2020 TV Complete-needs Liner	8	431	0	431	0	0	0	0	0	0	0	0	0	0	0	
67	I07-037	I07-036	W NEVADA ST	8	656	18	1	0	5	LCR 58', 110', 205', 466', 467'	8	656	0	656	0	0	0	0	0	0	0	0	0	0	0	
68	I07-038	I07-037	W NEVADA ST	8	56	0	0	0	0	Remove debris	8	56	0	56	0	0	0	0	0	0	0	0	0	0	0	
69	I07-041	I07-039	S 8TH ST	8	300	6	2	0	0	2019 TV Complete-needs Liner	8	300	0	300	0	0	0	0	0	0	0	0	0	0	0	

DRAWING FILENAME
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LAYOUT NAME: C3.0
LAYER MNGR NAME:
PLOT STYLE TABLE: FoxtrotScale.ctb

DATE	BY	REVISION	DATE

DESIGNED: SPS 03/22
DRAWN: ELT 03/22
CHECKED:
LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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CIPP BID TABULATION
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C3.0

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR	Comments:	PIPE SIZE	GIS FOOTAGE	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	
70	I07-040	I07-039	W NEVADA ST	8	148	1	0	0	0	I07-040 needs manhole	8	148	0	148	0	0	0	0	0	0	0	0	0	0	0	
71	I07-039	I07-038	W NEVADA ST	8	217	2	3	0	0	Verify positive slope with cleaning	8	217	0	217	0	0	0	0	0	0	0	0	0	0	0	
72	I07-044	I07-043	W BOONE ST	8	349	11	2	0	0	2015 TV Complete-needs Liner	8	349	0	349	0	0	0	0	0	0	0	0	0	0	0	
73	I07-052	I07-051	W BOONE ST	8	346	9	1	2	0	2015 TV Complete-needs Liner	8	346	0	346	0	0	0	0	0	0	0	0	0	0	0	
74	I07-055	I07-054B	N 7TH ST	6	240	9	0	0	0	MH I07-054B WAS ADDED @ BOC	6	240	240	0	0	0	0	0	0	0	0	0	0	0	0	
75	I07-061	I07-060	W LINN ST	8	316	9	2	0	0	2015 TV Complete-needs Liner	8	316	0	316	0	0	0	0	0	0	0	0	0	0	0	
76	I07-062	I07-060	W LINN ST	8	228	2	1	0	0	2015 TV Complete-needs Liner	8	228	0	228	0	0	0	0	0	0	0	0	0	0	0	
77	I07-063	I07-060	S 8TH ST	6	304	8	0	0	0	2017 TV Complete-needs Liner	6	304	304	0	0	0	0	0	0	0	0	0	0	0	0	
78	I07-064	I06-030	S 9TH ST & W MAIN ST	6	247	4	0	1	0	2019 TV Complete-needs Liner	6	247	247	0	0	0	0	0	0	0	0	0	0	0	0	
79	I07-069	I07-068	W CHURCH ST	8	176	5	2	0	0	2015 TV Complete-needs Liner	8	176	0	176	0	0	0	0	0	0	0	0	0	0	0	
80	I07-072	I07-071	S 10TH ST	8	287	8	0	0	0	2019 TV Complete-needs Liner	8	287	0	287	0	0	0	0	0	0	0	0	0	0	0	
81	I07-067A	I07-067	11TH & CHURCH	8	179	3	0	0	0	2015 TV Complete-needs Liner	8	179	0	179	0	0	0	0	0	0	0	0	0	0	0	
82	I07-075	I07-067A	11TH & CHURCH	8	94	4	0	0	0	2015 TV Complete-needs Liner	8	94	0	94	0	0	0	0	0	0	0	0	0	0	0	
83	I07-075A	I07-075	204 S 11TH ST	8	266	11	2	0	0	2015 TV Complete-needs Liner	8	266	0	266	0	0	0	0	0	0	0	0	0	0	0	
84	I07-076	I07-075A	S 11TH ST & W BOONE ST	8	208	12	0	0	0	2015 TV Complete-needs Liner	8	208	0	208	0	0	0	0	0	0	0	0	0	0	0	
85	I07-077	H07-029	W BOONE ST	8	443	9	4	0	0	Several intruding taps, medium roots, some cracks, but it is linable.	8	443	0	443	0	0	0	0	0	0	0	0	0	0	0	
86	I07-079	I07-078	W BOONE ST	8	268	7	0	1	0	2019 TV Complete-needs Liner	8	268	0	268	0	0	0	0	0	0	0	0	0	0	0	
87	I07-081	I07-077	W BOONE ST	8	195	2	0	1	0	2019 TV Complete-needs Liner	8	195	0	195	0	0	0	0	0	0	0	0	0	0	0	
88	I07-082	H07-032	W NEVADA ST	8	361	12	0	1	0	2019 TV Complete-needs Liner	8	361	0	361	0	0	0	0	0	0	0	0	0	0	0	
89	J05-013	J05-012	N 2ND ST	8	561	16	4	1	0	0	8	561	0	561	0	0	0	0	0	0	0	0	0	0	0	
90	J05-031	J05-030	608 N 5TH ST	6	279	3	0	0	0	OFF ROAD, COORDINATE ACCESS WITH CITY	6	279	279	0	0	0	0	0	0	0	0	0	0	0	0	
91	J05-032	J05-029	602 N 5TH ST	8	526	0	0	1	0	2015 TV Complete-needs Liner	8	526	0	526	0	0	0	0	0	0	0	0	0	0	0	
92	J05-037	J05-036	N 4TH ST & HUGHES	8	158	5	0	0	0	Ready for CIPP	8	158	0	158	0	0	0	0	0	0	0	0	0	0	0	
93	J05-044	J05-042	N 3RD ST	6	31	0	0	0	0	DIG REPAIR	6	31	0	31	0	0	0	0	0	0	0	0	0	0	0	
94	J06-006T	J06-005	W STATE ST & N 1ST ST	8	224	4	0	0	0	2019 TV Complete-needs Liner	8	224	0	224	0	0	0	0	0	0	0	0	0	0	0	
95	J06-008	J06-006T	W STATE ST & N 1ST ST	8	33	0	0	0	0	2019 TV Complete-needs Liner	8	33	0	33	0	0	0	0	0	0	0	0	0	0	0	
96	J06-013	J06-012	2ND & MAIN ST	6	153	4	0	0	0	2015 TV Inspection Segments-All have issues	6	153	153	0	0	0	0	0	0	0	0	0	0	0	0	
97	J06-021	J06-020	603 SUMMIT ST	15	27	0	0	0	0	2019 TV Complete-needs Liner	15	27	0	0	0	0	27	0	0	0	0	0	0	0	0	
98	J06-022	J06-021	212 N 6TH ST & SUMMIT ST	15	181	1	0	0	0	2019 TV Complete-needs Liner	15	181	0	0	0	0	181	0	0	0	0	0	0	0	0	
99	J06-033	J06-028	W STATE ST	6	220	3	0	0	0	2019 TV Complete-needs Liner	6	220	220	0	0	0	0	0	0	0	0	0	0	0	0	
100	J06-034	J06-033	W STATE ST	6	17	0	0	0	0	2015 TV Inspection Segments-All have issues	6	17	17	0	0	0	0	0	0	0	0	0	0	0	0	
101	J06-035	J06-033	BEHIND 204 W STATE	6	221	0	0	0	0	HEAVY CLEAN, LINE THROUGH BEND	8	221	0	221	0	0	0	0	0	0	0	0	0	0	0	
102	J06-037	J06-025	N 5TH ST & FREMONT ST	8	272	8	0	1	0	2019 TV Complete-needs Liner	8	272	0	272	0	0	0	0	0	0	0	0	0	0	0	
103	J06-038	J06-026	N 4TH ST & FREMONT	8	175	4	0	0	0	2019 TV Complete-needs Liner	8	175	0	175	0	0	0	0	0	0	0	0	0	0	0	
104	J06-044	J06-017	SUMMIT ST & VETERANS	8	202	5	1	0	0	2021 ready to line	8	202	0	202	0	0	0	0	0	0	0	0	0	0	0	
105	J06-045	J06-022	N 6TH ST/SUMMIT ST	8	32	0	0	0	0	2015 TV Complete-needs Liner	8	32	0	32	0	0	0	0	0	0	0	0	0	0	0	
106	J06-047T	J06-046	N 5TH SUMMIT VETERANS	8	321	9	3	0	0	2021 TV Inspection	8	321	0	321	0	0	0	0	0	0	0	0	0	0	0	
107	J06-049	J06-047T	N 5TH ST. BEHIND 414 JEROME ST.	6	195	0	0	0	0	MAY NOT HAVE THE ABILITY TO LINE THIS PIPE DUE TO DRASTIC VERTICAL BENDS. ATTEMPT TO LINE	6	195	195	0	0	0	0	0	0	0	0	0	0	0	
108	J06-050	J06-047T	414 JEROME ST	6	119	2	0	0	0	Line after installing MH J06-047T	6	119	119	0	0	0	0	0	0	0	0	0	0	0	0	
109	J06-052	J06-046	SUMMIT	8	224	6	0	0	0	2015 TV Inspection Segments-All have issues	8	224	0	224	0	0	0	0	0	0	0	0	0	0	0	
110	J06-053	J06-016	N 3RD ST & JEROME	6	254	4	0	0	0	2021 TELEVISING	6	254	254	0	0	0	0	0	0	0	0	0	0	0	0	
111	J06-057	J06-045	307 N 6TH ST	6	339	4	3	0	0	DIG REPAIR SERVICE@ 118', New Wye	6	339	339	0	0	0	0	0	0	0	0	0	0	0	0	
112	J06-058	I06-055	615 JEROME ST	6	347	1	0	0	0	2017 CCTV stops at 60' due to slight offset joint	6	347	347	0	0	0	0	0	0	0	0	0	0	0	0	
113	J06-061	J06-060	11 N. 6TH ST.	6	96	3	0	0	0	2020 TV Complete-needs Liner	8	96	0	96	0	0	0	0	0	0	0	0	0	0	0	
114	J06-062	J06-006T	35 W. STATE ST.	6	134	2	0	0	0	2020 TV Complete-needs Liner	8	134	0	122	0	0	0	0	0	0	0	0	0	0	0	
115	J06-063	J06-004	117 1ST ST	6	266	7	4	0	0	2020 TV Inspection Segments-All have issues	6	266	213	0	0	0	0	0	0	0	0	0	0	0	0	
116	J06-065	J06-003	W WEBSTER ST	8	273	7	1	0	0	2019 TV Complete-needs Liner	8	273	0	273	0	0	0	0	0	0	0	0	0	0	0	
117	J06-073	J06-001	411 N 1ST ST	6	213	7	0	0	0	2019 TV Complete-needs Liner	6	213	213	0	0	0	0	0	0	0	0	0	0	0	0	
118	J06-001A	J06-001	N 1ST ST	8	67	1	0	0	0	CIPP TRANSITION	8	67	0	67	0	0	0	0	0	0	0	0	0	0	0	
119	J06-074	J06-001A	N 1ST ST	6	228	0	2	0	0	DUE TO PROTRUDING TAPS, THE VIDEO WAS INCOMPLETE	6	228	228	0	0	0	0	0	0	0	0	0	0	0	0	
120	J06-079T	J06-079	N 2nd St	8	104	3	0	0	0	2019 TV Complete-needs Liner	8	104	0	104	0	0	0	0	0	0	0	0	0	0	0	
121	J06-080	J06-079T	N 2ND & ALLEY	8	218	3	0	0	0	2019 TV Complete-needs Liner	8	218	0	218	0	0	0	0	0	0	0	0	0	0	0	
122	J06-081	J06-080	W STATE ST	8	253	6	0	0	0	2019 TV Complete-needs Liner	8	253	0	253	0	0	0	0	0	0	0	0	0	0	0	
123	J06-082	J06-081	N 2nd St	6	30	2	0	0	0	2019 TV Complete-needs Liner	10	30	30	0	0	0	0	0	0	0	0	0	0	0	0	
124	J06-083	J06-079T	N 2nd St & ALLEY	6	186	1	0	0	0	Attempt to CIPP Through Bend, Review with Engineer.	6	186	0	186	0	0	0	0	0	0	0	0	0	0	0	
125	J06-084	J06-078	W GRANT ST	8	224	7	2	0	0	2019 TV Complete-needs Liner	8	224	0	224	0	0	0	0	0	0	0	0	0	0	0	
126	J06-085	J06-077	W WEBSTER ST	8	309	9	2	0	0	2021 TV Complete-needs Liner	8	309	0	309	0	0	0	0	0	0	0	0	0	0	0	
127	J06-086	J06-076	W OF N 2ND ST & LINCOLN ST	8	247	6	0	0	0	2019 TV Complete-needs Liner	8	247	0	247	0	0	0	0	0	0	0	0	0	0	0	
128	J06-088	J06-076	2ND ST, N OF LINCOLN	8	240	5	1	2	0	2015 TV Complete-needs Liner	8	240	0	240	0	0	0	0	0	0	0	0	0	0	0	
129	J06-091	J06-090	N 2ND ST	8	303	10	0	0	0	2015 TV Complete-needs Liner	8	303	0	303	0	0	0	0	0	0	0	0	0	0	0	
130	J06-098	J07-044	N 5TH ST	8	223	6	0	0	0	2015 TV Complete-needs Liner	8	223	0	223	0	0	0	0	0	0	0	0	0	0	0	
131	J06-101	J06-099	N 6TH ST & N 5TH ST ALLEY	8	243	2	0	0	0	WYE SETELED @ 62', SHOULD BE LINEABLE	8	243	0	243	0	0	0	0	0	0	0	0	0	0	0	
132	J06-102	J06-099	N 5TH ST ALLEY	8	222	3	2	0	0	2015 TV Inspection Segments-All have issues	8	222	0	222	0	0	0	0	0	0	0	0	0	0	0	
133	J07-003	J07-002	CHURCH ST	18	219	3	1	1	0	2015 TV Complete-needs Liner	18	219	0	0	0	0	0	219	0	0	0	0	0	0	0	
134	J07-004	J07-003	W NEVADA ST	18	222	7	2	0	0	2015 TV Complete-needs Liner	18	222	0	0	0	0	0	222	0	0	0	0	0	0	0	
135	J07-014	J07-012	ALLEY S OF W MAIN ST	8	74	0	0	0	0	MH 14 REMOVED, CIPP NEEDED	8	74	0	74	0	0	0	0	0	0	0	0	0	0	0	
136	J07-015	J07-014	ALLEY S OF W MAIN ST	8	18	0	0	0	0	MH 15 REMOVED, CIPP NEEDED	8	18	0	18	0	0	0	0	0	0	0	0	0	0	0	
137	J07-016	J07-015	ALLEY S OF W MAIN ST	8	70	3	0	0	0	2015 TV Inspection Segments-All have issues	8	70	0	70	0	0	0	0	0	0	0	0	0	0	0	
138	J07-023	J07-009	ALLEY S OF W CHURCH ST	6	120	2	0	0	0	CIPP THROUGH OFFSET JOINT	6	120	120	0	0	0	0	0	0	0	0	0	0	0	0	
139	J07-024	J07-008	W LINN ST & S 1ST ST	6	259	1	0	0	0	2015 TV Inspection Segments-All have issues	6	259	259	0	0	0	0	0	0	0	0	0	0	0	0	
140	J07-025	J07-006	S 2ND ST & W BOONE ST	8	225	0	0	0	0	2021 TV Complete-needs Liner	8	225	0	225	0	0	0	0	0	0	0	0	0	0	0	
141	J07-026	J07-025	S 1st ST & W BOONE ST	8	117	3	1	0	0	Nothing running through pipe, may not be active.	8	117	0	117	0	0	0	0	0	0	0	0	0	0	0	

DRAWING FILENAME
K:\proj\2000\2407-20A Marshalltown 2020 CIPP\Drawings\General\2407-20A_COVER.dwg

PLOT STYLE TABLE: FoxGroupScale.ctb
LAYER MNGR NAME:
LAYOUT NAME: C3.1

DATE	BY	
	DESIGNED:	SPS
	DRAWN:	ELT
	CHECKED:	

REVISION

DATE

03/22
03/22

LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

CIPP BID TABULATION
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C3.1

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR	Comments:	PIPE SIZE	GIS FOOTAGE	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	
142	J07-044EP	J07-044	ALLEY S OF W MAIN ST	8	182	1	0	0	0	2015 TV Inspection Segments-All have issues	8	182	0	182	0	0	0	0	0	0	0	0	0	0	0	
143	J07-049	J07-036	W LINN ST	8	408	9	5	0	0	2015 TV Complete-needs Liner	8	408	0	408	0	0	0	0	0	0	0	0	0	0	0	
144	J07-050	J07-049	S 6TH ST & W LINN ST	8	291	9	0	0	0	2019 TV Complete-needs Liner	8	291	0	291	0	0	0	0	0	0	0	0	0	0	0	
145	J07-051	J07-036	S 5TH ST & W LINN	8	300	6	3	0	0	Need to replace lampholeJ07-051	8	300	0	300	0	0	0	0	0	0	0	0	0	0	0	
146	J07-053	J07-052	S 4TH ST	8	234	9	2	1	0	2015 TV Complete-needs Liner	8	234	0	234	0	0	0	0	0	0	0	0	0	0	0	
147	J07-054	J07-052	W LINN ST	8	225	6	0	0	0	2019 TV Complete-needs Liner	8	225	0	225	0	0	0	0	0	0	0	0	0	0	0	
148	J07-055	J07-029	S 3RD ST	8	90	3	0	0	0	2015 TV Complete-needs Liner	8	90	0	90	0	0	0	0	0	0	0	0	0	0	0	
149	J07-060	J07-059	S 2ND & W LINN	8	213	2	1	0	1	LCR @ 16'	8	213	0	213	0	0	0	0	0	0	0	0	0	0	0	
150	J07-062	J07-004	W NEVADA ST	8	218	5	4	0	0	2015 TV Complete-needs Liner	8	218	0	218	0	0	0	0	0	0	0	0	0	0	0	
151	J07-067	J07-002	W BOONE ST	12	448	1	1	0	0	2015 TV Complete-needs Liner	12	448	0	0	0	448	0	0	0	0	0	0	0	0	0	
152	J07-074	J07-003	S 1ST ST	8	156	3	0	0	0	2014 TV Complete-needs Liner	8	156	0	156	0	0	0	0	0	0	0	0	0	0	0	
153	J07-088	J07-028	W BOONE ST	8	224	3	0	0	0	2015 TV Complete-needs Liner	8	224	0	224	0	0	0	0	0	0	0	0	0	0	0	
154	J07-089	J07-088	W BOONE ST	8	70	4	1	0	0	2019 TV Complete-needs Liner	8	70	0	70	0	0	0	0	0	0	0	0	0	0	0	
155	J07-094	J08-065	WASHINGTON ST EASEMENT	8	233	0	0	0	0	Heavy Cleaning	8	233	0	233	0	0	0	0	0	0	0	0	0	0	0	
156	J07-097	J07-096	S 2ND & W MADISION	8	271	0	0	0	0	Heavy Cleaning	8	271	0	271	0	0	0	0	0	0	0	0	0	0	0	
157	J07-098	J07-097	S 2ND & W MADISON	8	314	4	0	0	0	Heavy Cleaning	8	314	0	314	0	0	0	0	0	0	0	0	0	0	0	
158	J07-100	J07-095	S 1ST ST	8	101	4	1	0	0	Need to replace lamphole J07-100	8	101	0	101	0	0	0	0	0	0	0	0	0	0	0	
159	J08-027	J08-017	WASHINGTON ST	10	54	0	0	0	0	Spot repair done	10	54	0	0	54	0	0	0	0	0	0	0	0	0	0	
160	J08-062	K08-016A	E ANSON ST	10	194	2	1	0	0	ABS Truss pipe has hole pushed out into line. Will need to cut them out from inside the pipe.	10	194	0	0	194	0	0	0	0	0	0	0	0	0	0	
161	J08-065	J08-029	WASHINGTON ST EASEMENT	8	296	0	0	0	0	Heavy Cleaning @ 252 ON	8	296	0	296	0	0	0	0	0	0	0	0	0	0	0	
162	K05-002	J05-016	N CENTER ST	8	341	4	2	0	0	Sag, open joints and lines snakes down the line. Linable	8	341	0	341	0	0	0	0	0	0	0	0	0	0	0	
163	K06-010	K06-009	1ST AV. BETWEEN WEBSTER & GRANT	8	219	4	0	0	0	2019 TV Complete-needs Liner	8	219	0	219	0	0	0	0	0	0	0	0	0	0	0	
164	K06-012	K06-011	N 1ST AVE	8	418	12	2	0	1	LCR @ 219'	8	418	0	418	0	0	0	0	0	0	0	0	0	0	0	
165	K06-026	K06-010	1ST AV. TO CENTER BETWEEN WEBSTER & GRANT	8	444	13	2	0	1	LCR @ 86'	8	444	0	444	0	0	0	0	0	0	0	0	0	0	0	
166	K06-080	L06-025	BROMLEY ST	8	380	11	2	0	0	Spot Repair completed	8	380	0	380	0	0	0	0	0	0	0	0	0	0	0	
167	K06-081	K06-080	BROMLEY ST	8	219	8	1	0	0	No dig spot repair completed	8	219	0	219	0	0	0	0	0	0	0	0	0	0	0	
168	K06-083	K07-079	N 5TH AVE	10	444	5	2	0	0	2019 TV Complete-needs Liner	10	444	0	0	444	0	0	0	0	0	0	0	0	0	0	
169	K06-088	K06-010	1ST AV. BETWEEN WEBSTER & GRANT	6	114	2	1	0	1	LCR @ 75'	6	114	114	0	0	0	0	0	0	0	0	0	0	0	0	
170	K06-094	K06-077	S 5th AVE	8	275	8	3	0	0	2015 TV Complete-needs Liner	8	275	0	275	0	0	0	0	0	0	0	0	0	0	0	
171	K07-005	K07-004	S CENTER ST	24	254	0	0	0	0	CCTV HEAVY CLEAN & CIPP	24	254	0	0	0	0	0	0	0	254	0	0	0	0	0	
172	K07-006	K07-005	S CENTER	36	536	1	0	0	0	Heavy Cleaning, Transition	36	536	0	0	0	0	0	116	0	0	0	0	0	420	0	
173	K07-013T	K07-011	Alley Between 1st and 2nd Ave, N of Madison	18	255	5	1	0	0	MH 12 IS A SLOW BEND, LINE THROUGH	18	255	0	0	0	0	0	255	0	0	0	0	0	0	0	
174	K07-014	K07-013T	1ST AVE S	18	224	4	0	0	0	2015 TV Inspection Segments-All have issues	18	224	0	0	0	0	0	224	0	0	0	0	0	0	0	
175	K07-015	K07-014	S 1ST AVE.	12	224	2	0	0	0	2019 TV Complete-needs Liner	12	224	0	0	0	224	0	0	0	0	0	0	0	0	0	
176	K07-020	K07-019	BOONE ST	10	341	1	0	0	0	2015 TV Inspection Segments-All have issues	10	341	0	0	341	0	0	0	0	0	0	0	0	0	0	
177	K07-021	K07-020	S 1ST ST	10	78	1	0	0	0	Heavy Cleaning!	10	78	0	0	78	0	0	0	0	0	0	0	0	0	0	
178	K07-023	K07-022	E LINN ST	8	25	0	0	0	0	2015 TV Inspection Segments-All have issues	8	25	0	25	0	0	0	0	0	0	0	0	0	0	0	
179	K07-028	K07-027	E LINN ST AND W CHURCH	8	444	14	5	0	0	PR 24 Completed	8	444	0	444	0	0	0	0	0	0	0	0	0	0	0	
180	K07-030	K07-029	ALLEY OF S 3RD AVE	6	120	1	0	0	0	Line through bad repair at 35'	6	120	120	0	0	0	0	0	0	0	0	0	0	0	0	
181	K07-035	K07-023	1ST AVE IN ALLEY	10	223	7	1	0	0	CIPP FRACTURE AT 60', CLEEAN AND REVIEW WITH CITY	10	223	0	0	223	0	0	0	0	0	0	0	0	0	0	
182	K07-040	K07-038	E CHURCH ST & 2ND AVE	8	446	14	8	0	0	City should investigate which services are active.	8	446	0	446	0	0	0	0	0	0	0	0	0	0	0	
183	K07-043	K07-038	N 1ST AVE	8	218	3	1	0	0	2015 TV Inspection Segments-All have issues	8	218	0	218	0	0	0	0	0	0	0	0	0	0	0	
184	K07-044	K07-043	ALLEY MAIN & CHURCH	6	221	2	2	0	0	2015 TV Inspection Segments-All have issues	6	221	221	0	0	0	0	0	0	0	0	0	0	0	0	
185	K07-045	K07-044	ALLEY MAIN & CHURCH	8	128	7	2	0	0	Remove taps to comeplete CCTV & CIPP	8	128	128	0	0	0	0	0	0	0	0	0	0	0	0	
186	K07-046	K07-043	S 1ST AVE	6	123	3	0	0	0	2015 TV Complete-needs Liner	6	123	123	0	0	0	0	0	0	0	0	0	0	0	0	
187	K07-047	K07-019A	S 1ST AVE	6	208	1	0	0	0	HEAVY CLEAN	6	208	208	0	0	0	0	0	0	0	0	0	0	0	0	
188	K07-048	K07-019	E BOONE ST	8	145	0	0	0	0	2021 TV Complete-needs Liner	8	145	0	145	0	0	0	0	0	0	0	0	0	0	0	
189	K07-058	K07-010A	Alley south of 3rd Ave/Linn, No K07-057T Manhole between	8	730	0	0	0	0	ATTEMPT TO CCTV AND CLEAN, REVIEW WITH CITY	8	730	0	730	0	0	0	0	0	0	0	0	0	0	0	
190	K07-059	K07-058	S 3RD AVE	8	108	0	0	0	0	MULTIPLE COLLAPSE TO TOTAL FAILURE AT 57', LOOKS TO BE ANOTHER MAIN ON TOP OF THIS ONE (TWO LINES STACKED INTO MH 058) REVIEW WITH CITY, CCTV TOP LINE	8	108	0	108	0	0	0	0	0	0	0	0	0	0	0	
191	K07-060	K07-059	3RD AVE, ALLEY S. OF LINN	8	88	1	1	0	0	ATTEMPT TO LINE	8	88	0	88	0	0	0	0	0	0	0	0	0	0	0	
192	K07-061	K07-058	3RD AVE, ALLEY S. OF LINN	8	109	5	0	0	0	ATTEMPT TO LINE	8	109	0	109	0	0	0	0	0	0	0	0	0	0	0	
193	K07-070A	K07-070	E BOONE ST	8	231	2	1	0	0	2015 TV Complete-needs Liner	8	231	0	231	0	0	0	0	0	0	0	0	0	0	0	
194	K07-076	K07-075	E MAIN ST	8	81	0	0	0	0	2015 TV Complete-needs Liner	8	81	0	81	0	0	0	0	0	0	0	0	0	0	0	
195	K07-077	K07-076	E MAIN ST	8	152	0	0	0	0	2015 TV Inspection Segments-All have issues	8	152	0	152	0	0	0	0	0	0	0	0	0	0	0	
196	K07-078	K07-077	N 4TH AVE & E MAIN ST	8	44	0	0	0	0	2015 TV Complete-needs Liner	8	44	0	44	0	0	0	0	0	0	0	0	0	0	0	
197	K07-078	K07-079	E MAIN ST	10	418	10	0	0	1	LCR @ 289'	10	418	0	0	418	0	0	0	0	0	0	0	0	0	0	
198	K07-079	L07-069	E MAIN ST	12	431	11	1	0	0	2019 TV Complete-needs Liner	12	431	0	0	0	431	0	0	0	0	0	0	0	0	0	
199	K07-081	K07-072	ALLEY N OF 408 E LINN ST	8	219	0	0	0	0	PR 52 COMPLETED, SEGEMENT HAS 45 BEND	8	219	0	219	0	0	0	0	0	0	0	0	0	0	0	
200	K07-085	K07-083	E LINN ST	8	171	5	0	0	0	2015 TV Complete-needs Liner	8	171	0	171	0	0	0	0	0	0	0	0	0	0	0	
201	K07-087	K07-070A	E BOONE ST	8	104	3	1	0	0	2019 TV Complete-needs Liner	8	104	0	104	0	0	0	0	0	0	0	0	0	0	0	
202	K07-088	K07-069	S 4TH AVE	8	237	3	0	0	0	2015 TV Complete-needs Liner	8	237	0	237	0	0	0	0	0	0	0	0	0	0	0	
203	K07-089	K07-088	ALLEY E BOONE ST	8	268	4	1	0	0	2015 TV Complete-needs Liner	8	268	0	268	0	0	0	0	0	0	0	0	0	0	0	
204	K07-090	K07-070A	S 4TH AVE	8	142	2	0	0	0	2015 TV Complete-needs Liner	8	142	0	142	0	0	0	0	0	0	0	0	0	0	0	
205	K07-091	K07-005	S CENTER	24	228	2	1	0	0	Spot Repairs and then install Liner. Guy wire needs to be removed from pipe at 95' from UPST MH, Power pole removed from pipe at 110' from UPST MH, and a spot repair at 215' from UPST MH to remove a 2" offset point. Ovality, need to increase liner thickness.	24	228	0	0	0	0	0	0	0	228	0	0	0	0	0	
206	K08-001	L08-102	509 MAY ST	15	178	0	0	0	0	2019 TV Complete-needs Liner	15	178	0	0	0	0	178	0	0	0	0	0	0	0	0	
207	K08-002	K08-001	MAY ST	15	143	2	0	0	0	2021 TV Complete-needs Liner	15	143	0	0	0	0	143	0	0	0	0	0	0	0	0	

DRAWING FILENAME
K:\Proj\2000\2407-20A Marshalltown 2020 CIPP\Drawings\General\2407-20A_COVER.dwg

LAYER MNGR NAME	LAYOUT NAME
PLOT STYLE TABLE	C3.2
fosterjrScale.ctb	

DATE	BY	REVISION

DESIGNED: SPS 03/22
DRAWN: ELT 03/22
CHECKED:
LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

CIPP BID TABULATION
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C3.2

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR	Comments:	PIPE SIZE	GIS FOOTAGE	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	
208	K08-007	K08-006	MAY ST	10	14	0	0	0	0	Talk to simons. Needs Maintenance	10	14	0	0	14	0	0	0	0	0	0	0	0	0	0	
209	K08-007T	K08-007	MAY ST	10	40	0	0	0	0	Talk to simons. Needs Maintenance.. Diamond Vogul connection is now at 163' and line continues to Hy Vee.	10	40	0	0	40	0	0	0	0	0	0	0	0	0	0	
210	K08-028	K08-014	S 3RD AVE	8	360	11	5	1	0	2015 TV Inspection Segments-All have issues	8	360	0	360	0	0	0	0	0	0	0	0	0	0	0	
211	K08-015	K08-014	S 2ND & E ANSON	10	659	16	5	0	0	2015 TV Inspection Segments-All have issues	10	659	0	0	659	0	0	0	0	0	0	0	0	0	0	
212	K08-017	K08-016B	S 1ST AVE & E HIGH ST	8	310	9	4	0	0	2015 TV Inspection Segments-All have issues	8	310	0	310	0	0	0	0	0	0	0	0	0	0	0	
213	K08-019	K08-018	1012 S 1ST AVE	8	202	7	3	0	0	Lamphole I06-062 needs replaced	8	202	0	202	0	0	0	0	0	0	0	0	0	0	0	
214	K08-023	K08-022	920 S 2ND AVE	8	100	0	0	0	0	Line thru MH K08-023-	8	100	0	100	0	0	0	0	0	0	0	0	0	0	0	
215	K08-024	K08-023	ALLEY S OF E HIGH ST	8	134	0	0	0	0	Line thru MH K08-023-	8	134	0	134	0	0	0	0	0	0	0	0	0	0	0	
216	K08-025	K08-024	ALLEY S OF E HIGH ST	8	216	7	0	0	0	Line thru MH K08-025-	8	216	0	216	0	0	0	0	0	0	0	0	0	0	0	
217	K08-026	K08-025	ALLEY S OF E HIGH ST	8	214	5	0	0	0	Line thru MH K08-025	8	214	0	214	0	0	0	0	0	0	0	0	0	0	0	
218	K08-042	K08-003	S 5TH AVE	10	434	7	0	0	0	This segment has 3 private services that have totally failed at the main. Needs repaired before lining. Located at 86', 282' x2 & 363' from UPST MH.	10	434	0	0	434	0	0	0	0	0	0	0	0	0	0	
219	K08-046	K08-045	304 E ANSON ST	8	330	14	5	2	0	Will need Root and Tap cuts before lining	8	330	0	330	0	0	0	0	0	0	0	0	0	0	0	
220	K08-047	K08-045	S 4TH AVE	6	351	4	0	0	0	BORED SERVICE THROUGH MAIN @ 5 from NH 47, NEEDES REPAIR	6	351	351	0	0	0	0	0	0	0	0	0	0	0	0	
221	K08-048	K08-047	S 4TH AVE	6	192	1	0	0	0	2015 TV Inspection Segments-All have issues	6	192	192	0	0	0	0	0	0	0	0	0	0	0	0	
222	K08-049	K08-048	S 4TH AVE	6	188	1	0	0	0	2015 TV Inspection Segments-All have issues	6	188	188	0	0	0	0	0	0	0	0	0	0	0	0	
223	K08-051	L08-103	ANSON ST	15	181	4	0	0	0	2019 TV Complete-needs Liner	15	181	0	0	0	0	181	0	0	0	0	0	0	0	0	
224	K08-052	K08-051	ANSON ST	8	163	3	0	0	0	2019 TV Complete-needs Liner	8	163	0	163	0	0	0	0	0	0	0	0	0	0	0	
225	K08-053	K08-051	ANSON ST	8	306	8	0	0	0	2019 TV Complete-needs Liner	8	306	0	306	0	0	0	0	0	0	0	0	0	0	0	
226	K08-060	K08-059	BEHIND 922 S 6TH ST	33	257	1	0	0	0	Line Segment	33	257	0	0	0	0	0	0	0	0	0	0	257	0	0	
227	K08-067	K08-066	E SOUTH ST & S 1ST AVE	8	316	8	1	0	0	2019 TV Complete-needs Liner	8	316	0	316	0	0	0	0	0	0	0	0	0	0	0	
228	K08-075	K08-074A	RAIL YARD EASEMENT	10	294	0	0	0	0	USE LOW PSI WHEN CIPP PREP, 170 DIG REPAIR	10	294	0	0	294	0	0	0	0	0	0	0	0	0	0	
229	K09-004	K09-003	WOODS BEHIND GREENBRIAR	30	171	0	0	1	0	Large Diameter Pipe	30	171	0	0	0	0	0	0	0	0	0	171	0	0	0	
230	K09-040	K09-004	WOODS BEHIND GREENBRIAR	30	192	0	0	1	0	Large Diameter Pipe	30	192	0	0	0	0	0	0	0	0	0	192	0	0	0	
231	K09-042	K09-041	BEHIND GREENBRIAR 130	30	209	0	0	1	0	Large Diameter Pipe	30	209	0	0	0	0	0	0	0	0	0	209	0	0	0	
232	K09-043	K09-042	1302 GREENBRIER LANE	8	187	1	1	0	0	2015 TV Complete-needs Liner	8	187	0	187	0	0	0	0	0	0	0	0	0	0	0	
233	K09-051	K09-050	HIGH SCHOOL FIELDS	10	330	0	0	0	0	2015 TV Inspection Segments-All have issues	10	330	0	0	330	0	0	0	0	0	0	0	0	0	0	
234	K09-053	K09-054	E. South Street	8	31	0	0	0	0	2015 TV Complete-needs Liner	8	31	0	31	0	0	0	0	0	0	0	0	0	0	0	
235	K09-054	K09-052	E SOUTH STREET	8	180	1	0	0	0	2015 TV Complete-needs Liner	8	180	0	180	0	0	0	0	0	0	0	0	0	0	0	
236	K10-063	K10-059	E SOUTH STREET	8	347	9	0	0	0	2020 TV Complete-needs Liner	8	347	0	347	0	0	0	0	0	0	0	0	0	0	0	
237	K10-080	K10-079	3RD Ave & Rainbow	8	295	2	0	0	0	spot repair is complete. Ready to line	8	295	0	295	0	0	0	0	0	0	0	0	0	0	0	
238	K10-092	K10-091	S 3RD AVE & TOMAS DR	8	139	0	0	0	0	2015 TV Complete-needs Liner	8	139	0	139	0	0	0	0	0	0	0	0	0	0	0	
239	L06-008A	L06-008	E STATE ST	12	117	2	0	0	0	Line thru MH L06-008A- City will expose MH at time of Lining	12	117	0	0	0	117	0	0	0	0	0	0	0	0	0	
240	L06-009	L06-008A	E STATE ST	12	209	0	0	0	0	Line thru MH L06-008A- City will expose MH at time of Lining	12	209	0	0	0	209	0	0	0	0	0	0	0	0	0	
241	L06-012	L06-011A	E STATE ST	8	416	10	1	0	0	2019 TV Complete-needs Liner	8	416	0	416	0	0	0	0	0	0	0	0	0	0	0	
242	L06-055	L06-047	JBS, N 10TH AVE	18	18	0	0	0	0	2015 TV Complete-needs Liner, Heavy Cleaning	18	18	0	0	0	0	0	18	0	0	0	0	0	0	0	
243	L06-070	L06-069	12th AVE	36	432	2	0	0	0	2015 TV Inspection Segments-All have issues	36	432	0	0	0	0	0	0	0	0	0	0	0	432	0	
244	L07-013EP	L07-013	S 7TH AVE	8	79	1	0	0	0	Line is caped at end, or collapsed, not liable	8	79	0	79	0	0	0	0	0	0	0	0	0	0	0	
245	L07-016	L07-015	5 S 6TH AVE	6	275	2	0	1	0	L07-016 MH COMPLETE	6	275	275	0	0	0	0	0	0	0	0	0	0	0	0	
246	L07-017	L07-016	5 S 6TH AVE	6	21	0	0	0	0	L07-016 MH COMPLETE	6	21	21	0	0	0	0	0	0	0	0	0	0	0	0	
247	L07-019	L07-015	S 6TH AVE	6	231	2	0	0	0	utility bore through pipe @ 155', service repair outside mh 19	6	231	231	0	0	0	0	0	0	0	0	0	0	0	0	
248	L07-010A	L07-010	Alley from Church to Linn, east of 8th Av	8	182	0	0	0	0	Review and CIPP	8	182	0	182	0	0	0	0	0	0	0	0	0	0	0	
249	L07-027	L07-010A	Alley from Church to Linn, east of 8th Av	8	143	2	0	0	0	Review and CIPP	8	143	0	143	0	0	0	0	0	0	0	0	0	0	0	
250	L07-028	L07-027	Alley from Church to Linn, east of 8th Av	8	226	5	1	0	0	Review and CIPP	8	226	0	226	0	0	0	0	0	0	0	0	0	0	0	
251	L08-098	L08-097	ANSON CREEK (MAY ST & E ANSON)	33	99	0	0	1	0	2015 TV Complete-needs Liner	33	99	0	0	0	0	0	0	0	0	0	0	99	0	0	
252	L08-099	L08-098	ANSON CREEK (MAY ST & E ANSON)	33	118	0	0	1	0	2015 TV Complete-needs Liner	33	118	0	0	0	0	0	0	0	0	0	0	118	0	0	
253	L08-102	L08-096	S 6TH AVE & MAY ST	15	135	0	0	0	0	2015 TV Complete-needs Liner, Heavy Cleaning	15	135	0	0	0	0	135	0	0	0	0	0	0	0	0	
254	L09-018	L09-001	BEHIND FOOTBALL FIELD	27	353	0	0	0	0	Large Diameter Pipe	27	353	0	0	0	0	0	0	0	0	353	0	0	0	0	
255	L09-020	L09-019	514 E OLIVE ST	30	349	0	0	0	0	2015 TV Complete-needs Liner	30	349	0	0	0	0	0	0	0	0	0	349	0	0	0	
256	L09-023	L10-001A	EAST OLIVE ST	8	44	0	0	0	0	2015 TV Complete-needs Liner	8	44	0	44	0	0	0	0	0	0	0	0	0	0	0	
257	L09-024	L09-023	S 7TH AVE & OLIVE ST	8	311	4	0	0	0	2015 TV Complete-needs Liner	8	311	0	311	0	0	0	0	0	0	0	0	0	0	0	
258	L09-026	L09-025	E OLIVE ST	8	329	4	1	0	0	2015 TV Complete-needs Liner	8	329	0	329	0	0	0	0	0	0	0	0	0	0	0	
259	L09-034	L08-086	E SOUTH STREET	8	189	0	0	0	0	2015 TV Inspection Segments-All have issues	8	189	0	189	0	0	0	0	0	0	0	0	0	0	0	
260	L10-008	L10-007	2014 EDGEBROOK	30	261	1	1	0	0	Large Diameter Pipe	30	261	0	0	0	0	0	0	0	0	0	261	0	0	0	
261	L10-013	L10-012	BAILY DR & THUNDERBIRD	8	313	8	1	0	0	2015 TV Complete-needs Liner	8	313	0	313	0	0	0	0	0	0	0	0	0	0	0	
262	L10-034	L10-033	BAILEY DR	8	316	4	0	0	0	2015 TV Complete-needs Liner	8	316	0	316	0	0	0	0	0	0	0	0	0	0	0	
263	L10-043	L10-031	1808 EDGEBROOK DR	8	279	5	0	0	0	2015 TV Complete-needs Liner	8	279	0	279	0	0	0	0	0	0	0	0	0	0	0	
264	L10-048	L10-001A	E OLIVE ST	8	142	0	0	0	0	2015 TV Complete-needs Liner	8	142	0	142	0	0	0	0	0	0	0	0	0	0	0	
265	L11-001A	L11-001	2112 EDGEBROOK DRIVE	27	294	2	2	0	0	Large Diameter Pipe	27	294	0	0	0	0	0	0	0	0	294	0	0	0	0	
266	L11-022	L11-001	706 NEWCASTLE RD	8	342	5	1	2	0	HEAVY ROOTS IN SERVICES	8	342	0	342	0	0	0	0	0	0	0	0	0	0	0	
267	L11-024	L11-023	NEWCASTLE RD	8	243	1	1	0	0	2017 TV Inspection Segments-All have issues	8	243	0	243	0	0	0	0	0	0	0	0	0	0	0	
268	M06-034	M06-032	E. OF EAST MAIN LS	8	277	4	1	0	0	Requested by Justin Nickel- Under buildings	8	277	0	277	0	0	0	0	0	0	0	0	0	0	0	
269	M06-039	M06-LS2	E MARION ST	8	25	0	0	0	0	2015 TV Complete-needs Liner, Heavy Cleaning	8	25	0	25	0	0	0	0	0	0	0	0	0	0	0	
270	M07-002A	M07-002	S 12TH AVE	10	208	0	0	0	0	2015 TV Complete-needs Liner, Heavy Cleaning	10	208	0	0	208	0	0	0	0	0	0	0	0	0	0	
271	M07-044	M07-078	1301 EAST BOONE	8	371	2	0	0	0	2019 TV Complete-needs Liner	8	371	0	371	0	0	0	0	0	0	0	0	0	0	0	
272	M07-045	M07-044	1301 EAST BOONE	8	263	11	3	0	0	CIPP HOLE @ 160, LOW PSI FOR PREP	8	263	0	371	0	0	0	0	0	0	0	0	0	0	0	
273	M07-059	M07-058	E NEVADA ST	8	433	11	2	0	0	2015 TV Complete-needs Liner	8	433	0	433	0	0	0	0	0	0	0	0	0	0	0	
274	M07-078	M07-077	MARSHALL DR	8	241	7	0	0	0	2015 TV Complete-needs Liner	8	241	0	241	0	0	0	0	0	0	0	0	0	0	0	
275	J06-062	K06-030	34 W. STATE ST.	8	316	5	1	0	0	0	8	316	0	316	0	0	0	0	0	0	0	0	0	0	0	
276	J06-086T	J06-086	W. LINCOLN ST.	8	10	6	0	0	0	0	8	10	0	10	0	0	0	0	0	0	0	0	0	0	0	
277	K07-051	K07-013T	ALLEY 410 S. 1ST AVE.	12	438	1	0	0	0	LINE THROUGH K07-051A & OPEN	12	438	0	0	0	438	0	0	0	0	0	0	0	0	0	

DRAWING FILENAME
K:\proj\2000\2407-20A Marshalltown 2020 CIPP\Drawings\General\2407-20A_COVER.dwg

LAYOUT NAME	LAYER MNGR NAME	PLOT STYLE TABLE
C3.3		FoxGreyScale.ctb

DATE	BY	REVISION

DESIGNED: SPS 03/22
DRAWN: ELT 03/22
CHECKED:
LAST UPDATE: 3/30/22

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

CIPP BID TABULATION

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C3.3

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR	Comments:	PIPE SIZE	GIS FOOTAGE	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	
278	H06-097	H06-044	1212 SUMMIT ST.	10	76	0	0	0	0	READY FOR CIPP	12	76	0	0	76	0	0	0	0	0	0	0	0	0	0	
279	J07-002	J07-001	8 NEVADA ST.	18	230	3	0	0	0	THERE APPEARS TO BE PERFORATED PIPE ON THIS LINE.	18	230	0	0	0	0	0	230	0	0	0	0	0	0	0	
280	K08-077	K08-076	621 S. 3RD AVE.	10	237	1	0	0	0	READY FOR CIPP	10	237	0	0	237	0	0	0	0	0	0	0	0	0	0	
281	K08-076	K08-075	621 S. 3RD AVE.	10	137	0	0	0	0	READY FOR CIPP	10	137	0	0	137	0	0	0	0	0	0	0	0	0	0	
282	K05-007	K05-004	601 N. 2ND AVE.	6	414	12	0	0	0	READY FOR CIPP	6	414	414	0	0	0	0	0	0	0	0	0	0	0	0	
283	K05-005	K05-004	601 N. 2ND AVE.	8	283	4	1	0	0	NEEDS SHORT LINER OUTSIDE MH 005	8	283	0	283	0	0	0	0	0	0	0	0	0	0	0	
284	K05-004	K06-038	601 N. 2ND AVE.	8	424	14	1	0	0	REVIEW MH 38	8	424	0	424	0	0	0	0	0	0	0	0	0	0	0	
285	L08-052	L08-051	1115 E. MAY ST.	6	140	2	1	1	0	ROOT CUTTING	6	140	186	0	0	0	0	0	0	0	0	0	0	0	0	
286	L08-028T	L08-051	1116 E. MAY ST.	6	98	1	0	0	0	CIPP THROUGH BEND	6	98	98	0	0	0	0	0	0	0	0	0	0	0	0	
287	K07-033	K07-024	110 S. 1ST AVE.	8	296	3	0	0	0	2021 VIDEO FROM MH AND PR PROJECT	8	296	0	296	0	0	0	0	0	0	0	0	0	0	0	
288	L09-002	L09-001	BEHIND 621 RATCLIFFE DR.	12	460	2	0	0	0	2021 VIDEO FROM MH AND PR PROJECT	12	460	0	0	0	460	0	0	0	0	0	0	0	0	0	
289	L06-019	L06-012	706 E. BROMLEY ST.	8	436	9	0	0	0	2021 VIDEO FROM MH AND PR PROJECT	8	436	0	436	0	0	0	0	0	0	0	0	0	0	0	
290	H07-032	H07-029	307 S.12TH ST.	8	443	6	0	0	0	2021 VIDEO FROM MH AND PR PROJECT	8	443	0	443	0	0	0	0	0	0	0	0	0	0	0	
291	K07-027	K07-026	204 E. LINN ST.	8	224	2	0	0	0	2021 VIDEO FROM MH AND PR PROJECT	8	224	0	224	0	0	0	0	0	0	0	0	0	0	0	
292	K06-009	K06-008	306 1ST AVE.	15	386	8	1	0	0	2022 VIDEO FROM MH AND PR PROJECT	15	386	0	0	0	0	386	0	0	0	0	0	0	0	0	
293	K07-092	K07-083A	405 E LINN ST	6	156	0	0	0	0	ATTEMPT TO LINE, REPORT TO CITY	0	156	156	0	0	0	0	0	0	0	0	0	0	0	0	
					70,495	**1,284**	**188**	**40**	**14**			70,495	7,900	46,708	7,093	2,327	1,231	1,688	-	482	647	1,182	474	852	-	

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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
foxcitystdA.ctb		C3.4

DATE	BY		REVISION	DATE
03/22	SPS	DESIGNED:		
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FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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CIPP BID TABULATION
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C3.4

MANHOLE BID TABULATION

EXISTING INFORMATION														BID ITEMS											
STRUCTURE	PLAN SHEET	GENERAL LOCATION	APPROXIMATE ADDRESS	DIA (IN)	RIM (FT)	FLOW LINE (FT)	DEPTH (FT)	TYPE	LH	TEE	BEND	END OF PIPE	MH	SURFACE	INSTALL 48" MANHOLE	REMOVE/ REPLACE 48" MANHOLE	REMOVE/ REPLACE DROP CONNECTION	FULL DEPTH COMPOSITE PAVEMENT PATCH (SY)	SIDEWALK PATCH (SY)	DRIVEWAY PAVEMENT (SY)	GRAVEL SURFACING (TONS)	PCC PAVEMENT PATCH (SY)	INSTALL 48" MANHOLE 0 TO 5 (VF)	INSTALL 48" MANHOLE 5 TO 10 (VF)	INSTALL 48" MANHOLE 10 TO 15 (VF)	INSTALL 48" MANHOLE 15 TO 20 (VF)	BASE BID AND BID ALTERNATE
I07-040	D3.1	W NEVADA ST	803 W Nevada St		933.48	930.03	3.45	LAMP HOLE	1					ASPHALT	1			44					1				Base Bid
L07-013EP	D3.1	S 7TH AVE	107 S 7TH AVE				9	END OF PIPE				1		ASPHALT	1			44						1			Base Bid
K06-038	D3.1	N 2ND AVE	601 N. 2ND AVE.	48			9						1	PCC		1						44		1			Base Bid
								BASE BID TOTALS	**1**			**1**	**1**		**2**	**1**		**88**				**44**	**1**	**2**			Base Bid

POINT REPAIR BID TABULATION

EXISTING CONDITIONS								TABULATION OF SANITARY SEWER POINT REPAIRS																				
POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	COMPOSITE PAVEMENT PATCH (SY)	PCC PAVEMENT PATCH (SY)	ASPHALT PAVEMENT PATCH (SY)	SIDEWALK PATCH (SY)	GRAVEL SURFACING (TONS)	LENGTH OF 6" PIPE (LF)	LENGTH OF 8" PIPE (LF)	LENGTH OF 10" PIPE (LF)	LENGTH OF 12" PIPE (LF)	LENGTH OF 24" PIPE (LF)	REPLACE WYE (EA)	RELOCATE WATER SERVICE (EA)	DRIVEWAY PCC PAVEMENT PATCH (SY)	Televising Footage Repair Location (FT)	Internal Repair, 6-INCH (FT)	Internal Repair, 8-INCH (FT)	Internal Repair, 10-INCH (FT)	Internal Repair, 12-INCH (FT)	Internal Repair, 24-INCH (FT)	LCR Repair (EA)	PCC Curb and Gutter, 30-INCH (LF)	NUMBER OF POINT REPAIRS	NUMBER OF INTERNAL POINT REPAIRS
1	93	D3.1	J05-044	J05-042	N 3RD ST	VCP	6	23					5								1								1	
2	16	D3.1	H06-075	H06-074A	N 14TH STREET EASEMENT	VCP	10		31						30						1								1	
3	111	D3.1	J06-057	J06-045	307 N 6TH ST	VCP	6		44					10				1			118								1	
4A	218	D3.2	K08-042	K08-003	S 5TH AVE	VCP	10		44									1			86								1	
4B	218	D3.2	K08-042	K08-003	S 5TH AVE	VCP	10		44					10				2			282								1	
4C	218	D3.2	K08-042	K08-003	S 5TH AVE	VCP	10		44									1			363								1	
5	220	D3.2	K08-047	K08-045	S 4TH AVE	VCP	6						5								1								1	
6	247	D3.2	L07-019	L07-015	S 6TH AVE	VCP	6		44				5								155								1	
7	228	D3.3	K08-075	K08-074A	RAIL YARD EASEMENT	VCP	10					10			20						170								1	
NO-DIG REPAIRS																														
8	205	D3.3	K07-091	K07-005	S CENTER	VCP	24														125 / 13					20				2
9	2	D2.1	G06-027	G06-026	N 19TH ST & FREMONT ST	VCP	8														105						1			
10	283	D2.5	K05-005	K05-004	601 N. 2ND AVE.	VCP	8														283		5							1
11	18	D2.1	H06-078	H06-076	N 14TH ST	VCP	8														80						1			
12	32	D2.4	H07-028	H07-027	S 12TH ST/ W LINN ST	VCP	8														263						1			
13	49	D2.2	I06-036	I06-030	N 9TH ST & W MAIN ST	VCP	8														53						1			
14	67	D2.4	I07-037	I07-036	W NEVADA ST	VCP	8														58						1			
15	67	D2.4	I07-037	I07-036	W NEVADA ST	VCP	8														110						1			
16	67	D2.4	I07-037	I07-036	W NEVADA ST	VCP	8														205						1			
17	67	D2.4	I07-037	I07-036	W NEVADA ST	VCP	8														466						1			
18	67	D2.4	I07-037	I07-036	W NEVADA ST	VCP	8														467						1			
19	149	D2.7	J07-060	J07-059	S 2ND & W LINN	VCP	8														16						1			
20	164	D2.5	K06-012	K06-011	N 1ST AVE	VCP	8														219						1			
21	165	D2.5	K06-026	K06-010	1ST AV. TO CENTER	VCP	8														86						1			
22	169	D2.5	K06-088	K06-010	1ST AV. BETWEEN	VCP	6														75						1			
23	197	D2.5	K07-078	K07-079	E MAIN ST	VCP	10														289						1			
					BASE BID TOTALS			**23**	**251**			**10**	**15**	**20**	**50**			**5**				**5**			**20**	**14**		**9**	**3**

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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
FoxGrayScale.ctb		C3.5

DATE	BY	REVISION	DESIGNED:	DRAWN:	CHECKED:

LAST UPDATE: 3/30/22
DATE: 03/22
BY: SIPS
DESIGNED: ELT
DRAWN:
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FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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MANHOLE REPAIR BID TABULATION
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IOWA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C3.5

CITY LIMITS

D2.1
D2.2
D2.3
D2.4
D2.5
D2.6
D2.7
D2.8
D2.9
D2.10
D2.11
D2.12

84N
83N

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
- 8" SANITARY CIPP
- 9" SANITARY CIPP
- 10" SANITARY CIPP
- 12" SANITARY CIPP
- 15" SANITARY CIPP
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- 27" SANITARY CIPP
- 30" SANITARY CIPP
- 33" SANITARY CIPP
- 36" SANITARY CIPP
- MANHOLE REHAB
- MANHOLE READY

DRAWING FILENAME
K:\1proj\2000\2407-20A Marshalltown 2020 CIPP\Drawings\Civil\2407-20A CITY LIMITS.dwg

PLOT STYLE TABLE: FoxGrayScale.ctb
LAYER MNGR NAME:
LAYOUT NAME: C4.1

DATE	REVISION	BY	DATE
		DESIGNED:	SPS 01/22
		DRAWN:	SPB 01/22
		CHECKED:	
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Ames, Iowa 50010
Phone: (515) 233-0000
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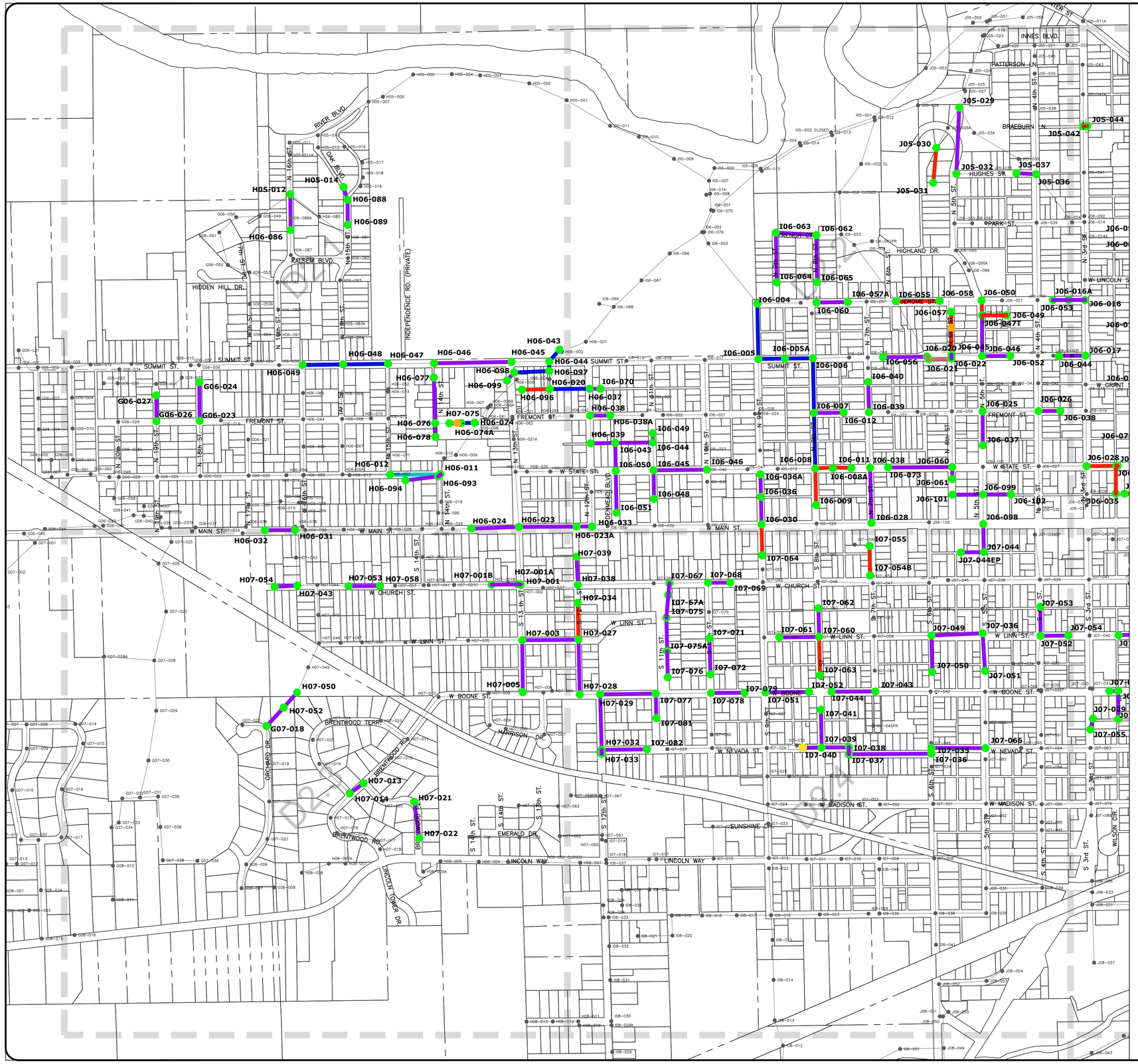
PROJECT OVERVIEW MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
MARSHALLTOWN, IA
PN: SAN21001

PROJECT NO.
2407-20A

SHEET
C4.1



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LAYOUT NAME: D1.1
LAYER MNGR NAME:
PLOT STYLE TABLE: foxstreyScale.ctb

CURED IN PLACE PIPE MAPPING KEY

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D2.1	D2.2	D2.5	D2.6
D2.3	D2.4	D2.7	D2.8
		D2.9	D2.10
		D2.11	D2.12
		D1.3	

0 400' 800'

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
- 8" SANITARY CIPP
- 9" SANITARY CIPP
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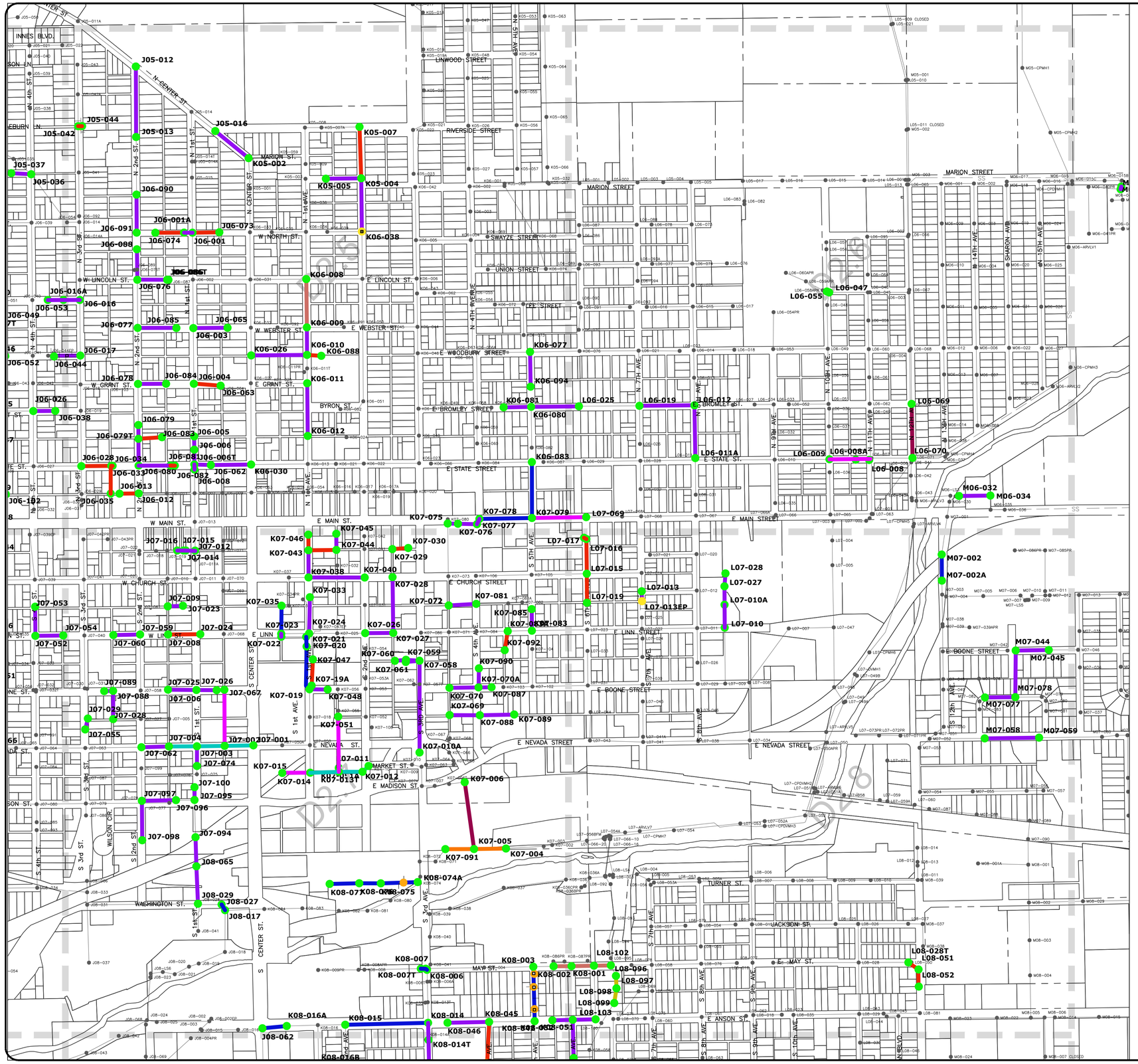
- 30" SANITARY CIPP
- 33" SANITARY CIPP
- 36" SANITARY CIPP
- CONTRACTOR NEEDS TO CONTACT CITY PRIOR TO WORK (USE LOW JET PSI)
- MANHOLE REHAB
- MANHOLE READY
- DIG POINT REPAIR

DATE	BY	REVISION



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PLOT STYLE TABLE
FoxGray5Color.ctb

LAYER MNGR NAME

LAYOUT NAME
D1.2

DATE	BY	REVISION

DESIGNED: ELT 03/22
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CIPP PLAN - SHEET INDEX MAP

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP

CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

SHEET
D1.2

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
- 8" SANITARY CIPP
- 9" SANITARY CIPP
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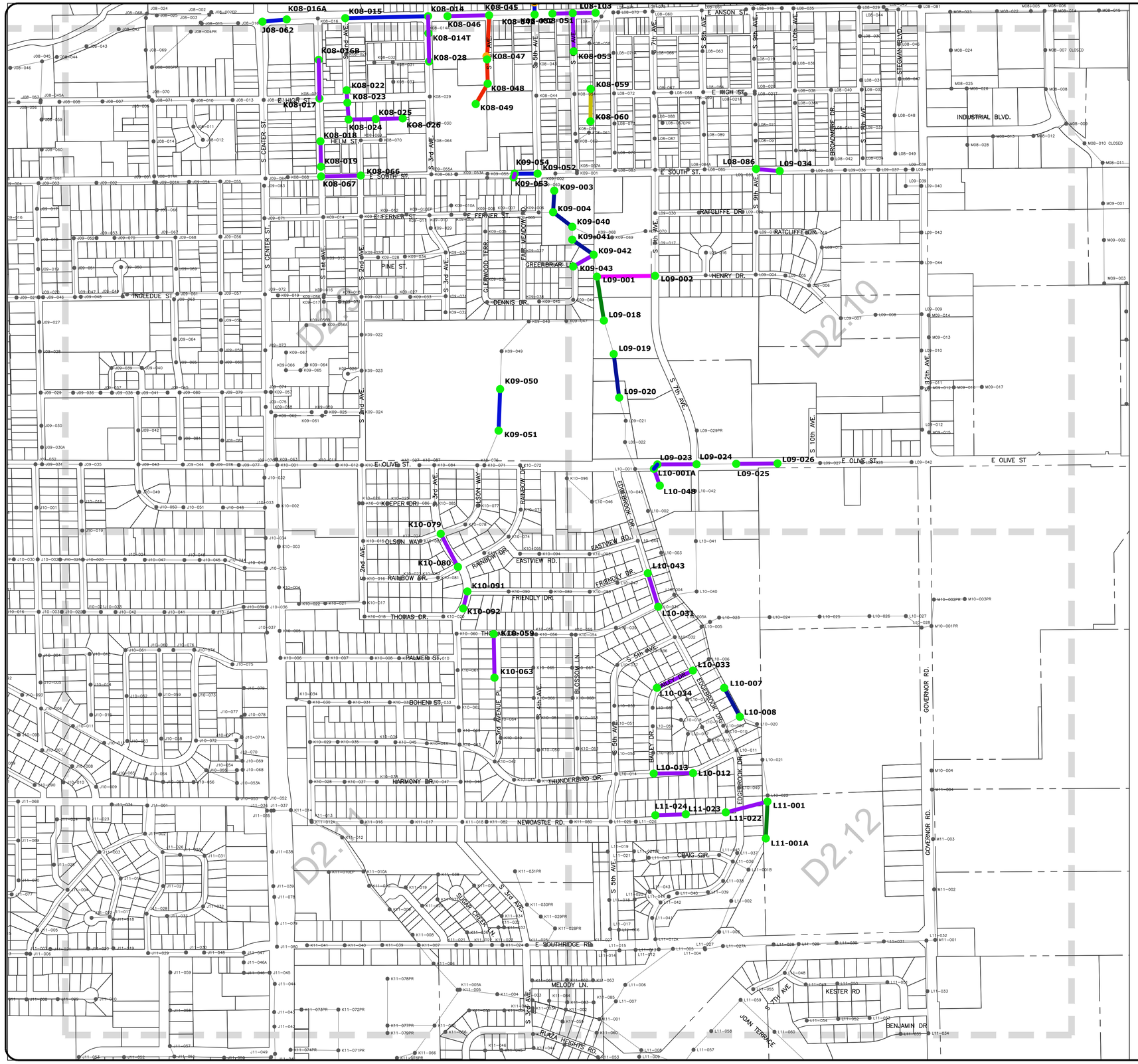
- CONTRACTOR NEEDS TO CONTACT CITY PRIOR TO WORK (USE LOW JET PSI)
- MANHOLE REHAB
- MANHOLE READY
- DIG POINT REPAIR

CURED IN PLACE PIPE MAPPING KEY



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LAYOUT NAME	D1.3
LAYER MNGR NAME	
PLOT STYLE TABLE	FoxGray5calc.ctb

CURED IN PLACE PIPE MAPPING KEY

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D2.1	D2.2	D2.5	D2.6
D2.3	D2.4	D2.7	D2.8
		D2.9	D2.10
		D2.11	D2.12

D1.3

0 400' 800'

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
- 8" SANITARY CIPP
- 9" SANITARY CIPP
- 10" SANITARY CIPP
- 12" SANITARY CIPP
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- CONTRACTOR NEEDS TO CONTACT CITY PRIOR TO WORK (USE LOW JET PSI)
- MANHOLE REHAB
- MANHOLE READY
- DIG POINT REPAIR

DATE	BY	REVISION

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
1	G06-024	G06-023	N 18TH ST	8	308	11	4	2	0
2	G06-027	G06-026	N 19TH ST & FREMONT ST	8	207	8	1	2	1
4	H06-012	H06-011	N 14TH & W STATE	18	404	2	0	0	0
5	H06-023A	H06-023	W MAIN ST	8	452	15	2	0	0
6	H06-024	H06-023	1312 W MAIN	8	378	5	1	0	0
7	H06-032	H06-031	W MAIN ST & S 17TH ST	8	240	10	0	0	0
12	H06-046	H06-045	SUMMIT ST	8	616	8	0	0	0
13	H06-048	H06-047	SUMMIT ST	10	357	9	0	1	0
14	H06-049	H06-048	SUMMIT ST	10	322	11	0	0	0
15	H06-074A	H06-074	KIWANIS PARK & 14TH ST	10	106	0	0	0	0
16	H06-075	H06-074A	N 14TH STREET EASEMENT	10	95	0	0	0	0
17	H06-077	H06-076	N 14TH ST	8	363	12	0	1	0
18	H06-078	H06-076	N 14TH ST	8	109	2	0	0	1
19	H06-086	H05-012	N 16TH ST	8	284	5	0	2	0
20	H06-088	H05-014	N 15TH ST	8	104	1	1	0	0
21	H06-089	H06-088	N 15TH ST	8	201	7	0	0	0
22	H06-093	H06-011	W STATE ST	8	27	0	0	0	0
23	H06-094	H06-093	W STATE ST	8	261	3	0	0	0
24	H06-096	H06-020	N 13TH ST	6	221	4	0	0	0
25	H06-098	H06-097	N 13TH ST	10	280	5	1	0	0
26	H06-099	H06-098	N 13TH ST	8	85	0	0	0	0
278	H06-097	H06-044	1212 SUMMIT ST.	10	76	0	0	0	0
					5,496	**118**	**10**	**8**	**2**

POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	Televising Footage Repair Location (FT)
2	16	D3.1	H06-075	H06-074A	N 14TH STREET EASEMENT	VCP	10	1
11	18	D2.1	H06-078	H06-076	N 14TH ST	VCP	8	80

CURED IN PLACE PIPE MAPPING KEY

D1.1 D1.2

D2.1 D2.2 D2.5 D2.6

D2.3 D2.4 D2.7 D2.8

D2.9 D2.10

D2.11 D2.12

D1.3

0 200' 400'

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
- 8" SANITARY CIPP
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- MANHOLE REHAB
- MANHOLE READY
- DIG POINT REPAIR

DRAWING FILENAME
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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
FoxGreyScale.ctb		D2.1

DATE	BY	REVISION
03/22	ELT	
03/22	ELT	

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FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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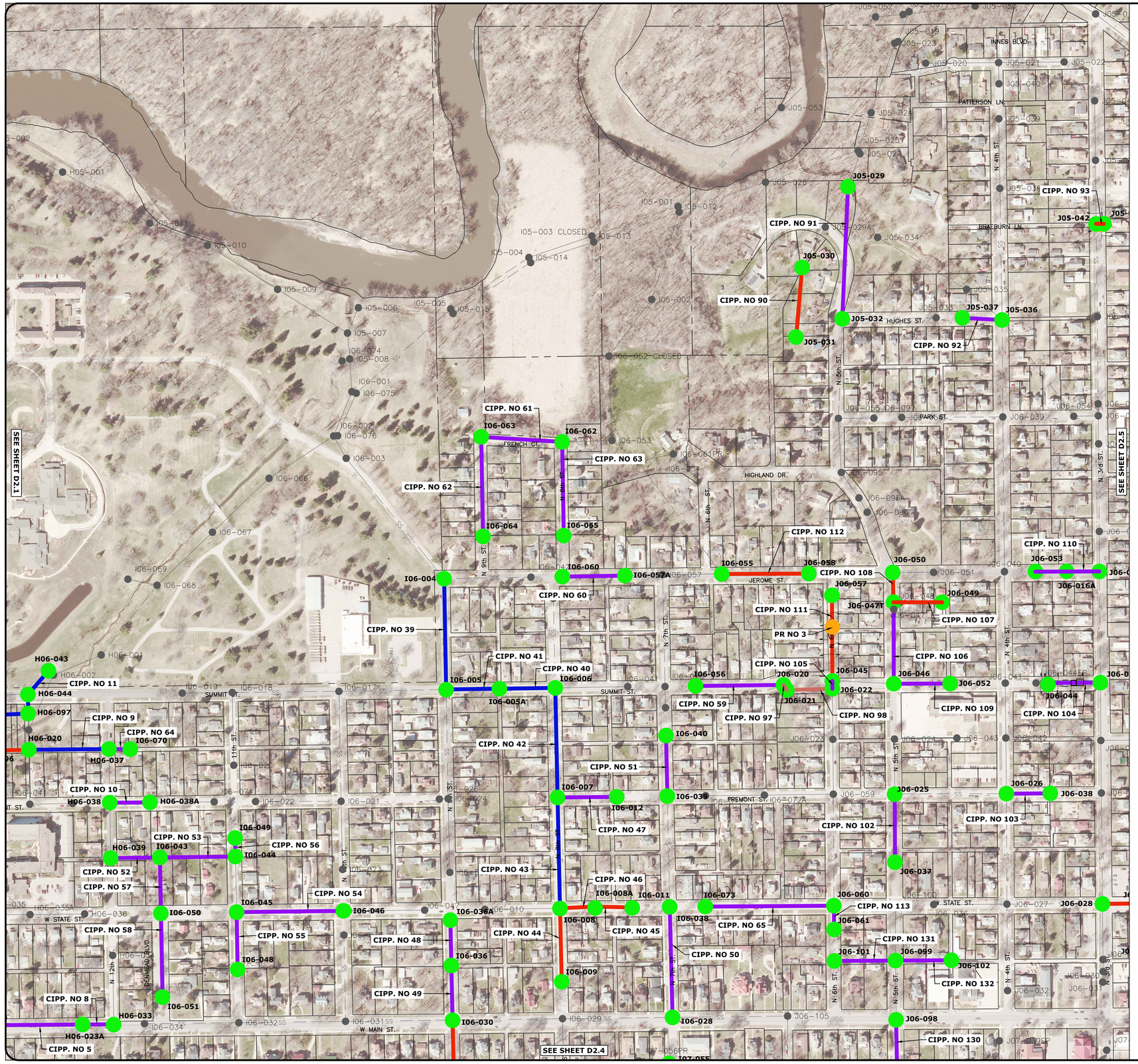
CIPP PLAN - SITE MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

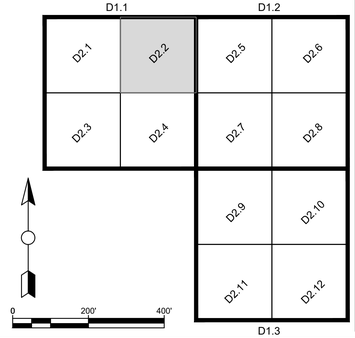
SHEET
D2.1



CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
8	H06-033	H06-023A	W MAIN ST	8	129	2	1	0	0
9	H06-037	H06-020	N 12TH ST	10	318	9	3	0	0
10	H06-038A	H06-038	S 12TH AVE & FREMONT ST	8	165	4	0	0	0
11	H06-044	H06-043	SUMMITT ST	10	126	0	0	0	0
39	I06-005	I06-004	N 9TH ST & JEROME STREET	10	440	6	3	0	0
40	I06-006	I06-005A	N 8TH ST / SUMMITT ST	10	221	3	0	0	0
41	I06-005A	I06-005	N 9TH ST / SUMMITT ST	10	212	1	0	0	0
42	I06-007	I06-006	FREMONT ST & N 8TH ST	10	435	11	3	0	0
43	I06-008	I06-007	STATE ST & 8TH ST	10	440	15	3	0	0
44	I06-009	I06-008	W STATE ST	6	293	9	0	0	0
45	I06-011	I06-008A	W STATE ST	6	139	4	0	0	0
46	I06-008A	I06-008	W STATE ST	6	150	5	0	0	0
47	I06-012	I06-007	N 8TH ST & FREMONT ST	8	235	9	1	1	0
48	I06-036A	I06-036	N 9TH ST & W STATE ST	8	181	4	0	0	0
49	I06-036	I06-030	N 9TH ST & W MAIN ST	8	217	2	0	0	1
50	I06-038	I06-028	N 7TH ST	8	439	9	3	1	0
51	I06-040	I06-039	418 N 9TH ST	8	241	5	0	1	0
52	I06-043	H06-039	1110 W FREMONT	8	196	3	0	0	0
53	I06-044	I06-043	108 N 11TH ST	8	301	4	0	0	0
54	I06-046	I06-045	W STATE ST & N 10TH ST	8	425	7	0	0	0
55	I06-048	I06-045	N 11TH ST	8	228	9	0	0	0
56	I06-049	I06-044	N 11TH ST	8	73	5	0	0	0
57	I06-050	I06-043	DENMEND BLVD	8	221	1	0	0	0
58	I06-051	I06-050	DENMEND BLVD	8	334	12	0	0	0
59	I06-056	I06-020	SUMMIT	8	350	15	0	1	0
60	I06-060	I06-057A	JEROME ST	8	249	7	0	0	0
61	I06-063	I06-062	418 9TH ST	8	323	3	1	0	0
62	I06-064	I06-063	9TH ST & FRENCH CT	8	403	16	0	1	0
63	I06-065	I06-062	406 N 8TH ST	8	371	11	0	0	0
64	I06-070	H06-037	N 12TH ST	8	85	2	0	0	0
65	I06-073	J06-060	W STATE & N 6TH ST	8	511	11	2	0	0
90	J05-031	J05-030	608 N 5TH ST	6	279	3	0	0	0
91	J05-032	J05-029	602 N 5TH ST	8	526	0	0	1	0
92	J05-037	J05-036	N 4TH ST & HUGHES	8	158	5	0	0	0
97	J06-021	J06-020	603 SUMMIT ST	15	27	0	0	0	0
98	J06-022	J06-021	212 N 6TH ST & SUMMIT ST	15	181	1	0	0	0
102	J06-037	J06-025	N 5TH ST & FREMONT ST	8	272	8	0	1	0
103	J06-038	J06-026	N 4TH ST & FREMONT	8	175	4	0	0	0
104	J06-044	J06-017	SUMMIT ST & VETERANS	8	202	5	1	0	0
105	J06-045	J06-022	N 6TH ST/SUMMIT ST	8	32	0	0	0	0
106	J06-047T	J06-046	N 5TH SUMMIT VETERANS	8	321	9	3	0	0
107	J06-049	J06-047T	N 5TH ST, BEHIND 414 JEROME ST.	6	195	0	0	0	0
108	J06-050	J06-047T	414 JEROME ST	6	119	2	0	0	0
109	J06-052	J06-046	SUMMIT	8	224	6	0	0	0
110	J06-053	J06-016	N 3RD ST & JEROME	6	254	4	0	0	0
111	J06-057	J06-045	307 N 6TH ST	6	339	4	3	0	0
112	J06-058	I06-055	615 JEROME ST	6	347	1	0	0	0
113	J06-061	J06-060	11 N. 6TH ST.	6	96	3	0	0	0
131	J06-101	J06-099	N 6TH ST & N 5TH ST ALLEY	8	243	2	0	0	0
132	J06-102	J06-099	N 5TH ST ALLEY	8	222	3	2	0	0
					12,663	**264**	**29**	**7**	**1**

POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	Televising Footage Repair Location (FT)
3	111	D3.1	J06-057	J06-045	307 N 6TH ST	VCP	6	118
13	49	D2.2	I06-036	I06-030	N 9TH ST & W MAIN ST	VCP	8	53

CURED IN PLACE PIPE MAPPING KEY



SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
- 8" SANITARY CIPP
- 9" SANITARY CIPP
- 10" SANITARY CIPP
- 12" SANITARY CIPP
- 15" SANITARY CIPP
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- 36" SANITARY CIPP
- CONTRACTOR NEEDS TO CONTACT CITY PRIOR TO WORK (USE LOW JET PSI)
- MANHOLE REHAB
- MANHOLE READY
- DIG POINT REPAIR

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LAYOUT NAME: D2.2
PLOT STYLE TABLE: FoxGray3Cable.ctb

DATE	BY	REVISION	DATE

DESIGNED:
DRAWN:
CHECKED:
LAST UPDATE: 03/30/22

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Ames, Iowa 50010
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FAX: (515) 233-0103

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CIPP PLAN - SITE MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

SHEET
D2.2

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
3	G07-018	H07-052	ORCHARD DRIVE	8	199	1	1	0	0
27	H07-001B	H07-001	13TH ST & CHURCH	8	233	8	0	0	0
28	H07-005	H07-003	W BOONE ST / S 13TH ST	8	413	10	0	0	0
29	H07-014	H07-013	BRENTWOOD RD/ BRENTWOOD TERR	8	137	1	0	0	0
30	H07-022	H07-021	BRENTWOOD PL	8	290	3	0	0	0
31	H07-027	H07-003	S 12TH ST/ W LINN ST	8	447	13	0	0	0
36	H07-052	H07-050	1505 BRENTWOOD TERR., ACCESS OFF W LINN & S 16TH	8	161	0	0	0	0
37	H07-054	H07-043	W CHURCH ST	8	180	4	0	0	0
38	H07-058	H07-053	1503 W CHURCH	8	249	6	0	0	0
					2,309	**46**	**1**	**0**	**0**

CURED IN PLACE PIPE MAPPING KEY

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
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- MANHOLE READY
- DIG POINT REPAIR

DRAWING FILENAME
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PLOT STYLE TABLE	LAYER MNGR NAME	LAYOUT NAME
FoxGrayScale.ctb		D2.3

DATE	BY	REVISION	DATE
03/22	ELT	DESIGNED:	
03/22	ELT	DRAWN:	
		CHECKED:	
		LAST UPDATE: 03/30/22	

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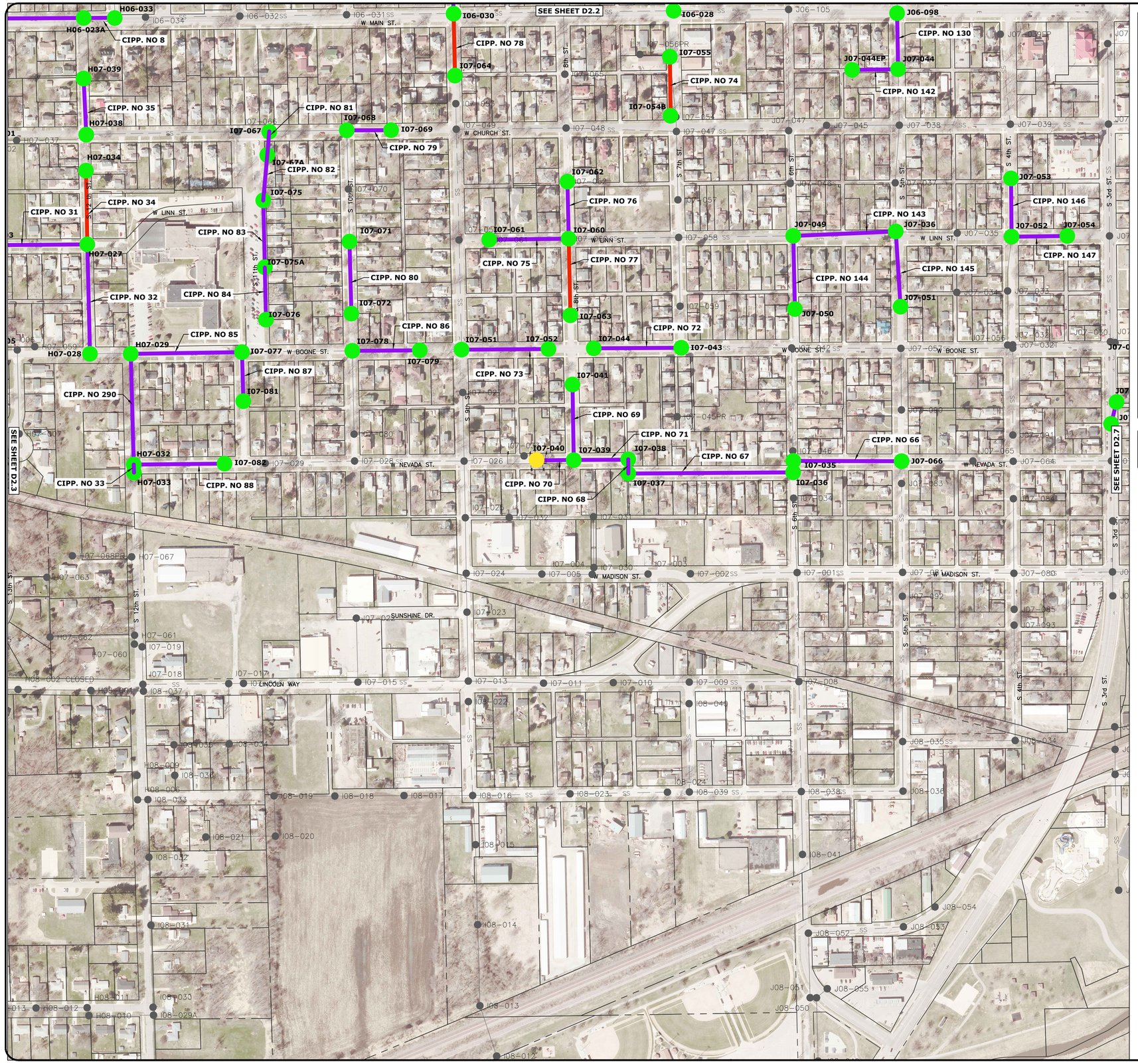
CIPP PLAN - SITE MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

SHEET
D2.3


SEE SHEET D2.2
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W MAIN ST.
W CHURCH ST.
W LINN ST.
W BOONE ST.
W NEVADA ST.
W MADISON ST.
SUNSHINE DR.
LINCOLN WAY
S 8th ST.
S 7th ST.
S 6th ST.
S 5th ST.
S 4th ST.
S 3rd ST.
S 10th ST.
S 11th ST.
S 12th ST.
S 13th ST.
H06-033
H06-023A
CIPP. NO 8
H07-039
CIPP. NO 35
H07-038
H07-034
CIPP. NO 34
CIPP. NO 31
H07-027
CIPP. NO 32
H07-028
CIPP. NO 85
H07-029
CIPP. NO 290
H07-032
H07-033
CIPP. NO 33
CIPP. NO 88
H07-082
CIPP. NO 87
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H07-077
H07-078
CIPP. NO 86
H07-079
H07-072
CIPP. NO 80
H07-071
CIPP. NO 83
CIPP. NO 84
H07-075A
H07-076
H07-075
H07-067A
CIPP. NO 82
CIPP. NO 81
H07-067
H07-068
H07-069
CIPP. NO 79
I06-030
CIPP. NO 78
I07-064
I06-028
I07-055
CIPP. NO 74
I07-054B
J06-098
CIPP. NO 130
J07-044EP
J07-044
CIPP. NO 142
J07-053
CIPP. NO 146
J07-052
J07-054
CIPP. NO 147
CIPP. NO 143
J07-049
J07-036
J07-051
CIPP. NO 145
CIPP. NO 144
J07-050
I07-062
CIPP. NO 76
I07-061
I07-060
CIPP. NO 75
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I07-063
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I07-051
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I07-039
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I07-038
CIPP. NO 67
CIPP. NO 70
CIPP. NO 68
I07-037
I07-036
I07-035
CIPP. NO 66
J07-066
H08-002 CLOSED
H08-001
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I08-035
I08-034
I08-038
I08-009
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J07-085
J07-086

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
89	J05-013	J05-012	N 2ND ST	8	561	16	4	1	0
93	J05-044	J05-042	N 3RD ST	6	31	0	0	0	0
94	J06-006T	J06-005	W STATE ST & N 1ST ST	8	224	4	0	0	0
95	J06-008	J06-006T	W STATE ST & N 1ST ST	8	33	0	0	0	0
96	J06-013	J06-012	2ND & MAIN ST	6	153	4	0	0	0
99	J06-033	J06-028	W STATE ST	6	220	3	0	0	0
100	J06-034	J06-033	W STATE ST	6	17	0	0	0	0
101	J06-035	J06-033	BEHIND 204 W STATE	6	221	0	0	0	0
114	J06-062	J06-006T	35 W. STATE ST.	6	134	2	0	0	0
115	J06-063	J06-004	117 1ST ST	6	266	7	4	0	0
116	J06-065	J06-003	W WEBSTER ST	8	273	7	1	0	0
117	J06-073	J06-001	411 N 1ST ST	6	213	7	0	0	0
118	J06-001A	J06-001	N 1ST ST	8	67	1	0	0	0
119	J06-074	J06-001A	N 1ST ST	6	228	0	2	0	0
120	J06-079T	J06-079	N 2nd St	8	104	3	0	0	0
121	J06-080	J06-079T	N 2ND & ALLEY	8	218	3	0	0	0
122	J06-081	J06-080	W STATE ST	8	253	6	0	0	0
123	J06-082	J06-081	N 2nd St	6	30	2	0	0	0
124	J06-083	J06-079T	N 2nd St & ALLEY	6	186	1	0	0	0
125	J06-084	J06-078	W GRANT ST	8	224	7	2	0	0
126	J06-085	J06-077	W WEBSTER ST	8	309	9	2	0	0
127	J06-086	J06-076	W OF N 2ND ST & LINCOLN ST	8	247	6	0	0	0
128	J06-088	J06-076	2ND ST, N OF LINCOLN	8	240	5	1	2	0
129	J06-091	J06-090	N 2ND ST	8	303	10	0	0	0
162	K05-002	J05-016	N CENTER ST	8	341	4	2	0	0
163	K06-010	K06-009	1ST AV. BETWEEN WEBSTER & GRANT	8	219	4	0	0	0
164	K06-012	K06-011	N 1ST AVE	8	418	12	2	0	1
165	K06-026	K06-010	1ST AV. TO CENTER BETWEEN WEBSTER & GRANT	8	444	13	2	0	1
166	K06-080	L06-025	BROMLEY ST	8	380	11	2	0	0
167	K06-081	K06-080	BROMLEY ST	8	219	8	1	0	0
168	K06-083	K07-079	N 5TH AVE	10	444	5	2	0	0
169	K06-088	K06-010	1ST AV. BETWEEN WEBSTER & GRANT	6	114	2	1	0	1
170	K06-094	K06-077	S 5th AVE	8	275	8	3	0	0
194	K07-076	K07-075	E MAIN ST	8	81	0	0	0	0
195	K07-077	K07-076	E MAIN ST	8	152	0	0	0	0
196	K07-078	K07-077	N 4TH AVE & E MAIN ST	8	44	0	0	0	0
197	K07-078	K07-079	E MAIN ST	10	418	10	0	0	1
198	K07-079	L07-069	E MAIN ST	12	431	11	1	0	0
275	J06-062	K06-030	34 W. STATE ST.	8	316	5	1	0	0
276	J06-086T	J06-086	W. LINCOLN ST.	8	10	6	0	0	0
282	K05-007	K05-004	601 N. 2ND AVE.	6	414	12	0	0	0
283	K05-005	K05-004	601 N. 2ND AVE.	8	283	4	1	0	0
284	K05-004	K06-038	601 N. 2ND AVE.	8	424	14	1	0	0
292	K06-009	K06-008	306 1ST AVE.	15	386	8	1	0	0
					10,568	**240**	**36**	**3**	**4**

POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	Televising Footage Repair Location (FT)
1	93	D3.1	J05-044	J05-042	N 3RD ST	VCP	6	1
10	283	D2.5	K05-005	K05-004	601 N. 2ND AVE.	VCP	8	283
20	164	D2.5	K06-012	K06-011	N 1ST AVE	VCP	8	219
21	165	D2.5	K06-026	K06-010	1ST AV. TO CENTER BETWEEN WEBSTER & GRANT	VCP	8	86
22	169	D2.5	K06-088	K06-010	1ST AV. BETWEEN WEBSTER & GRANT	VCP	6	75
23	197	D2.5	K07-078	K07-079	E MAIN ST	VCP	10	289

CURED IN PLACE PIPE MAPPING KEY

D1.1 D1.2

D2.1 D2.2 D2.5 D2.6

D2.3 D2.4 D2.7 D2.8

D2.9 D2.10

D2.11 D2.12

D1.3

0 200' 400'

SANITARY SEWER CIPP LEGEND

- 6" SANITARY CIPP
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- MANHOLE REHAB
- MANHOLE READY
- DIG POINT REPAIR

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PLOT STYLE TABLE: FoxGray3color.ctb
LAYOUT NAME: D2.5

DATE	BY	REVISION

DESIGNED: ELT 03/22
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414 South 17th Street, Suite 107
Ames, Iowa 50010
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CIPP PLAN - SITE MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO. 2407-20A

SHEET D2.5

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDIN G TAPS	ROOT CUTTING	LCR
239	L06-008A	L06-008	E STATE ST	12	117	2	0	0	0
240	L06-009	L06-008A	E STATE ST	12	209	0	0	0	0
241	L06-012	L06-011A	E STATE ST	8	416	10	1	0	0
242	L06-055	L06-047	JBS, N 10TH AVE	18	18	0	0	0	0
243	L06-070	L06-069	12th AVE	36	432	2	0	0	0
268	M06-034	M06-032	E. OF EAST MAIN LS	8	277	4	1	0	0
269	M06-039	M06-LS2	E MARION ST	8	25	0	0	0	0
289	L06-019	L06-012	706 E. BROMLEY ST.	8	436	9	0	0	0
					1,930	27	2	0	0

CURED IN PLACE PIPE MAPPING KEY

D1.1 D2.1 D2.2 D2.3 D2.4 | D1.2 D2.5 D2.6 D2.7 D2.8 | D1.3 D2.9 D2.10 D2.11 D2.12

0 200' 400'

SANITARY SEWER CIPP LEGEND

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- MANHOLE READY
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CIPP PLAN - SITE MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO. 2407-20A

SHEET D2.6

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PLOT STYLE TABLE: FoxGray3Color.ctb
LAYOUT NAME: D2.6

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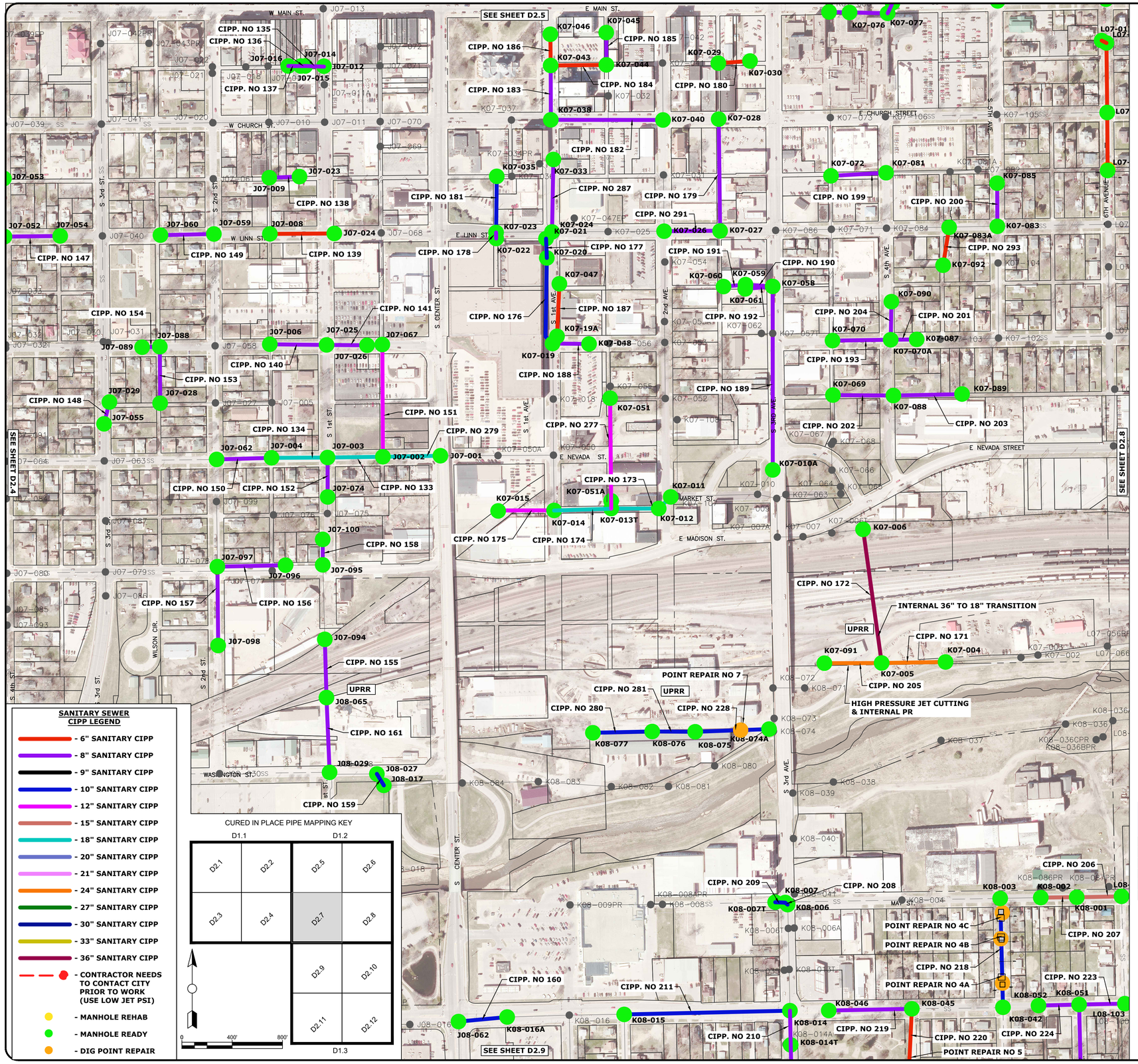
SEE SHEET D2.8



CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
133	J07-003	J07-002	CHURCH ST	18	219	3	1	1	0
134	J07-004	J07-003	W NEVADA ST	18	222	7	2	0	0
135	J07-014	J07-012	ALLEY S OF W MAIN ST	8	74	0	0	0	0
136	J07-015	J07-014	ALLEY S OF W MAIN ST	8	18	0	0	0	0
137	J07-016	J07-015	ALLEY S OF W MAIN ST	8	70	3	0	0	0
138	J07-023	J07-009	ALLEY S OF W CHURCH ST	6	120	2	0	0	0
139	J07-024	J07-008	W LINN ST & S 1ST ST	6	259	1	0	0	0
140	J07-025	J07-006	S 2ND ST & W BOONE ST	8	225	0	0	0	0
141	J07-026	J07-025	S 1st ST & W BOONE ST	8	117	3	1	0	0
148	J07-055	J07-029	S 3RD ST	8	90	3	0	0	0
149	J07-060	J07-059	S 2ND & W LINN	8	213	2	1	0	1
150	J07-062	J07-004	W NEVADA ST	8	218	5	4	0	0
151	J07-067	J07-002	W BOONE ST	12	448	1	1	0	0
152	J07-074	J07-003	S 1ST ST	8	156	3	0	0	0
153	J07-088	J07-028	W BOONE ST	8	224	3	0	0	0
154	J07-089	J07-088	W BOONE ST	8	70	4	1	0	0
155	J07-094	J08-065	WASHINGTON ST EASEMENT	8	233	0	0	0	0
156	J07-097	J07-096	S 2ND & W MADISION	8	271	0	0	0	0
157	J07-098	J07-097	S 2ND & W MADISON	8	314	4	0	0	0
158	J07-100	J07-095	S 1ST ST	8	101	4	1	0	0
159	J08-027	J08-017	WASHINGTON ST	10	54	0	0	0	0
160	J08-062	K08-016A	E ANSON ST	10	194	2	1	0	0
161	J08-065	J08-029	WASHINGTON ST EASEMENT	8	296	0	0	0	0
171	K07-005	K07-004	S CENTER ST	24	254	0	0	0	0
172	K07-006	K07-005	S CENTER	36	536	1	0	0	0
173	K07-013T	K07-011	Alley Between 1st and 2nd Ave, N of Madison	18	255	5	1	0	0
174	K07-014	K07-013T	1ST AVE S	18	224	4	0	0	0
175	K07-015	K07-014	S 1ST AVE.	12	224	2	0	0	0
176	K07-020	K07-019	BOONE ST	10	341	1	0	0	0
177	K07-021	K07-020	S 1ST ST	10	78	1	0	0	0
178	K07-023	K07-022	E LINN ST	8	25	0	0	0	0
179	K07-028	K07-027	E LINN ST AND W CHURCH	8	444	14	5	0	0
180	K07-030	K07-029	ALLEY OF S 3RD AVE	6	120	1	0	0	0
181	K07-035	K07-023	1ST AVE IN ALLEY	10	223	7	1	0	0
182	K07-040	K07-038	E CHURCH ST & 2ND AVE	8	446	14	8	0	0
183	K07-043	K07-038	N 1ST AVE	8	218	3	1	0	0
184	K07-044	K07-043	ALLEY MAIN & CHURCH	6	221	2	2	0	0
185	K07-045	K07-044	ALLEY MAIN & CHURCH	8	128	7	2	0	0
186	K07-046	K07-043	S 1ST AVE	6	123	3	0	0	0
187	K07-047	K07-019A	S 1ST AVE	6	208	1	0	0	0
188	K07-048	K07-019	E BOONE ST	8	145	0	0	0	0
189	K07-058	K07-010A	Alley south of 3rd Ave/Linn, No K07-057T Manhole between	8	730	0	0	0	0
190	K07-059	K07-058	S 3RD AVE	8	108	0	0	0	0
191	K07-060	K07-059	3RD AVE, ALLEY S. OF LINN	8	88	1	1	0	0
192	K07-061	K07-058	3RD AVE, ALLEY S. OF LINN	8	109	5	0	0	0
193	K07-070A	K07-070	E BOONE ST	8	231	2	1	0	0
199	K07-081	K07-072	ALLEY N OF 408 E LINN ST	8	219	0	0	0	0
200	K07-085	K07-083	E LINN ST	8	171	5	0	0	0
201	K07-087	K07-070A	E BOONE ST	8	104	3	1	0	0
202	K07-088	K07-069	S 4TH AVE	8	237	3	0	0	0
203	K07-089	K07-088	ALLEY E BOONE ST	8	268	4	1	0	0
204	K07-090	K07-070A	S 4TH AVE	8	142	2	0	0	0
205	K07-091	K07-005	S CENTER	24	228	2	1	0	0
208	K08-007	K08-006	MAY ST	10	14	0	0	0	0
209	K08-007T	K08-007	MAY ST	10	40	0	0	0	0
210	K08-028	K08-014	S 3RD AVE	8	360	11	5	1	0
211	K08-015	K08-014	S 2ND & E ANSON	10	659	16	5	0	0
218	K08-042	K08-003	S 5TH AVE	10	434	7	0	0	0
219	K08-046	K08-045	304 E ANSON ST	8	330	14	5	2	0
220	K08-047	K08-045	S 4TH AVE	6	351	4	0	0	0
223	K08-051	L08-103	ANSON ST	15	181	4	0	0	0
228	K08-075	K08-074A	RAIL YARD EASEMENT	10	294	0	0	0	0
277	K07-051	K07-013T	ALLEY 410 S. 1ST AVE.	12	438	1	0	0	0
279	J07-002	J07-001	8 NEVADA ST.	18	230	3	0	0	0
280	K08-077	K08-076	621 S. 3RD AVE.	10	237	1	0	0	0
281	K08-076	K08-075	621 S. 3RD AVE.	10	137	0	0	0	0
287	K07-033	K07-024	110 S. 1ST AVE.	8	296	3	0	0	0
291	K07-027	K07-026	204 E. LINN ST.	8	224	2	0	0	0
293	K07-092	K07-083A	405 E LINN ST	6	156	0	0	0	0
					15,435	209	53	4	1

POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	Televising Footage Repair Location (FT)
4A	218	D3.2	K08-042	K08-003	S 5TH AVE	VCP	10	86
4B	218	D3.2	K08-042	K08-003	S 5TH AVE	VCP	10	282
4C	218	D3.2	K08-042	K08-003	S 5TH AVE	VCP	10	363
5	220	D3.2	K08-047	K08-045	S 4TH AVE	VCP	6	1
7	228	D3.3	K08-075	K08-074A	RAIL YARD EASEMENT	VCP	10	170
19	149	D2.7	J07-060	J07-059	S 2ND & W LINN	VCP	8	16

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LAYER MNGR NAME:
PLOT STYLE TABLE: FoxGreyScale.ctb

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CIPP PLAN - SITE MAP
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

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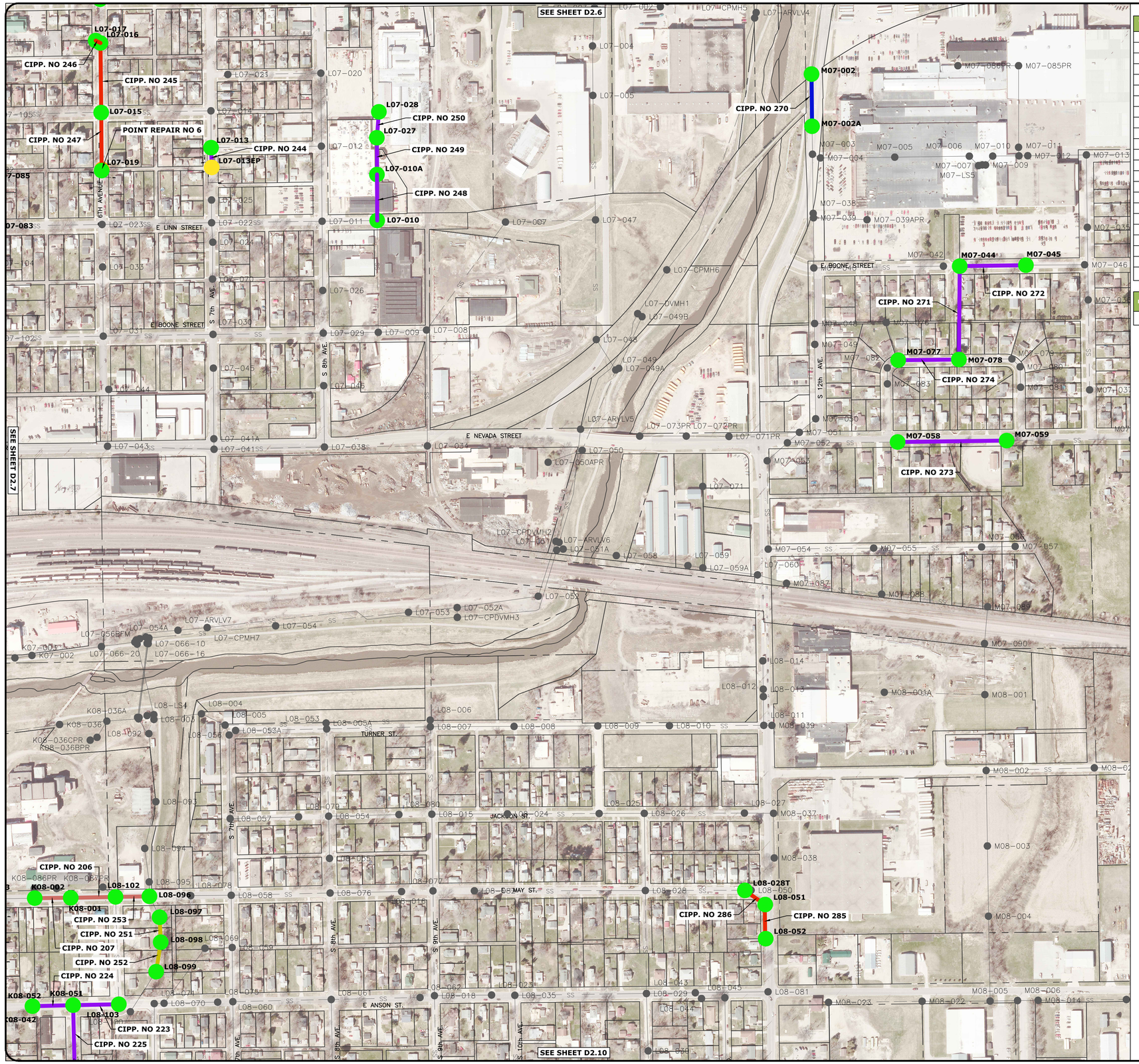
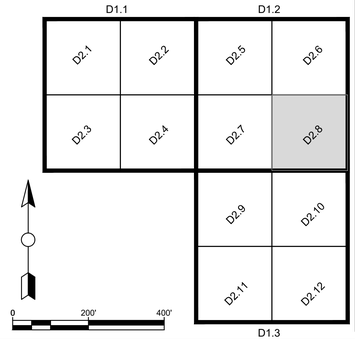


CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
206	K08-001	L08-102	509 MAY ST	15	178	0	0	0	0
207	K08-002	K08-001	MAY ST	15	143	2	0	0	0
223	K08-051	L08-103	ANSON ST	15	181	4	0	0	0
224	K08-052	K08-051	ANSON ST	8	163	3	0	0	0
225	K08-053	K08-051	ANSON ST	8	306	8	0	0	0
244	L07-013EP	L07-013	S 7TH AVE	8	79	1	0	0	0
245	L07-016	L07-015	S S 6TH AVE	6	275	2	0	1	0
246	L07-017	L07-016	S S 6TH AVE	6	21	0	0	0	0
247	L07-019	L07-015	S 6TH AVE	6	231	2	0	0	0
248	L07-010A	L07-010	Alley from Church to Linn, east of 8th Av	8	182	0	0	0	0
249	L07-027	L07-010A	Alley from Church to Linn, east of 8th Av	8	143	2	0	0	0
250	L07-028	L07-027	Alley from Church to Linn, east of 8th Av	8	226	5	1	0	0
251	L08-098	L08-097	ANSON CREEK (MAY ST & E ANSON)	33	99	0	0	1	0
252	L08-099	L08-098	ANSON CREEK (MAY ST & E ANSON)	33	118	0	0	1	0
253	L08-102	L08-096	S 6TH AVE & MAY ST	15	135	0	0	0	0
270	M07-002A	M07-002	S 12TH AVE	10	208	0	0	0	0
271	M07-044	M07-078	1301 EAST BOONE	8	371	2	0	0	0
272	M07-045	M07-044	1301 EAST BOONE	8	263	11	3	0	0
273	M07-059	M07-058	E NEVADA ST	8	433	11	2	0	0
274	M07-078	M07-077	MARSHALL DR	8	241	7	0	0	0
285	L08-052	L08-051	1115 E. MAY ST.	6	140	2	1	1	0
286	L08-028T	L08-051	1116 E. MAY ST.	6	98	1	0	0	0
					4,234	**63**	**7**	**4**	**0**

POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	Televising Footage Repair Location (FT)
6	247	D3.2	L07-019	L07-015	S 6TH AVE	VCP	6	0

CURED IN PLACE PIPE MAPPING KEY



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- MANHOLE READY
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2020 SANITARY SEWER REHABLITATION PROJECT - CIPP

CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

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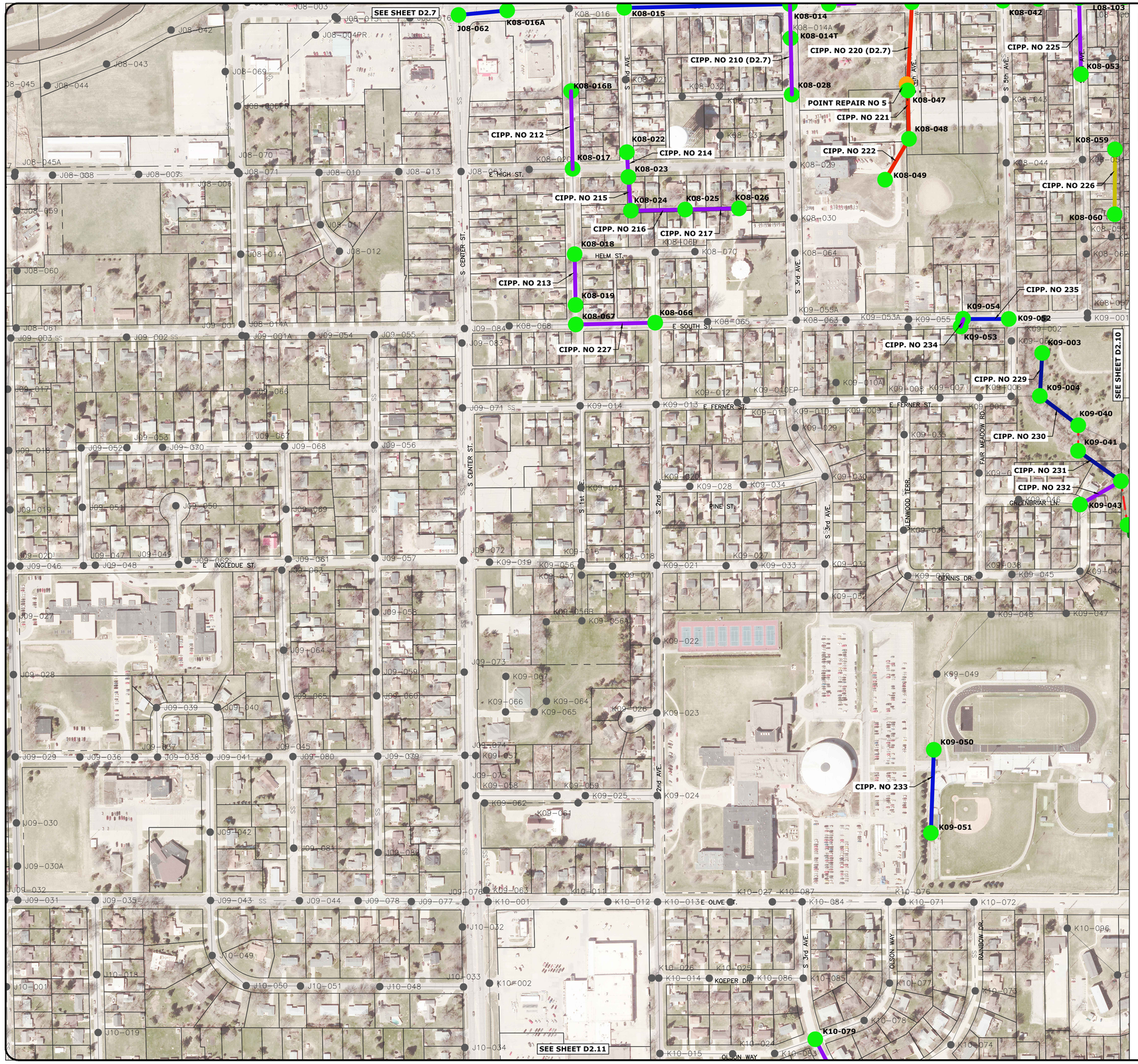

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
212	K08-017	K08-016B	S 1ST AVE & E HIGH ST	8	310	9	4	0	0
213	K08-019	K08-018	1012 S 1ST AVE	8	202	7	3	0	0
214	K08-023	K08-022	920 S 2ND AVE	8	100	0	0	0	0
215	K08-024	K08-023	ALLEY S OF E HIGH ST	8	134	0	0	0	0
216	K08-025	K08-024	ALLEY S OF E HIGH ST	8	216	7	0	0	0
217	K08-026	K08-025	ALLEY S OF E HIGH ST	8	214	5	0	0	0
221	K08-048	K08-047	S 4TH AVE	6	192	1	0	0	0
222	K08-049	K08-048	S 4TH AVE	6	188	1	0	0	0
226	K08-060	K08-059	BEHIND 922 S 6TH ST	33	257	1	0	0	0
227	K08-067	K08-066	E SOUTH ST & S 1ST AVE	8	316	8	1	0	0
229	K09-004	K09-003	WOODS BEHIND GREENBRIAR	30	171	0	0	1	0
233	K09-051	K09-050	HIGH SCHOOL FIELDS	10	330	0	0	0	0
234	K09-053	K09-054	E. South Street	8	31	0	0	0	0
235	K09-054	K09-052	E. South Street	8	180	1	0	0	0
					2,841	**40**	**8**	**1**	**0**

POINT REPAIR NO.	CIPP SEGMENT NO.	SHEET NO.	US MH	DS MH	LOCATION	PIPE TYPE	DIA	Televising Footage Repair Location (FT)
5	220	D3.2	K08-047	K08-045	S 4TH AVE	VCP	6	1

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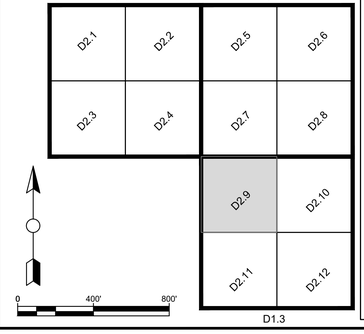
CURED IN PLACE PIPE MAPPING KEY



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2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

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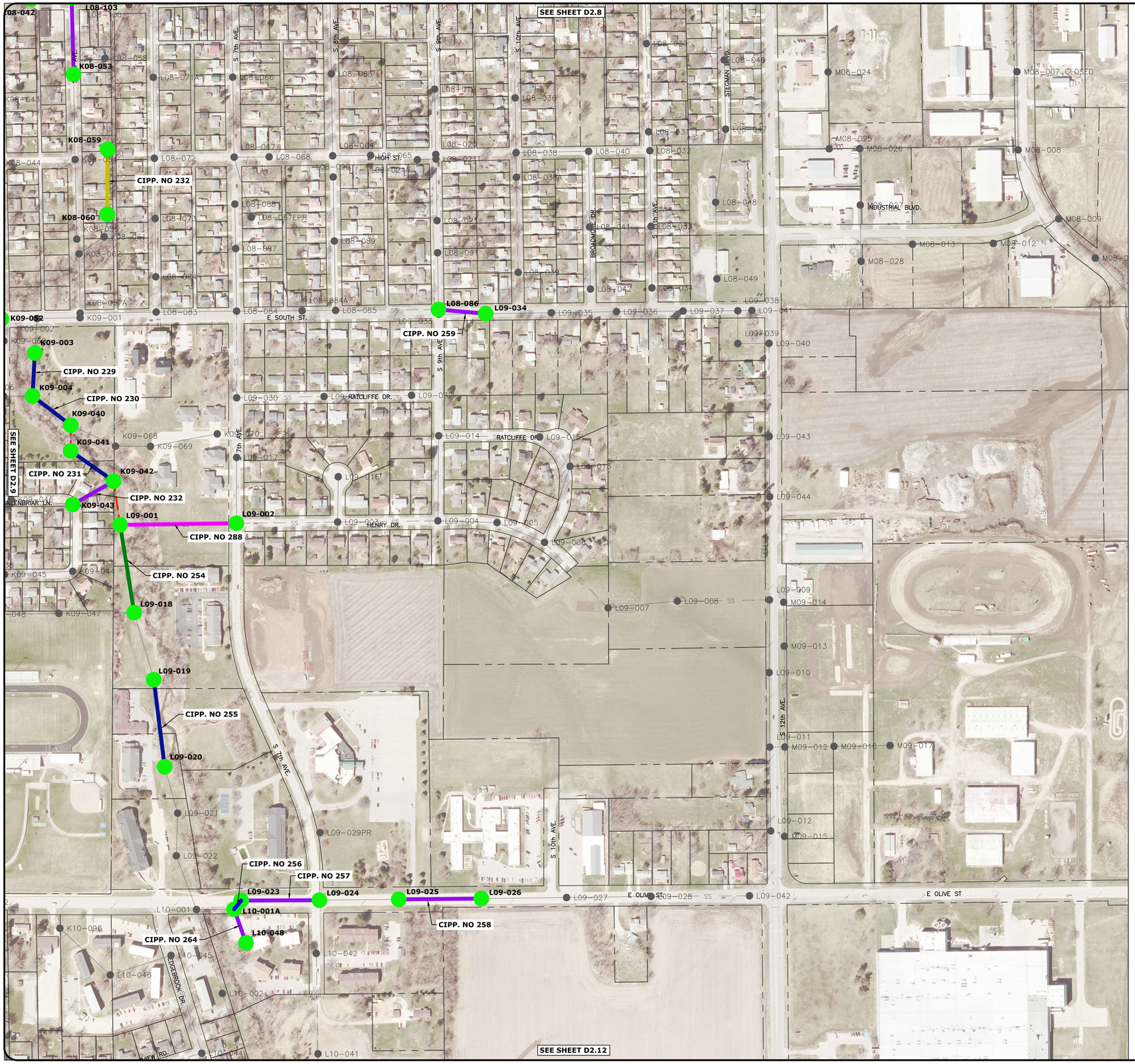

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
230	K09-040	K09-004	WOODS BEHIND GREENBRIAR	30	192	0	0	1	0
231	K09-042	K09-041	BEHIND GREENBRIAR 130	30	209	0	0	1	0
232	K09-043	K09-042	1302 GREENBRIER LANE	8	187	1	1	0	0
254	L09-018	L09-001	BEHIND FOOTBALL FIELD	27	353	0	0	0	0
255	L09-020	L09-019	514 E OLIVE ST	30	349	0	0	0	0
256	L09-023	L10-001A	EAST OLIVE ST	8	44	0	0	0	0
257	L09-024	L09-023	S 7TH AVE & OLIVE ST	8	311	4	0	0	0
258	L09-026	L09-025	E OLIVE ST	8	329	4	1	0	0
259	L09-034	L08-086	E SOUTH STREET	8	189	0	0	0	0
264	L10-048	L10-001A	E OLIVE ST	8	142	0	0	0	0
288	L09-002	L09-001	BEHIND 621 RATCLIFFE DR.	12	460	2	0	0	0
					2,765	11	2	2	0

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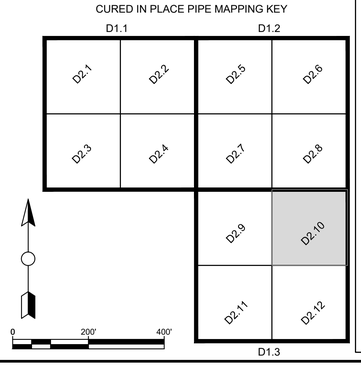

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CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

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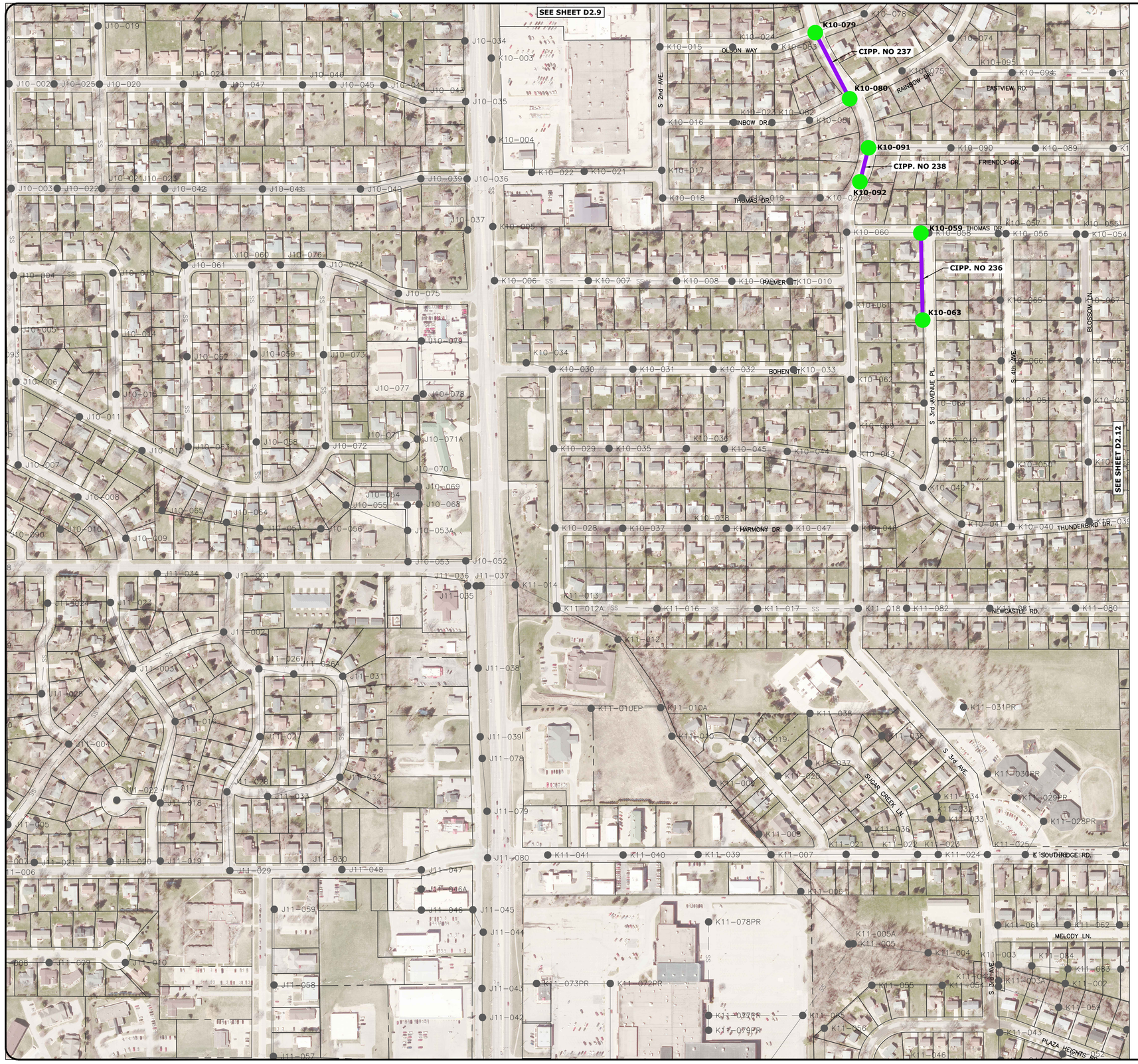

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
236	K10-063	K10-059	1907 S 3RD	8	347	9	0	0	0
237	K10-080	K10-079	3RD Ave & Rainbow	8	295	2	0	0	0
238	K10-092	K10-091	S 3RD AVE & TOMAS DR	8	139	0	0	0	0
					781	**11**	**0**	**0**	**0**

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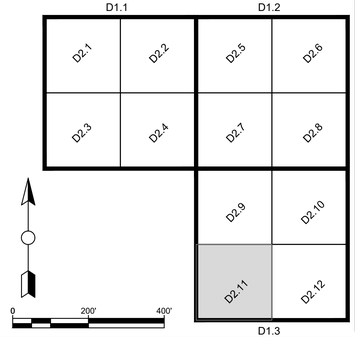

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2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

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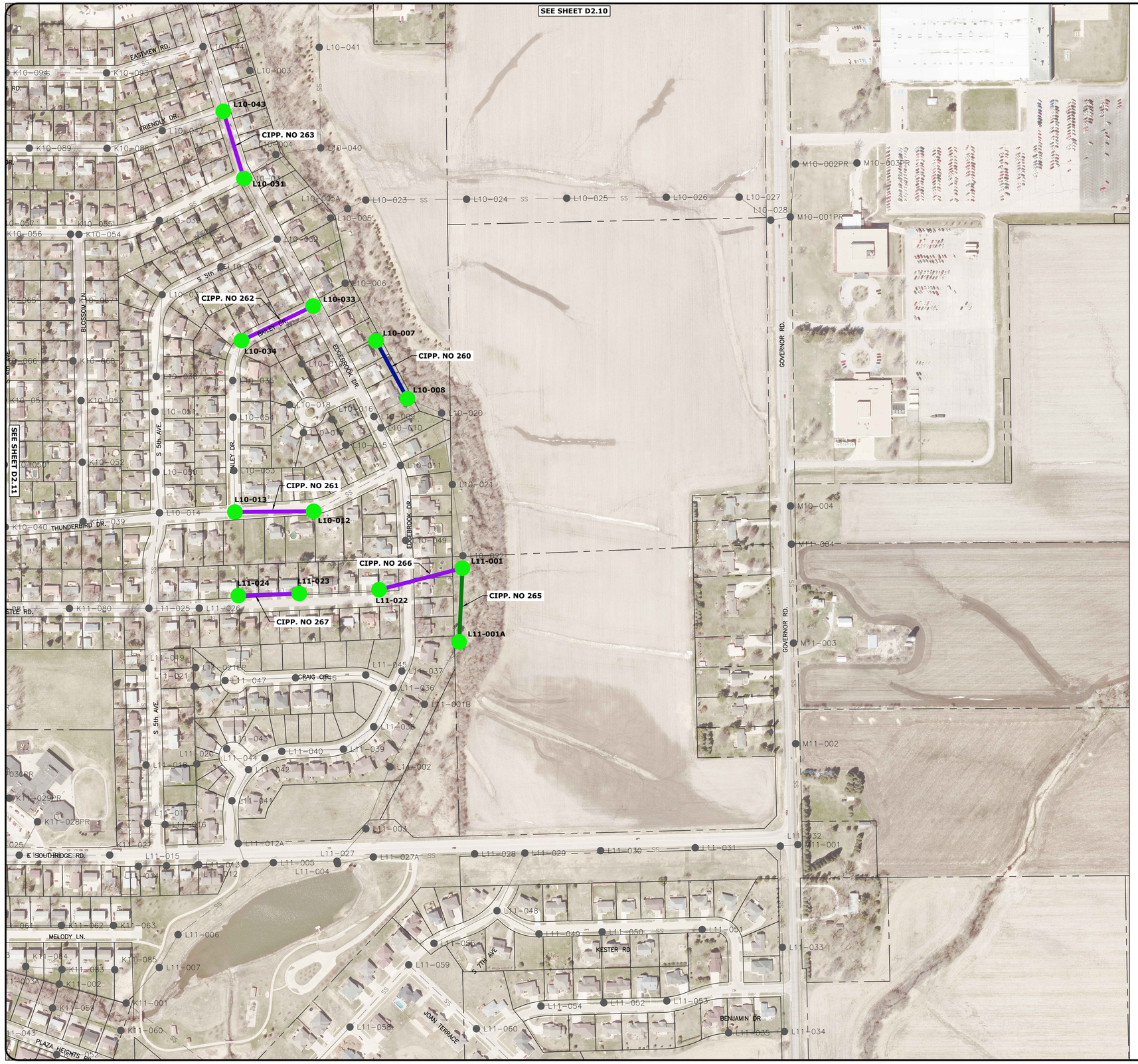

CIPP NO.	US MH	DS MH	LOCATION ON FILM	PIPE SIZE	GIS FOOTAGE	SERVICE REINSTATEMENTS	PROTRUDING TAPS	ROOT CUTTING	LCR
260	L10-008	L10-007	2014 EDGEBROOK	30	261	1	1	0	0
261	L10-013	L10-012	BAILY DR & THUNDERBIRD	8	313	8	1	0	0
262	L10-034	L10-033	BAILEY DR	8	316	4	0	0	0
263	L10-043	L10-031	1808 EDGEBROOK DR	8	279	5	0	0	0
265	L11-001A	L11-001	2112 EDGEBROOK DRIVE	27	294	2	2	0	0
266	L11-022	L11-001	706 NEWCASTLE RD	8	342	5	1	2	0
267	L11-024	L11-023	NEWCASTLE RD	8	243	1	1	0	0
					2,048	**26**	**6**	**2**	**0**

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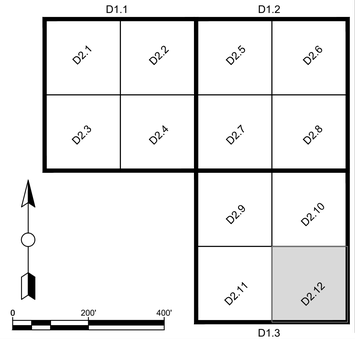

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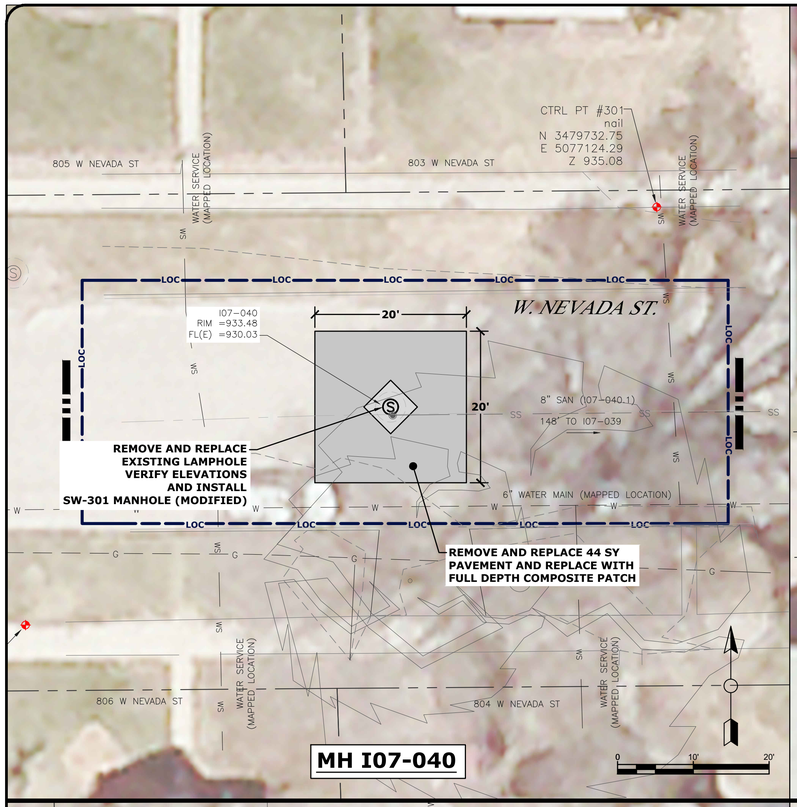

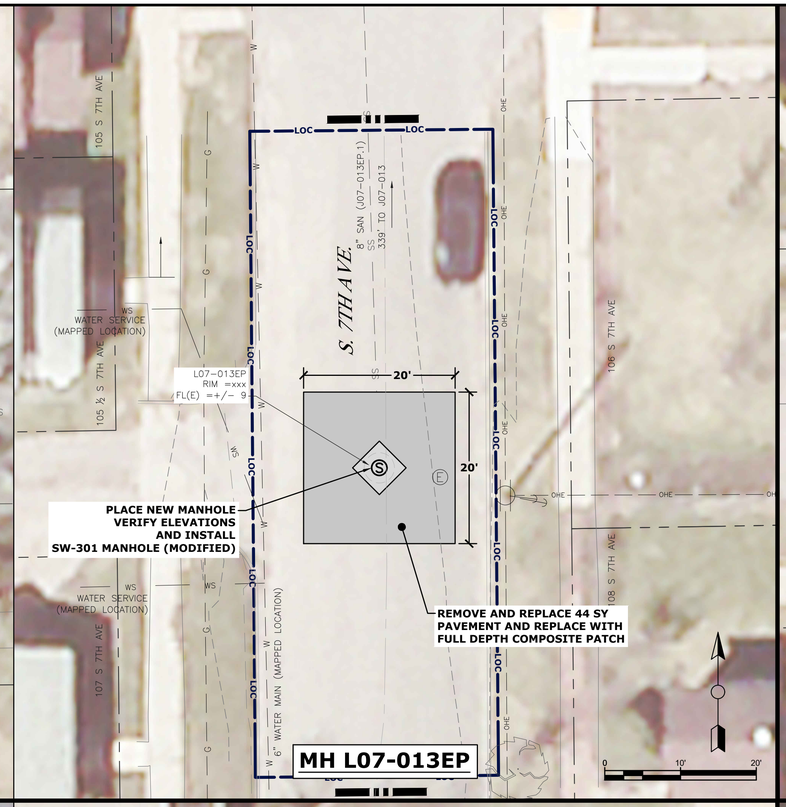

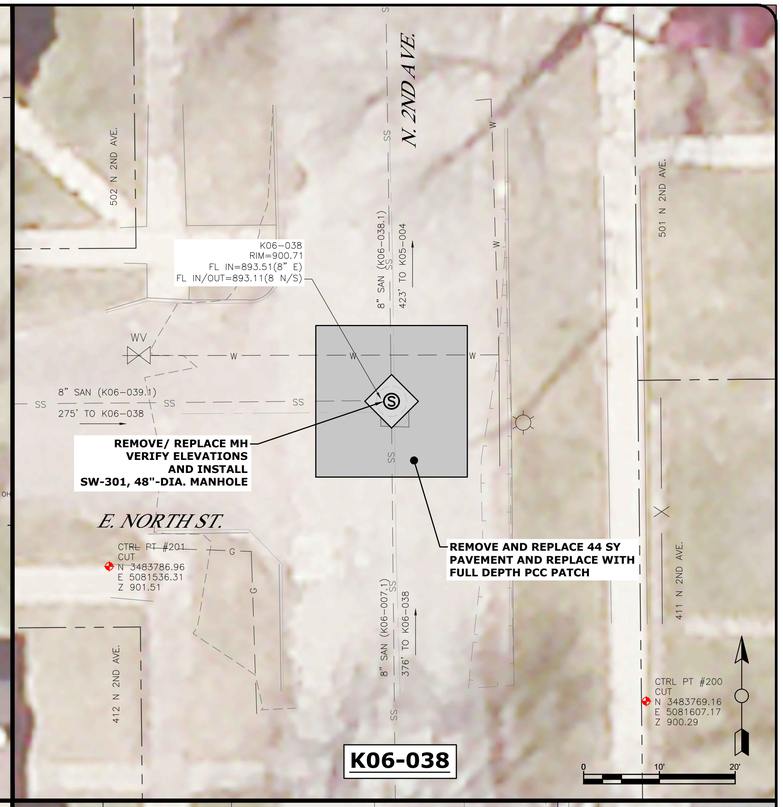

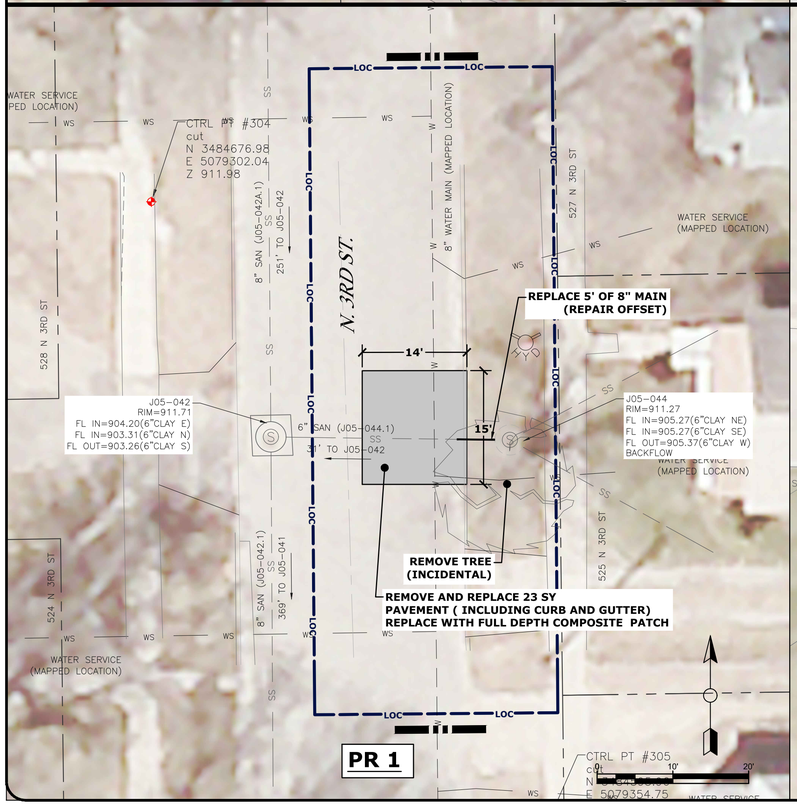

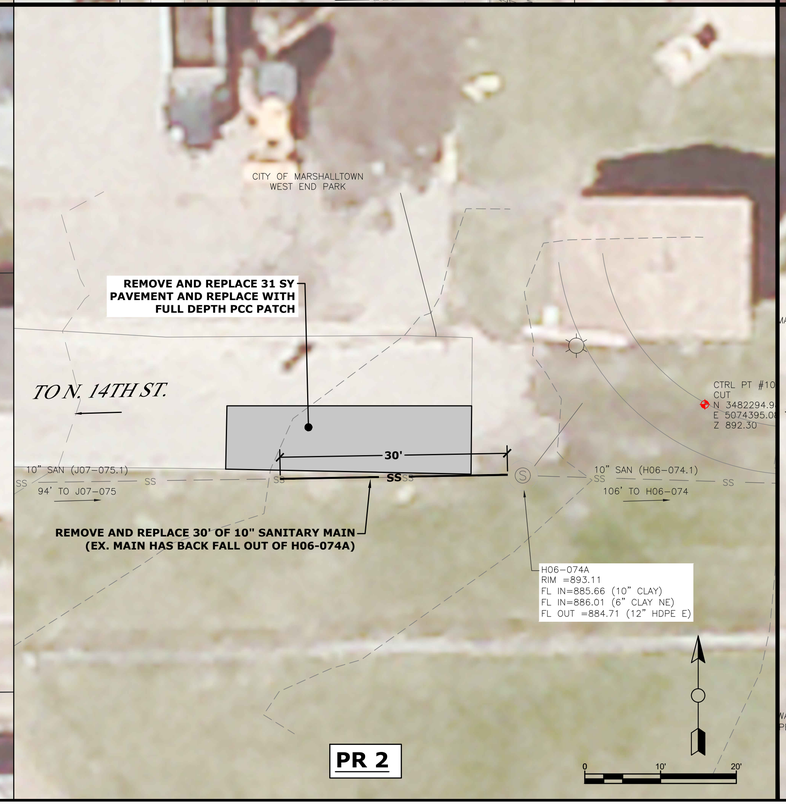

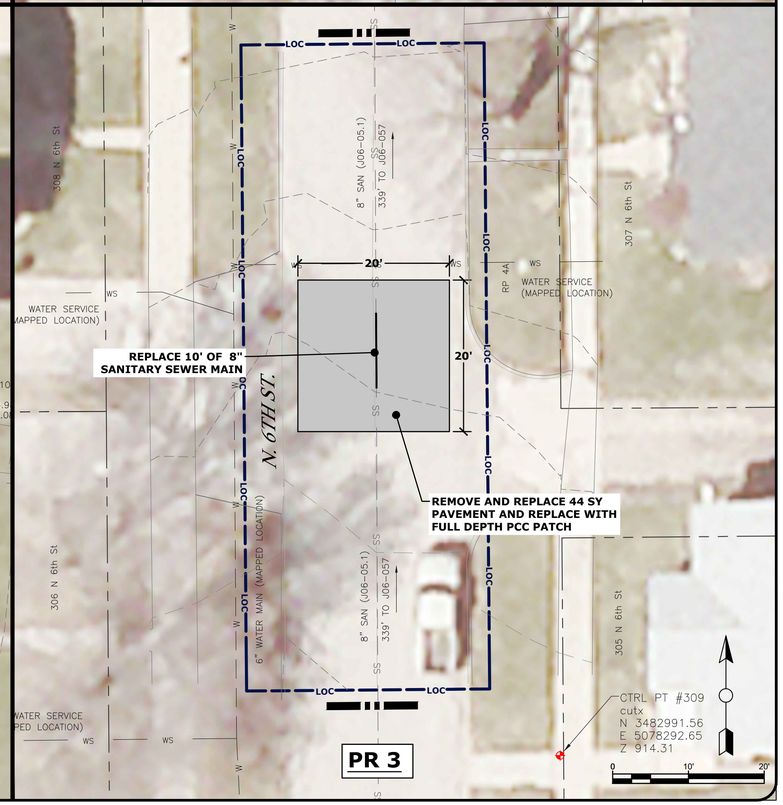

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		DRAWN:	ELT 03/22
		CHECKED:	
		LAST UPDATE: 03/30/22	

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

STRAND ASSOCIATES®

PONT REPAIR & MANHOLE INSTALLATION LOCATION PLAN VIEW
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP

CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

SHEET
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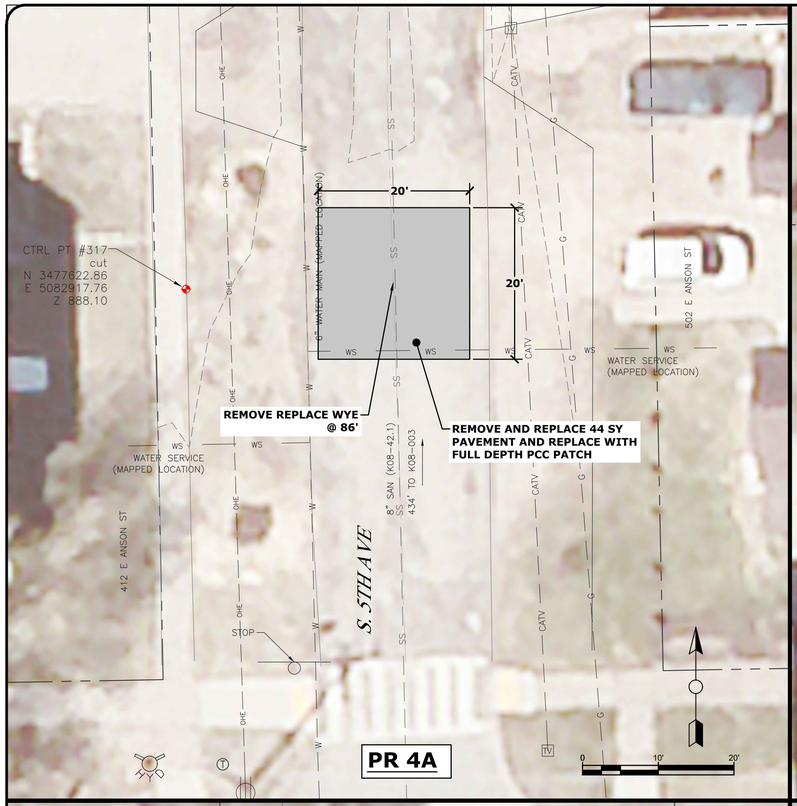

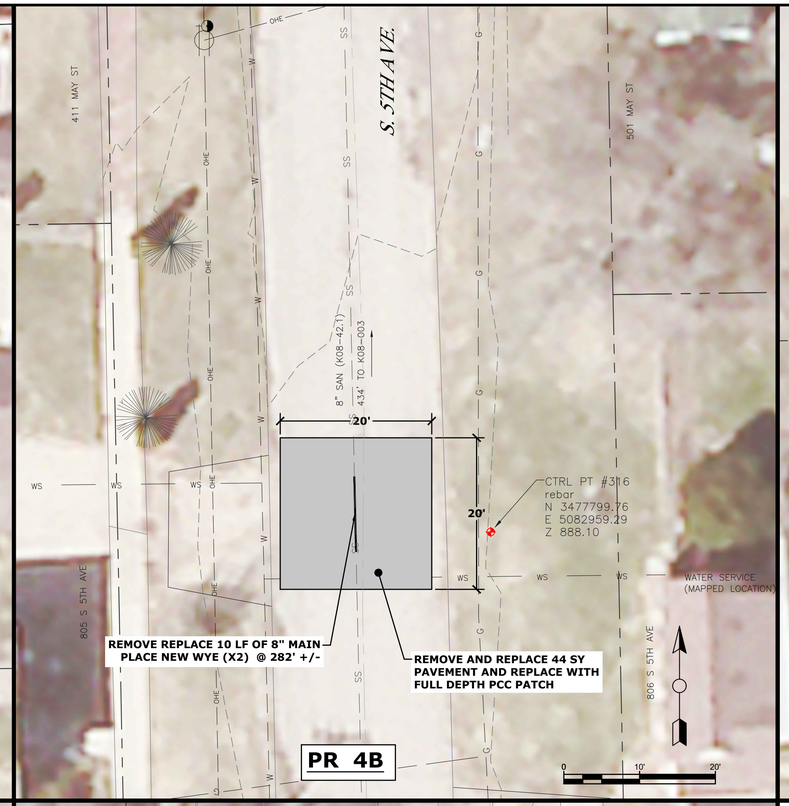

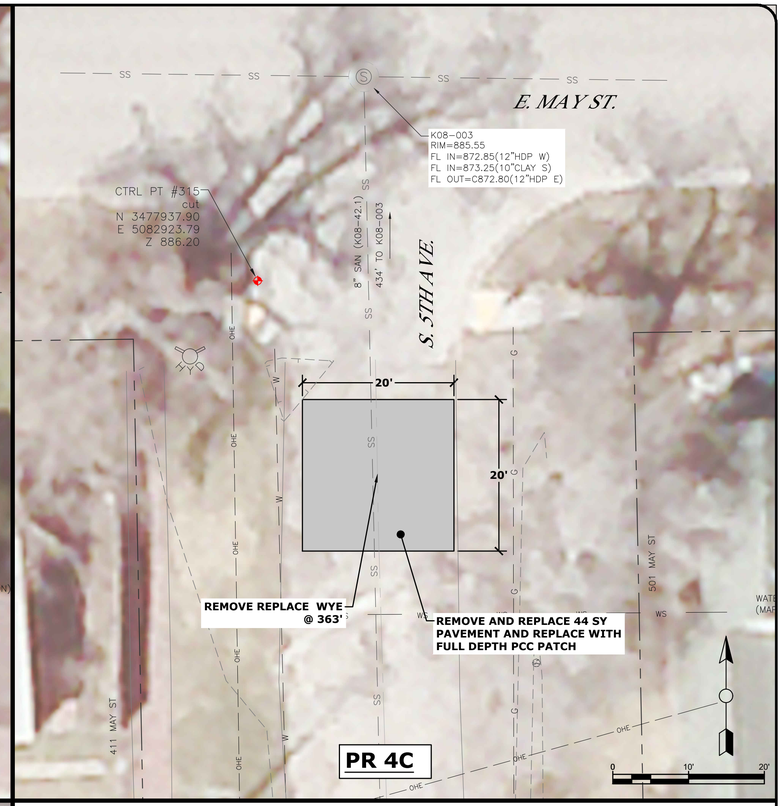

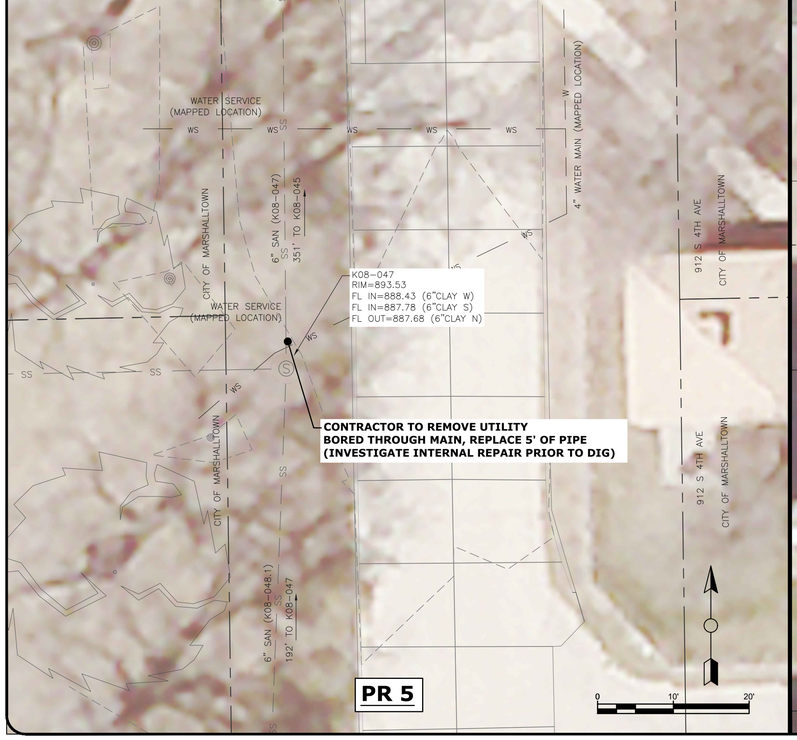

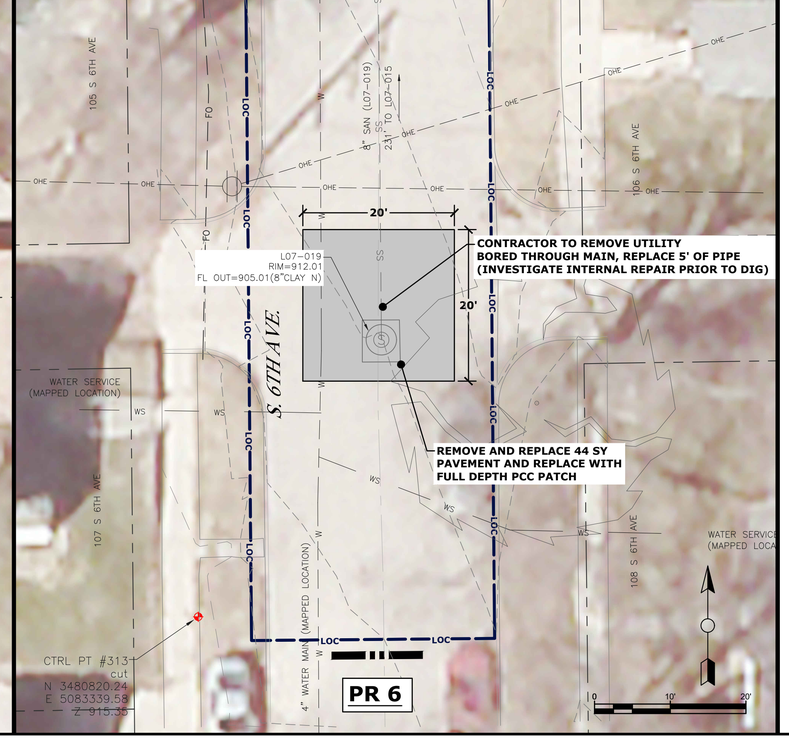

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	DRAWN:	ELT	03/22
	CHECKED:		
	LAST UPDATE: 03/30/22		

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414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

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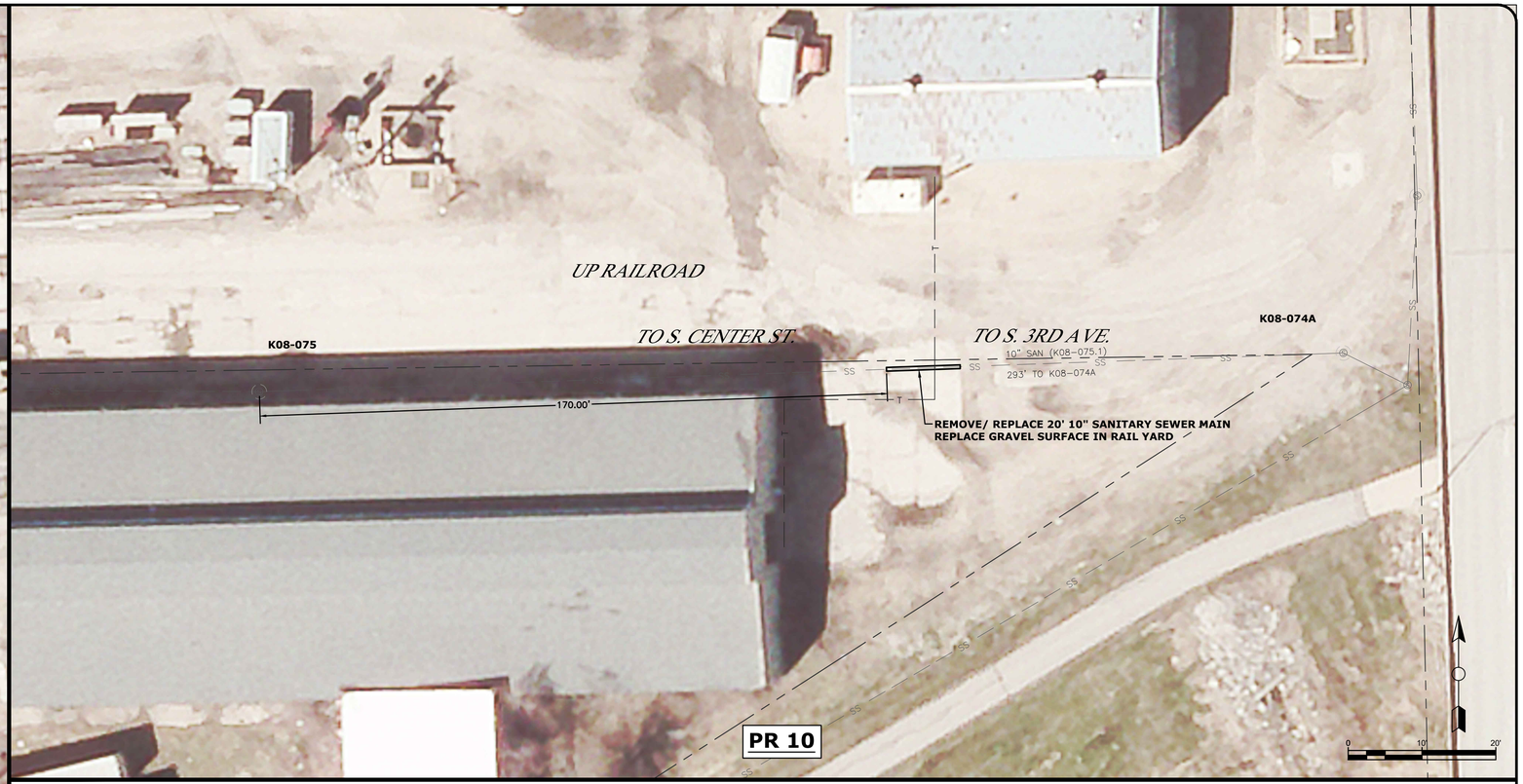
POINT REPAIR & MANHOLE INSTALLATION LOCATION PLAN VIEW
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

SHEET
D3.2



NOTE:
NO WORK SHALL BEGIN ON UNION PACIFIC PROPERTY UNTIL THE CONTRACTOR HAS OBTAINED THE PERMIT TO COMPLETE THE WORK. SEE BID ITEMS 1.05 AND 1.06. CONTRACTOR SHALL ABIDE BY ALL PROVISIONS OF THE ACCESS AGREEMENT WITH THE RAILROAD.

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		CHECKED:	
		LAST UPDATE: 03/30/22	

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
Phone: (515) 233-0000
FAX: (515) 233-0103

PONT REPAIR & MANHOLE INSTALLATION LOCATION PLAN VIEW
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN
MARSHALLTOWN, IOWA

PROJECT NO.
2407-20A

SHEET
D3.3

BIDDING REQUIREMENTS
AND
CONTRACT DOCUMENTS
FOR

2020 Sanitary Sewer Rehabilitation Project – CIPP

Marshalltown, Iowa

2022

FOX Strand
414 South 17th Street, Suite 107
Ames, Iowa 50010
(515) 233-0000
(800) 433-3469

FOX Strand Project Number 7034-008 (2407-20A)
City Project Number SAN21001

2020 Sanitary Sewer Rehabilitation Project - CIPP

Marshalltown, Iowa

2022

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

4/20/22

STEVEN P. SOUPIR, P.E. DATE
License number P18924

My license renewal date is December 31, 2023.

Pages or sheets covered by this seal:
All

Prepared by
FOX Strand
Consulting Engineers
Ames, Iowa 50010

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PN 7034-008 (2407-20A)

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PART I - BIDDING REQUIREMENTS

Notice of Hearing and Invitation to Bid
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Bidder Status Form

CITY OF MARSHALLTOWN, IOWA
OFFICIAL NOTICE OF HEARING AND LETTING

CITY OF MARSHALLTOWN, IOWA
2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY PROJECT NO. SAN21001

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, PROPOSED FORM OF CONTRACT AND ESTIMATED COST FOR THE CITY OF MARSHALLTOWN, IOWA, 2020 SANITARY SEWER REHABILITATION PROJECT - CIPP IN THE CITY OF MARSHALLTOWN, IOWA, AND THE TAKING OF BIDS FOR SUCH IMPROVEMENTS.

A public hearing will be held at 5:30 p.m. local time on the **9th day of May, 2022** in the Council Chambers, 10 West State Street, Second Floor, Marshalltown, Iowa, on the proposed plans, specifications, proposed form of contract, and the estimated cost of improvements proposed to be constructed under Project No. SAN21001, the 2020 Sanitary Sewer Rehabilitation Project - CIPP now on file in the office of the City Clerk and at said hearing any interested person may appear and file objection thereto or to the bidding process.

Sealed proposals will be received by the City Clerk of the City of Marshalltown, Iowa at her office at 24 N. Center Street **until 11:00 a.m. local time**, on the **17th day of May, 2022** for the construction of the 2020 Sanitary Sewer Rehabilitation Project - CIPP as described in the plans and specifications for Project No. SAN21001 and which will be opened, read, and tabulated by the City Engineer or his designate at that time, will be acted upon by the City Council of said City at a meeting to be held in the Council Chambers on the **23rd day of May, 2022** or at such later time and place as may then be fixed. Each proposal shall be made out on a blank form furnished by the City and shall be submitted in a sealed envelope marked, **2020 Sanitary Sewer Rehabilitation Project - CIPP, Marshalltown, Iowa**.

The proposed work will involve furnishing the labor, equipment, and materials necessary for 2020 Sanitary Sewer Rehabilitation Project - CIPP in Marshalltown, Iowa. All work is to be done in strict compliance with the Plans and Specifications for said Project No. SAN21001 as proposed by the City Engineer. The extent of the work involved is as follows:

Sanitary sewer improvements shall include, but not be limited to approximately 70,000 linear feet of sanitary sewer CIPP pipe lining. This shall include sanitary sewer televising pre and post construction inspection televising, point repairs, manhole replacement, and associated other work for construction.

Each proposal must be accompanied either by a cashier's check or certified check in the amount of five percent (5%) drawn on an Iowa bank or a bank chartered under the laws of the United States, a Bid Bond or credit union certified share draft in the amount of five percent (5%) of the proposal, drawn on a credit union in Iowa or chartered under the laws of the United States and filed in an envelope separate from the one containing the proposal, made payable to the City of Marshalltown, Iowa, and said check or draft may be cashed or the Bid Bond declared forfeited by the City of Marshalltown, Iowa as liquidated damages in the event the successful bidder fails to enter into a contract within fifteen (15) days of the Notice of Award and post bond satisfactory to the City insuring the faithful fulfillment of the contract and maintenance of said improvements as required by law and the Specifications.

A pre-bid conference for the Project will not be held.

Payment to the Contractor for said construction will be made in cash from the following sources: Cash from any fund of City of Marshalltown, Iowa, which may be legally used for such purposes; proceeds derived from the sale and issuance of Utility Revenue Bonds, or Federal or State grants or loans.

The Contractor will be paid each month Ninety-five Percent (95%) of the Engineer's Estimate of the value of work completed at the end of the preceding month. Final payment will be made no sooner than thirty (30) days after completion of the work and acceptance by the Owner.

The work under the proposed contract shall commence within thirty (30) days of the written "Notice to Proceed". The "Notice to Proceed" is anticipated to be issued within seven (7) days of the Effective Date of the Agreement. The work shall be substantially completed by **September 22, 2023**. Final completion shall be by **November 3, 2023**. All work shall be completed by the substantial and final completion dates indicated, subject to any changes granted by the Owner.

The Owner and Contractor recognize that time is of the essence of this Agreement and that City will suffer financial loss if the Work is not completed within the times specified in paragraph above, plus any extensions thereof allowed. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by City if the Work is not completed on time. Accordingly, instead of requiring any such proof, City and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay the City of Marshalltown **$1,000.00** for each day that expires after the time specified for Substantial Completion for the contract until the work is certified by the Engineer as substantially complete and **$1,000.00** for each day after the time specified for certification of Final Completion if Contractor neglects, refuses or fails to complete the remaining Work within the contract time for Final Completion. The City shall deduct the accrued liquidated damages from the final payment due to the Contractor.

All proposals shall be made upon the official bidding blanks furnished by the City and any alteration in the Official Form of Proposal will entitle the Council, at its option, to reject the proposal involved from consideration. Each said proposal shall

be sealed and plainly identified.

Preference will be given to products and provisions grown and coal produced within the State of Iowa, by virtue of statutory authority, and to Iowa domestic labor in constructing said improvements.

The successful bidder will be required to furnish bonds as specified, said bonds to be issued by a responsible surety approved by the Owner and which shall guarantee a faithful performance of the Contract and the terms and conditions therein contained and shall guarantee the prompt payment of all materials and labor and protect and save harmless the Owner from claims and damages of any kind caused by the operations of the Contractor and shall also guarantee the maintenance of the improvements constructed for a period of four (4) years after completion and acceptance by the Owner.

The Owner reserves the right to defer acceptance of any proposal for a period not to exceed thirty (30) days from the date of receipt of proposals.

Complete digital project bidding documents are available at www.questcdn.com. Prospective bidders may download the digital plan documents at no cost by inserting the Quest project cost number **8122090** on the website's project search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, printing, and working with this digital project information. Website registration is necessary to ensure that prospective bidders remain informed of addendum and other essential communications prior to the bid date. If the prospective bidder has a concern about the validity of the digital information downloaded from www.questcdn.com, then prospective bidder shall access the paper copies on file at the Owner's or the Engineer's office to verify the information in question.

A paper copy of said Bidding Requirements and Contract Documents will be on file in the office of the City Clerk, City Hall, Marshalltown, Iowa, for examination by prospective bidders. An optional paper set of Bidding Requirements and Contract Documents may be obtained from FOX Strand, 414 South 17th Street, Suite 107, Ames, Iowa, 50010, (515) 233-0000. A deposit of $150 per paper set of Bidding Requirements and Contract Documents will be charged, all of which will be refunded if the paper documents are returned in reusable condition within 14 days of the Award of Contract. If all paper documents are not returned, unmarked, in reusable condition and within 14 days, the deposit shall be forfeited.

Paper documents may be acquired directly from the office of FOX Strand. without incurring a shipping and handling fee. However, a minimum prior notice of two business days is required for documents that will be picked up during FOX Strand normal business hours. Upon request, documents can be shipped at the lowest cost ground shipping rate and via a trusted carrier such as UPS or FEDEX.

The City Council reserves the right to reject any and all bids and to waive technicalities and irregularities and all bids must remain effective for a period of 30 days of opening same.

This Notice to Bidders is hereby published by authority of resolution duly adopted by the Council of the City of Marshalltown on the ___day of _____, 2022.

CITY OF MARSHALLTOWN, IOWA

By _____
Alicia Hunter, City Clerk

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

B. The Issuing Office for this project is FOX Strand, 414 South 17th Street, Suite 107, Ames, Iowa 50010; telephone 515-233-0000; fax 515-233-0103.

ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner requires that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.04 Bidder may register as a plan holder and obtain complete sets of paper Bidding Documents, in the number and for deposit sum, if any, stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner. The deposit will be refunded to each document holder of record who returns a complete set of Bidding Documents in good condition within 14 days after Award of Contract.

2.05 *Electronic Documents*

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding *Documents* are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf). It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic

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Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of *Electronic* Documents of the Bidding Documents, described in Paragraph 2.05.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

C. Prior to bidding or after the Contract is awarded, the Engineer will, if available, provide for the use of the *Contractor* documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.

1. Electronic Documents that are available in native file format include:

a. AutoCAD Civil 3D

b. 2D AutoCAD files after the contract is awarded may be available of select process and structural sheets.

2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.

3. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.

4. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract Documents and any related document in native file format.

5. The Contractor shall sign and agree to the Engineer's Electronic Media Transfer Agreement.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 Contractor and all subcontractors that are utilized shall be registered with the Iowa Labor Commission according to the provisions of Chapter 91C of the Code of Iowa. Contractor's registration number shall be included on the Bid Form. Registration forms can be obtained from the Iowa Division of Labor at 1000 East Grand Avenue, Des Moines, Iowa 50319 (http://www.iowaworkforce.org/labor/contractor.htm, phone 515-281-3606). In the event that the selected Contractor is not registered by the date the City intends to make an award, Contractor will be allowed 10 calendar days to complete registration. If the registration

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number is not provided by the tenth calendar day, the award may be made to another Contractor.

3.02 Nondiscrimination in Employment. Bidders on this Work will be required to comply with Executive Order 11246 as amended. By submission of its bid, each bidder acknowledges that it understands and agrees to be bound by the equal opportunity requirements of EPA regulations (40 CFR Part B, particularly Section 8.4 [b]), which shall be applicable throughout the performance of Work under this Contract. Each bidder agrees that if awarded a contract, it will similarly bind contractually each Subcontractor. In implementation of the foregoing policies, each bidder further understands and agrees that if awarded a contract, it must engage in affirmative action directed at promoting and ensuring equal employment opportunity in the workforce used under the Contract and that it must require contractually the same effort of all Subcontractors whose subcontracts exceed $10,000). The bidder understands and agrees that "affirmative action" as used herein shall constitute a good faith effort to achieve and maintain that amount of minority employment in the onsite workforce used on the Project which corresponds, for each trade used, to the minority population in the serving labor market area from which workers are reasonably available for hire for the Project.

3.03 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Population (Exec. Order No.12898, 59 Fed. Reg. 7629 - 1994). These four laws and Executive Order No. 12898 prohibit discrimination in the provision of services or benefits on the basis of race, color, national origin, sex, handicap or age in programs or activities receiving federal financial assistance. These anti-discrimination provisions apply to the entire operations of federal assistance recipients, not just the specific program or activity being funded by the assistance. IDNR will require assurances from the CWSRF applicant and the applicant's contractors stating that they will comply with the requirements of the non-discrimination laws.*

3.04 *Debarred or Suspended Contractors. This project will be subject to regulations concerning "Debarment and Suspension under EPA Assistance Programs". Any bidder or equipment supplier whose firm or affiliate is listed in the General Services Administration (GSA) monthly publication entitled "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" will be prohibited from the bidding process. Anyone submitting a bid who is listed will be determined to be a nonresponsive bidder. A contractor's Suspension/Debarment Certification is contained in the specifications; however, this certification should not preclude any interested party from ascertaining whether the certifying firm or person is actually on the GSA "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs". The list will be available for inspection upon request to determine a person's eligibility for award in accordance with 40 CFR Part 32, dated May 26, 1988.*

3.05 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within five (5) business days of Owner's request, Bidder must submit the following information:

A. Written evidence establishing its qualifications such as financial data, previous experience, and *present* commitments on EJCDC C-451 Bidders Qualifications Statements, provided with the Bidding Documents.

B. A written statement that Bidder is authorized to do business in the State of Iowa.

C. Bidder's state or other contractor license number, if applicable.

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D. Other required information regarding qualifications.

3.06 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.07 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A pre-bid conference will not be conducted for this Project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 Site and Other Areas

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

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B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:

1. None.

Owner will make electronic copies of these other Site-related documents available to any Bidder on request.

B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.

C. The other *Site*-related documents are not part of the Contract Documents.

D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held *accountable* for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.

E. No *other* Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

B. Bidder must conduct the required Site visit during normal working hours.

C. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

D. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

E. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

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F. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing.

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five (5%) percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond issued by a surety meeting the

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requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 46 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items, with the exception of Base Bid Equipment, which must be pre-approved by Engineer and identified by **Addendum**.

10.02 Base Bid Equipment. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. No item of material or equipment will be considered by Engineer as a substitute or "or-equal" for Base-Bid Equipment unless written request for approval has been submitted by Bidder and has been received by Engineer at least fifteen (15) days prior to the date for receipt of Bids. Each such request shall conform to the requirements of Paragraph 7.05 and 7.06 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner. Pre-

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approval of a product, manufacturer, or supplier in no way removes or reduces the requirement that each item meet the Project Specifications.

10.03 Other Materials and Equipment. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

10.04 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

11.02 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

11.03 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.07.

ARTICLE 12—PREPARATION OF BID

12.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

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12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.06 A Bid by an individual must show the Bidder's name and official address.

12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

12.08 All names must be printed in ink below the signatures.

12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.

12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.

12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

12.13 Funding of this project will utilize the State of Iowa's State Revolving Fund (SRF), which requires bidders to certify compliance with various special conditions as described in the Bidding Requirements and Contract Documents.

A. Any bidder or equipment supplier whose firm or affiliate is listed in on the U.S. General Services Administration Excluded Parties List System web site at http://www.epls.gov/ will be prohibited from the bidding process. Anyone submitting a bid who is listed on this web site will be determined to be a non-responsive bidder in accordance with 40 CFR Part 31. A contractor's Suspension/Debarment Certification is contained in the specifications; however, this certification should not preclude any interested party from ascertaining whether the certifying firm or person is actually on the GSA "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs".

B. Bidders' DBE requirements for SRF projects including documentation of a) affirmative steps taken for DBE participation and b) the efforts to utilize and the resulting proposed utilization of certified DBEs. (There is a Disadvantaged Business Enterprise [DBE] requirement for the Contract. Funding of this project will utilize the State of Iowa's State Revolving Fund (SRF), which involves certain goals regarding awarding of sub-agreements to small, minority and women-owned businesses, collectively known as Disadvantaged Business Enterprises (DBEs). Only work performed by certified DBEs can be counted toward the goals. In Iowa, DBEs must be certified through the Iowa Department of Transportation (IDOT). Information on certification requirements and a list of certified DBEs is on the IDOT website at http://www.iowadot.gov/contracts/contracts_eeoaa.htm.)

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ARTICLE 13—BASIS OF BID

13.01 *Unit Price*

A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 14—SUBMITTAL OF BID

14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form and noted below:

A. Bidder shall certify its state or country of domicile by completing the address section of the Bid Form.

B. Bidder shall complete and submit the Bidder Status Form with its bid as required by Iowa Administrative Code 875, Chapter 156.

C. SRF Forms:

1. SRF Attachment 1 – Certification of Non-Segregated Facilities
2. SRF Attachment 2 – Debarments and Suspensions Certification
3. SRF Attachment 3 – Disadvantaged Business Enterprise (DBE)Solicitation
4. SRF Attachment 4 – DBE Subcontractor Performance Form
5. SRF Attachment 5 – DBE Subcontractor Utilization Form

14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. The Bid Security shall be filed in an envelope separate from the one containing the completed Bid Form and clearly marked "Bid Security". If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate

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package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

14.04 By submitting a bid, the bidder agrees that the Owner may copy the bid for purposes of facilitating the evaluation or to respond to request for public records. The bidder consents to such copying by submitting a bid and warrants that such copying will not violate the rights of any third parties.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.

15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

17.02 Should there be any reason why the contract cannot be awarded within the period of time stated in the Bid Form, the time may be extended by mutual agreement between the Owner and the apparent successful Bidder.

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ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the interest of the Project to make an award to that Bidder.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

18.05 If Owner awards the contract for the Work, such award will be to the Bidder whose Bid is in the best interest of the Project.

18.06 Evaluation of Bids

A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

18.07 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

18.08 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

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ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

20.02 No bid shall be considered binding upon the Owner until the contract is properly executed by both parties. Executed contracts may be subject to final approval of funding authorities.

ARTICLE 21—SALES AND USE TAXES

21.01 Owner is exempt from Iowa state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes must not be included in the Bid. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

ARTICLE 22—BIDDING PREFERENCES

22.01 The State of Iowa, its agencies, and its political subdivisions, including cities, school districts and public utilities are required by Iowa Code Section 73A.21 to require a reciprocal resident bidder and resident labor force preference.

22.02 Nonresident bidders are advised that when a contract for a public improvement is to be awarded to the lowest responsible bidder that per Iowa law a resident bidder shall be allowed a preference over a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country. Preferences include but not limited to any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder resides. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident.

22.03 Nonresident bidder is defined as a person or entity authorized to transact business and having a business address for transacting business outside the State of Iowa at which it is conducting and has conducted business.

22.04 Resident bidder is defined as a person or entity authorized to transact business and having a business address for transacting business within the State of Iowa at which it is conducting and has conducted business for a minimum of three years prior to the date of the first advertisement for the public improvement. If the nonresident bidder's state or foreign country defines resident bidder more stringently than the State of Iowa then the more stringent definition shall apply to the nonresident bidder's bid.

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BID FORM

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP

MARSHALLTOWN, IOWA

2022

FOX Strand Project Number 2407-20A

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The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

City Clerk
City of Marshalltown
24 N Center Street
Marshalltown, IA 50158

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. Contractor's Iowa Registration No. or a written covenant to obtain such registration within the time for acceptance of Bids;

C. Bidder Status Form;

D. All required SRF forms:

Attachment 1 – Certification of Non-Segregated Facilities

Attachment 2 – Debarments and Suspensions Certification

Attachment 3 – Disadvantaged Business Enterprise (DBE) Solicitation

Attachment 4 – DBE Subcontractor Performance Form

Attachment 5 – DBE Subcontractor Utilization Form

Attachment 10 - Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

ARTICLE 3—BASIS OF BID—UNIT PRICE BID

3.01 *Unit Price Bids*

A. Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
	DIVISION 1 - GENERAL PROVISIONS & COVENANTS				
1.01	TRAFFIC CONTROL & STAGING	LS	1	$	$
1.02	EXPLORATORY DIGGING AND UTILITY POTHOLING	HR	40	$	$
1.03	UTILITY CROSSING	EA	5	$	$
1.04	DEWATERING	LS	1	$	$
1.05	RAILROAD PROTECTIVE LIABILITY INSURANCE	LS	1	$	$
1.06	RAILROAD FLAGGER	DAY	7	$	$
1.07	BYPASS PUMPING	LS	1	$	$
1.08	MISCELLANEOUS REMOVALS	LS	1	$	$
	DIVISION 2 – EARTHWORK				
2.01	CLEARING AND GRUBBING, TREE REMOVAL, TREE TRIMMING	LS	1	$	$
2.02	EARTHWORK, ROADWAY EXCAVATION	CY	150	$	$
2.03	EARTHWORK, UNSUITABLE SOILS REMOVAL, DISPOSAL, AND REPLACEMENT	CY	250	$	$
2.04	SUBGRADE PREPARATION, 8-INCH	SY	506	$	$
	DIVISION 3 - TRENCH EXCAVATION & BACKFILL				
3.01	TRENCH FOUNDATION	TON	50	$	$
3.02	SPECIAL PIPE EMBEDMENT OR ENCASEMENT	CY	50	$	$
3.03	TRENCH COMPACTION TESTING	LS	1	$	$
	DIVISION 4 - SEWERS & DRAINS				
4.01	SANITARY SEWER, MAIN REPLACEMENT, 6-INCH	LF	25	$	$
4.02	SANITARY SEWER, MAIN REPLACEMENT, 8-INCH	LF	40	$	$
4.03	SANITARY SEWER, MAIN REPLACEMENT, 10-INCH	LF	80	$	$
4.04	SANITARY SEWER, MAIN REPLACEMENT, 12-INCH	LF	10	$	$
4.05	SANITARY SEWER, MAIN REPLACEMENT, 15-INCH	LF	10	$	$
4.06	SANITARY SEWER, MAIN REPLACEMENT, 18-INCH	LF	10	$	$
4.07	SANITARY SEWER, MAIN REPLACEMENT, 24-INCH	LF	10	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
4.08	SANITARY SEWER, MAIN REPLACEMENT, 27-INCH	LF	10	$	$
4.09	SANITARY SEWER, MAIN REPLACEMENT, 30-INCH	LF	10	$	$
4.10	SANITARY SEWER, MAIN REPLACEMENT, 33-INCH	LF	10	$	$
4.11	SANITARY SEWER, MAIN REPLACEMENT, 36-INCH	LF	10	$	$
4.12	SANITARY SEWER SERVICE RECONNECTION, WYE REPLACEMENT	EA	10	$	$
4.13	SANITARY SEWER CLEANOUT	EA	5	$	$
4.14	CCTV 6-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,900	$	$
4.15	CCTV 8-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	46,708	$	$
4.16	CCTV 10-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,093	$	$
4.17	CCTV 12-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	2,327	$	$
4.18	CCTV 15-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,231	$	$
4.19	CCTV 18-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,688	$	$
4.20	CCTV 24-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	482	$	$
4.21	CCTV 27-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	647	$	$
4.22	CCTV 30-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,182	$	$
4.23	CCTV 33-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	474	$	$
4.24	CCTV 36-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	852	$	$
4.25	CCTV 6-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,900	$	$
4.26	CCTV 8-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	46,708	$	$
4.27	CCTV 10-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,093	$	$
2.28	CCTV 12-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	2,327	$	$
4.29	CCTV 15-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,231	$	$
4.30	CCTV 18-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,688	$	$
4.31	CCTV 24-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	482	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
4.32	CCTV 27-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	647	$	$
4.33	CCTV 30-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,182	$	$
4.34	CCTV 33-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	474	$	$
4.35	CCTV 36-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	852	$	$
4.36	CCTV INSPECTION REVERSAL	EA	100	$	$
4.37	SANITARY SEWER MAIN LINE, HEAVY CLEANING	HR	100	$	$
4.38	HIGH PRESSURE JETTING AND ROBOTIC CUTTING	EA	2	$	$
4.39	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY ROOTS	HR	100	$	$
4.40	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY SCALE	HR	80	$	$
4.41	SANITARY SEWER MAIN LINE, PROTRUDING TAP CUT	EA	200	$	$
4.42	SANITARY SEWER CIPP POINT REPAIR DEBRIS CUTTING	HR	50	$	$
4.43	SANITARY SEWER CIPP POINT REPAIR, GROUTING VOID AROUND LATERAL INTERNALLY	EA	10	$	$
4.44	SANITARY SEWER CIPP POINT REPAIR, 6-INCH	LF	15	$	$
4.45	SANITARY SEWER CIPP POINT REPAIR, 8-INCH	LF	25	$	$
4.46	SANITARY SEWER CIPP POINT REPAIR, 10-INCH	LF	15	$	$
4.47	SANITARY SEWER CIPP POINT REPAIR, 12-INCH	LF	10	$	$
4.48	SANITARY SEWER CIPP POINT REPAIR, 15-INCH	LF	5	$	$
4.49	SANITARY SEWER CIPP POINT REPAIR, 18-INCH	LF	5	$	$
4.50	SANITARY SEWER CIPP POINT REPAIR, 24-INCH	LF	20	$	$
4.51	SANITARY SEWER CIPP POINT REPAIR, 27-INCH	LF	5	$	$
4.52	SANITARY SEWER CIPP POINT REPAIR, 30-INCH	LF	5	$	$
4.53	SANITARY SEWER CIPP POINT REPAIR, 33-INCH	LF	5	$	$
4.54	SANITARY SEWER CIPP POINT REPAIR, 36-INCH	LF	5	$	$
4.55	SANITARY SEWER CIPP LCR REPAIR, 5 FT	EA	34	$	$
4.56	SUBDRAIN, TYPE 1, CASE B, 6-INCH	LF	25	$	$
4.57	CIPP LINING, 6" O.D.	LF	7,900	$	$
4.58	CIPP LINING, 8" O.D.	LF	46,708	$	$
4.59	CIPP LINING, 10" O.D.	LF	7,093	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
4.60	CIPP LINING, 12" O.D.	LF	2,327	$	$
4.61	CIPP LINING, 15" O.D.	LF	1,231	$	$
4.62	CIPP LINING, 18" O.D.	LF	1,688	$	$
4.63	CIPP LINING, 24" O.D.	LF	482	$	$
4.64	CIPP LINING, 27" O.D.	LF	647	$	$
4.65	CIPP LINING, 30" O.D.	LF	1,182	$	$
4.66	CIPP LINING, 33" O.D.	LF	474	$	$
4.67	CIPP LINING, 36" O.D.	LF	852	$	$
4.68	CIPP LINING, SERVICE REINSTATEMENTS	EA	1,284	$	$
4.69	CIPP LINING, 36" CIPP TRANSITION TO 18" O.D.	EA	1	$	$
	DIVISION 5 - WATER MAINS & APPURTENANCES				
5.01	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 4-INCH	LF	20	$	$
5.02	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 6-INCH	LF	20	$	$
5.03	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 8-INCH	LF	20	$	$
5.04	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 12-INCH	LF	20	$	$
5.05	FITTING, 45 DEGREE MJ BEND, 4-INCH	EA	4	$	$
5.06	FITTING, 45 DEGREE MJ BEND, 6-INCH	EA	4	$	$
5.07	FITTING, 45 DEGREE MJ BEND, 8-INCH	EA	4	$	$
5.08	FITTING, 45 DEGREE MJ BEND, 12-INCH	EA	4	$	$
5.09	FITTING, MJ SLEEVE, 4-INCH	EA	2	$	$
5.10	FITTING, MJ SLEEVE, 6-INCH	EA	2	$	$
5.11	FITTING, MJ SLEEVE, 8-INCH	EA	2	$	$
5.12	FITTING, MJ SLEEVE, 12-INCH	EA	2	$	$
5.13	WATER SERVICE RELOCATION AND REPLACEMENT	EA	5	$	$
	DIVISION 6 - STRUCTURES FOR SANITARY & STORM SEWERS				
6.01	SANITARY SEWER MANHOLE, 48-INCH SW-301, 0 TO 5 VERTICAL FEET	EA	2	$	$
6.02	SANITARY SEWER MANHOLE, 48-INCH SW-301, 5 TO 10 VERTICAL FEET	EA	4	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
6.03	REMOVE EXISTING MANHOLE	EA	2	$	$
6.04	SANITARY SEWER MANHOLE, SW-307, DROP CONNECTION	EA	1	$	$
6.05	MANHOLE FIELD ADJUSTMENTS	EA	3	$	$
6.06	MANHOLE TESTING	LS	1	$	$
	DIVISION 7 - STREETS & RELATED WORK				
7.01	REMOVAL AND DISPOSITION OF PAVEMENT	SY	506	$	$
7.02	PCC CURB AND GUTTER, 30-INCH	LF	50	$	$
7.03	HMA PAVEMENT SAMPLES AND TESTING	LS	1	$	$
7.04	DRIVEWAY PAVEMENT REMOVAL	SY	50	$	$
7.05	PCC PAVEMENT, DRIVEWAY, 6-INCH	SY	50	$	$
7.06	MODIFIED SUBBASE STONE, 8-INCH	TON	300	$	$
7.07	SUBBASE STABILIZATION, MACADAM STONE	TON	50	$	$
7.08	SIDEWALK REMOVAL	SY	25	$	$
7.09	SIDEWALK, PCC, 5-INCH	SY	25	$	$
7.10	PEDESTRIAN RAMPS, PCC, 6-INCH	SY	8	$	$
7.11	DETECTABLE WARNING PANELS	SF	10	$	$
7.12	CURB AND GUTTER REMOVAL	LF	50	$	$
7.13	ROADWAY GEOGRID	SY	506	$	$
7.14	HMA FULL DEPTH COMPOSITE PATCH	SY	161	$	$
7.15	PCC FULL DEPTH PATCH	SY	345	$	$
7.16	PCC SAMPLES AND TESTING	LS	1	$	$
7.17	SURFACING, REMOVE AND REPLACE, CLASS A ROADSTONE	TON	10	$	$
	DIVISION 8 - TRAFFIC CONTROL (NOT USED)				
	DIVISION 9 - SITE WORK & LANDSCAPING				
9.01	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 1	SQ	10	$	$
9.02	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 3	SQ	10	$	$
9.03	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 4	SQ	10	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
9.04	TEMPORARY ROLLED EROSION CONTROL PRODUCT, TYPE 2.D	SY	10	$	$
9.05	SILT FENCE	LF	100	$	$
9.06	FILTER SOCK	LF	100	$	$
9.07	STABILIZED CONSTRUCTION ENTRANCE, 3-INCH	TON	50	$	$
9.08	INLET PROTECTION, SURFACE APPLIED	EA	25	$	$
	DIVISION 10 – DEMOLITION (NOT USED)				
	DIVISION 11 - MISCELLANEOUS				
11.01	MOBILIZATION	LS	1	$	$
11.02	MOBILIZATION, MANHOLE INSTALLS AND POINT REPAIR LOCATIONS	EA	30	$	$
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

TOTAL BASE BID AMOUNT $_____

Bidder acknowledges that (1) each bid unit price includes an amount considered by bidder to be adequate to cover contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of bids, and final payment for all unit price bid items will be based on actual quantities, determined as provided in the contract documents.

3.02 *Adjustment Prices – (Not used)*

3.03 *Bid Alternates (Not used)*

3.04 *Base Bid Equipment Schedule*: *(Not used)*

3.05 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

3.06 Bidder accepts the provisions of the Agreement as to liquidated damages.

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ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

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6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

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c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

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BID BOND (PENAL SUM FORM)

Bidder	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Bid**
Name: **City of Marshalltown**	Project *(name and location)*:
Address *(principal place of business)*:	**2020 Sanitary Sewer Rehabilitation Project - CIPP Marshalltown, Iowa**
24 N Center St	
Marshalltown, IA 50158	
	Bid Due Date: **May 17, 2022**
Bond	
Penal Sum:	
Date of Bond:	

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

Bidder	Surety
_____	_____
(Full formal name of Bidder)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature) (Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title:	Title:

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

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1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
    3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
    3.2. All Bids are rejected by Owner, or
    3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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Bidder Status Form

To be completed by all bidders — Part A

Please answer "Yes" or "No" for each of the following:

☐ Yes ☐ No My company is authorized to transact business in Iowa.
(To help you determine if your company is authorized, please review the worksheet on the next page).

☐ Yes ☐ No My company has an office to transact business in Iowa.

☐ Yes ☐ No My company's office in Iowa is suitable for more than receiving mail, telephone calls, and e-mail.

☐ Yes ☐ No My company has been conducting business in Iowa for at least 3 years prior to the first request for bids on this project.

☐ Yes ☐ No My company is not a subsidiary of another business entity or my company is a subsidiary of another business entity that would qualify as a resident bidder in Iowa.

If you answered "Yes" for each question above, your company qualifies as a resident bidder. Please complete Parts B and D of this form.

If you answered "No" to one or more questions above, your company is a nonresident bidder. Please complete Parts C and D of this form.

To be completed by resident bidders — Part B

My company has maintained offices in Iowa during the past 3 years at the following addresses:

Dates: _____ /_____ /_____ to _____ /_____ /_____ Address: _____

City, State, Zip: _____

Dates: _____ /_____ /_____ to _____ /_____ /_____ Address: _____

City, State, Zip: _____

Dates: _____ /_____ /_____ to _____ /_____ /_____ Address: _____

You may attach additional sheet(s) if needed. City, State, Zip: _____

To be completed by non-resident bidders — Part C

1. Name of home state or foreign country reported to the Iowa Secretary of State:

_____

2. Does your company's home state or foreign country offer preferences to bidders who are residents? ☐ Yes ☐ No

3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.

_____

_____

You may attach additional sheet(s) if needed.

To be completed by all bidders — Part D

I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be a reason to reject my bid.

Firm Name: _____

Signature: _____ Date: _____

You must submit the completed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156.
This form has been approved by the Iowa Labor Commissioner.

Worksheet: Authorization to Transact Business

This worksheet may be used to help complete Part A of the Resident Bidder Status form. If at least one of the following describes your business, you are authorized to transact business in Iowa.

☐ Yes ☐ No My business is currently registered as a contractor with the Iowa Division of Labor.

☐ Yes ☐ No My business is a sole proprietorship and I am an Iowa resident for Iowa income tax purposes.

☐ Yes ☐ No My business is a general partnership or joint venture. More than 50 percent of the general partners or joint venture parties are residents of Iowa for Iowa income tax purposes.

☐ Yes ☐ No My business is an active corporation with the Iowa Secretary of State and has paid all fees required by the Secretary of State, has filed its most recent biennial report, and has not filed articles of dissolution.

☐ Yes ☐ No My business is a corporation whose articles of incorporation are filed in a state other than Iowa, the corporation has received a certificate of authority from the Iowa secretary of state, has filed its most recent biennial report with the secretary of state, and has neither received a certificate of withdrawal from the secretary of state nor had its authority revoked.

☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in this state and the statement has not been canceled.

☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in a state other than Iowa, has filed a statement of foreign qualification in Iowa and a statement of cancellation has not been filed.

☐ Yes ☐ No My business is a limited partnership or limited liability limited partnership which has filed a certificate of limited partnership in this state, and has not filed a statement of termination.

☐ Yes ☐ No My business is a limited partnership or a limited liability limited partnership whose certificate of limited partnership is filed in a state other than Iowa, the limited partnership or limited liability limited partnership has received notification from the Iowa secretary of state that the application for certificate of authority has been approved and no notice of cancellation has been filed by the limited partnership or the limited liability limited partnership.

☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in Iowa and has not filed a statement of termination.

☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in a state other than Iowa, has received a certificate of authority to transact business in Iowa and the certificate has not been revoked or canceled.

PART II – CONTRACT DOCUMENTS

A. Contract Forms

C-520 - Stipulated Price Agreement
Performance Payment and Maintenance Bond

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **City of Marshalltown** ("Owner") and _____ ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The project consists of sanitary sewer improvements shall include, but not be limited to approximately 70,000 linear feet of sanitary sewer CIPP pipe lining. This shall include sanitary sewer televising pre and post construction inspection televising, point repairs, manhole replacement, and associated other work for construction.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **2020 Sanitary Sewer Rehabilitation Project - CIPP**

ARTICLE 3—ENGINEER

3.01 The Owner has retained FOX Strand, 414 South 17th Street, Suite 107, Ames, Iowa 50010 ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by FOX Strand.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **September 22, 2023**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **November 3, 2023.**

4.03 *Milestones*

A. Parts of the Work must comply with the following project Milestone(s):

1. None.

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
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4.04 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner **$1,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02 above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$1,000.00** for each day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
	DIVISION 1 - GENERAL PROVISIONS & COVENANTS				
1.01	TRAFFIC CONTROL & STAGING	LS	1	$	$
1.02	EXPLORATORY DIGGING AND UTILITY POTHOLING	HR	40	$	$
1.03	UTILITY CROSSING	EA	5	$	$
1.04	DEWATERING	LS	1	$	$
1.05	RAILROAD PROTECTIVE LIABILITY INSURANCE	LS	1	$	$
1.06	RAILROAD FLAGGER	DAY	7	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
1.07	BYPASS PUMPING	LS	1	$	$
1.08	MISCELLANEOUS REMOVALS	LS	1	$	$
	DIVISION 2 – EARTHWORK				
2.01	CLEARING AND GRUBBING, TREE REMOVAL, TREE TRIMMING	LS	1	$	$
2.02	EARTHWORK, ROADWAY EXCAVATION	CY	150	$	$
2.03	EARTHWORK, UNSUITABLE SOILS REMOVAL, DISPOSAL, AND REPLACEMENT	CY	250	$	$
2.04	SUBGRADE PREPARATION, 8-INCH	SY	506	$	$
	DIVISION 3 - TRENCH EXCAVATION & BACKFILL				
3.01	TRENCH FOUNDATION	TON	50	$	$
3.02	SPECIAL PIPE EMBEDMENT OR ENCASEMENT	CY	50	$	$
3.03	TRENCH COMPACTION TESTING	LS	1	$	$
	DIVISION 4 - SEWERS & DRAINS				
4.01	SANITARY SEWER, MAIN REPLACEMENT, 6-INCH	LF	25	$	$
4.02	SANITARY SEWER, MAIN REPLACEMENT, 8-INCH	LF	40	$	$
4.03	SANITARY SEWER, MAIN REPLACEMENT, 10-INCH	LF	80	$	$
4.04	SANITARY SEWER, MAIN REPLACEMENT, 12-INCH	LF	10	$	$
4.05	SANITARY SEWER, MAIN REPLACEMENT, 15-INCH	LF	10	$	$
4.06	SANITARY SEWER, MAIN REPLACEMENT, 18-INCH	LF	10	$	$
4.07	SANITARY SEWER, MAIN REPLACEMENT, 24-INCH	LF	10	$	$
4.08	SANITARY SEWER, MAIN REPLACEMENT, 27-INCH	LF	10	$	$
4.09	SANITARY SEWER, MAIN REPLACEMENT, 30-INCH	LF	10	$	$
4.10	SANITARY SEWER, MAIN REPLACEMENT, 33-INCH	LF	10	$	$
4.11	SANITARY SEWER, MAIN REPLACEMENT, 36-INCH	LF	10	$	$
4.12	SANITARY SEWER SERVICE RECONNECTION, WYE REPLACEMENT	EA	10	$	$
4.13	SANITARY SEWER CLEANOUT	EA	5	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
4.14	CCTV 6-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,900	$	$
4.15	CCTV 8-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	46,708	$	$
4.16	CCTV 10-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	7,093	$	$
4.17	CCTV 12-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	2,327	$	$
4.18	CCTV 15-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,231	$	$
4.19	CCTV 18-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,688	$	$
4.20	CCTV 24-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	482	$	$
4.21	CCTV 27-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	647	$	$
4.22	CCTV 30-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	1,182	$	$
4.23	CCTV 33-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	474	$	$
4.24	CCTV 36-INCH SANITARY SEWER, PRECONSTRUCTION INSPECTION	LF	852	$	$
4.25	CCTV 6-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,900	$	$
4.26	CCTV 8-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	46,708	$	$
4.27	CCTV 10-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	7,093	$	$
2.28	CCTV 12-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	2,327	$	$
4.29	CCTV 15-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,231	$	$
4.30	CCTV 18-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,688	$	$
4.31	CCTV 24-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	482	$	$
4.32	CCTV 27-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	647	$	$
4.33	CCTV 30-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	1,182	$	$
4.34	CCTV 33-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	474	$	$
4.35	CCTV 36-INCH SANITARY SEWER W/REPORT, POST CONSTRUCTION INSPECTION	LF	852	$	$
4.36	CCTV INSPECTION REVERSAL	EA	100	$	$
4.37	SANITARY SEWER MAIN LINE, HEAVY CLEANING	HR	100	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
4.38	HIGH PRESSURE JETTING AND ROBOTIC CUTTING	EA	2	$	$
4.39	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY ROOTS	HR	100	$	$
4.40	SANITARY SEWER MAIN LINE, REMOVAL OF HEAVY SCALE	HR	80	$	$
4.41	SANITARY SEWER MAIN LINE, PROTRUDING TAP CUT	EA	200	$	$
4.42	SANITARY SEWER CIPP POINT REPAIR DEBRIS CUTTING	HR	50	$	$
4.43	SANITARY SEWER CIPP POINT REPAIR, GROUTING VOID AROUND LATERAL INTERNALLY	EA	10	$	$
4.44	SANITARY SEWER CIPP POINT REPAIR, 6-INCH	LF	15	$	$
4.45	SANITARY SEWER CIPP POINT REPAIR, 8-INCH	LF	25	$	$
4.46	SANITARY SEWER CIPP POINT REPAIR, 10-INCH	LF	15	$	$
4.47	SANITARY SEWER CIPP POINT REPAIR, 12-INCH	LF	10	$	$
4.48	SANITARY SEWER CIPP POINT REPAIR, 15-INCH	LF	5	$	$
4.49	SANITARY SEWER CIPP POINT REPAIR, 18-INCH	LF	5	$	$
4.50	SANITARY SEWER CIPP POINT REPAIR, 24-INCH	LF	20	$	$
4.51	SANITARY SEWER CIPP POINT REPAIR, 27-INCH	LF	5	$	$
4.52	SANITARY SEWER CIPP POINT REPAIR, 30-INCH	LF	5	$	$
4.53	SANITARY SEWER CIPP POINT REPAIR, 33-INCH	LF	5	$	$
4.54	SANITARY SEWER CIPP POINT REPAIR, 36-INCH	LF	5	$	$
4.55	SANITARY SEWER CIPP LCR REPAIR, 5 FT	EA	34	$	$
4.56	SUBDRAIN, TYPE 1, CASE B, 6-INCH	LF	25	$	$
4.57	CIPP LINING, 6" O.D.	LF	7,900	$	$
4.58	CIPP LINING, 8" O.D.	LF	46,708	$	$
4.59	CIPP LINING, 10" O.D.	LF	7,093	$	$
4.60	CIPP LINING, 12" O.D.	LF	2,327	$	$
4.61	CIPP LINING, 15" O.D.	LF	1,231	$	$
4.62	CIPP LINING, 18" O.D.	LF	1,688	$	$
4.63	CIPP LINING, 24" O.D.	LF	482	$	$
4.64	CIPP LINING, 27" O.D.	LF	647	$	$
4.65	CIPP LINING, 30" O.D.	LF	1,182	$	$
4.66	CIPP LINING, 33" O.D.	LF	474	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
4.67	CIPP LINING, 36" O.D.	LF	852	$	$
4.68	CIPP LINING, SERVICE REINSTATEMENTS	EA	1,284	$	$
4.69	CIPP LINING, 36" CIPP TRANSITION TO 18" O.D.	EA	1	$	$
	DIVISION 5 - WATER MAINS & APPURTENANCES				
5.01	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 4-INCH	LF	20	$	$
5.02	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 6-INCH	LF	20	$	$
5.03	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 8-INCH	LF	20	$	$
5.04	RELOCATE WATER MAIN, TRENCHED, RESTRAINED JOINT CLASS 350 DIP, 12-INCH	LF	20	$	$
5.05	FITTING, 45 DEGREE MJ BEND, 4-INCH	EA	4	$	$
5.06	FITTING, 45 DEGREE MJ BEND, 6-INCH	EA	4	$	$
5.07	FITTING, 45 DEGREE MJ BEND, 8-INCH	EA	4	$	$
5.08	FITTING, 45 DEGREE MJ BEND, 12-INCH	EA	4	$	$
5.09	FITTING, MJ SLEEVE, 4-INCH	EA	2	$	$
5.10	FITTING, MJ SLEEVE, 6-INCH	EA	2	$	$
5.11	FITTING, MJ SLEEVE, 8-INCH	EA	2	$	$
5.12	FITTING, MJ SLEEVE, 12-INCH	EA	2	$	$
5.13	WATER SERVICE RELOCATION AND REPLACEMENT	EA	5	$	$
	DIVISION 6 - STRUCTURES FOR SANITARY & STORM SEWERS				
6.01	SANITARY SEWER MANHOLE, 48-INCH SW-301, 0 TO 5 VERTICAL FEET	EA	2	$	$
6.02	SANITARY SEWER MANHOLE, 48-INCH SW-301, 5 TO 10 VERTICAL FEET	EA	4	$	$
6.03	REMOVE EXISTING MANHOLE	EA	2	$	$
6.04	SANITARY SEWER MANHOLE, SW-307, DROP CONNECTION	EA	1	$	$
6.05	MANHOLE FIELD ADJUSTMENTS	EA	3	$	$
6.06	MANHOLE TESTING	LS	1	$	$
	DIVISION 7 - STREETS & RELATED WORK				

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
7.01	REMOVAL AND DISPOSITION OF PAVEMENT	SY	506	$	$
7.02	PCC CURB AND GUTTER, 30-INCH	LF	50	$	$
7.03	HMA PAVEMENT SAMPLES AND TESTING	LS	1	$	$
7.04	DRIVEWAY PAVEMENT REMOVAL	SY	50	$	$
7.05	PCC PAVEMENT, DRIVEWAY, 6-INCH	SY	50	$	$
7.06	MODIFIED SUBBASE STONE, 8-INCH	TON	300	$	$
7.07	SUBBASE STABILIZATION, MACADAM STONE	TON	50	$	$
7.08	SIDEWALK REMOVAL	SY	25	$	$
7.09	SIDEWALK, PCC, 5-INCH	SY	25	$	$
7.10	PEDESTRIAN RAMPS, PCC, 6-INCH	SY	8	$	$
7.11	DETECTABLE WARNING PANELS	SF	10	$	$
7.12	CURB AND GUTTER REMOVAL	LF	50	$	$
7.13	ROADWAY GEOGRID	SY	506	$	$
7.14	HMA FULL DEPTH COMPOSITE PATCH	SY	161	$	$
7.15	PCC FULL DEPTH PATCH	SY	345	$	$
7.16	PCC SAMPLES AND TESTING	LS	1	$	$
7.17	SURFACING, REMOVE AND REPLACE, CLASS A ROADSTONE	TON	10	$	$
	DIVISION 8 - TRAFFIC CONTROL (NOT USED)				
	DIVISION 9 - SITE WORK & LANDSCAPING				
9.01	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 1	SQ	10	$	$
9.02	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 3	SQ	10	$	$
9.03	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING - TYPE 4	SQ	10	$	$
9.04	TEMPORARY ROLLED EROSION CONTROL PRODUCT, TYPE 2.D	SY	10	$	$
9.05	SILT FENCE	LF	100	$	$
9.06	FILTER SOCK	LF	100	$	$
9.07	STABILIZED CONSTRUCTION ENTRANCE, 3-INCH	TON	50	$	$
9.08	INLET PROTECTION, SURFACE APPLIED	EA	25	$	$

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Unit Price Work					
Item No.	**Description**	**Unit**	**Bid Quantity**	**Unit Price**	**Extended Price**
	DIVISION 10 – DEMOLITION (NOT USED)				
	DIVISION 11 - MISCELLANEOUS				
11.01	MOBILIZATION	LS	1	$	$
11.02	MOBILIZATION, MANHOLE INSTALLS AND POINT REPAIR LOCATIONS	EA	30	$	$
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

TOTAL BASE BID AMOUNT $_____

Bidder acknowledges that (1) each bid unit price includes an amount considered by bidder to be adequate to cover contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of bids, and final payment for all unit price bid items will be based on actual quantities, determined as provided in the contract documents.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **3rd Monday** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. Ninety-five percent (95%) of the value of the Work completed (with the balance being retainage); and,

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b. Ninety-five percent (95%) of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to ninety-five percent (95%) of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less two-hundred percent (200%) of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the maximum rate allowed by law.

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ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement (pages 1 to 16, inclusive).
2. Performance, Payment and Maintenance Bond (pages PP&M1 to PP&M4, inclusive).
3. General Conditions (pages 1 to 70, inclusive). Not attached but incorporated by reference.
4. Supplementary Conditions (pages 1 to 20, inclusive). Not attached but incorporated by reference.
5. Specifications as listed in the table of contents of the project manual – not attached but incorporated by reference.
6. Drawings (not attached but incorporated by reference) consisting of 97, sheets with each sheet bearing the following general title: **2020 Sanitary Sewer Rehabilitation Project - CIPP**
7. Addenda (numbers ___ to ___ , inclusive). Not attached but incorporated by reference.
8. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages ___ to ___, inclusive).
    b. Documentation submitted by Contractor prior to Notice of Award (pages ___ to ___, inclusive).
    C. SRF Forms:
        1) Attachment 1: Certification of Non-Segregated Facilities Form
        2) Attachment 2: Certification Regarding Debarment and Suspension Form
        3) Attachment 3: Disadvantaged Business Enterprise Certification Form
        4) Attachment 4: DBE Program Subcontractor Performance Form
        5) Attachment 5: DBE Program Subcontractor Utilization Form
        6) Attachment 10: Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment
9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

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C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of

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discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

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ARTICLE 9—OTHER PROVISIONS

American Iron and Steel

A. The Contractor acknowledges to and for the benefit of **City of Marshalltown** ("Purchaser") and the State of Iowa (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund and such law contains provisions commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

9.02 *Davis-Bacon Labor Standards, 29 CFR 5.5 (a)(1) through (10)*

A. Minimum wages:

1. will be paid unconditionally and not less often than once a week
2. the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination
3. Contributions made or costs reasonably anticipated for bona fide fringe benefits

B. Withholding**:**

1. The **City of Marshalltown** shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or
2. any other Federal contract with the same prime contractor (crosswithholding), or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor,

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3. employed by the contractor or any subcontractor the full amount of wages required by the contract

C. Payrolls and basic records

1. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter

a. Such records shall contain the name, address, and social security number of each such worker,

b. his or her correct classification,

c. hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide

d. fringe benefits or cash equivalents

e. daily and weekly number of hours worked,

f. deductions made and actual wages paid.

2. The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls

3. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors

D. Apprentices and trainees

1. employed pursuant to and individually registered in a bona fide apprenticeship program

2. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program

3. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination.

4. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program.

a. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination

E. Compliance with Copeland Act requirements

1. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract

F. Subcontracts

1. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10)

2. A clause requiring the subcontractors to include these clauses in any lower tier subcontracts

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3. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

G. Contract termination: debarment

1. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12

H. Compliance with Davis-Bacon and Related Act requirements

1. All rulings and interpretations of the Davis-Bacon and Related Acts contained in **29 CFR parts 1, 3, and 5** are herein incorporated by reference in this contract.

I. Disputes concerning labor standards

1. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. b. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

J. Certification of eligibility

1. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

2. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

3. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____(which is the Effective Date of the Contract).

Owner:	Contractor:
City of Marshalltown *(typed or printed name of organization)*	_____ *(typed or printed name of organization)*
By: _____ *(individual's signature)*	By: _____ *(individual's signature)*
Date: _____ *(date signed)*	Date: _____ *(date signed)*
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)* *(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____ *(individual's signature)*	Attest: _____ *(individual's signature)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address for giving notices:	Address for giving notices:
Designated Representative:	Designated Representative:
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address: **24 N Center Street** **Marshalltown, IA 50158**	Address:
Phone:	Phone:
Email:	Email:
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	License No.: _____ *(where applicable)* State: _____

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PERFORMANCE BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **City of Marshalltown**	Description *(name and location)*:
Mailing address *(principal place of business)*:	**2020 Sanitary Sewer Rehabilitation Project - CIPP Marshalltown, Iowa**
24 N. Center Street	
Marshalltown, IA 50158	Contract Price:
	Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☒ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature)(Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-610, Performance Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

    5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

    5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

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5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

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statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: None

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WARRANTY BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Construction Contract**
Name: **City of Marshalltown**	Description *(name and location)*:
Address *(principal place of business)*:	**2020 Sanitary Sewer Rehabilitation Project - CIPP Marshalltown, Iowa**
24 N. Center Street **Marshalltown, IA 50158**	Contract Price: Effective Date of Contract: Contract's Date of Substantial Completion:

Bond

Bond Amount: _____

Date of Bond: _____

Bond Period: Commencing 364 days after Substantial Completion of the Work under the Construction Contract, and continuing until **four** years after such Substantial Completion.

Modifications to this Bond form:
☒ None ☐ See Paragraph 9

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth herein, do each cause this Warranty Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature) (Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title:	Title:

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-612, Warranty Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract's Correction Period Obligations. The Construction Contract is incorporated herein by reference.

2. If the Contractor performs the Correction Period Obligations, the Surety and the Contractor shall have no obligation under this Warranty Bond.

3. If Owner gives written notice to Contractor and Surety during the Bond Period of Contractor's obligation under the Correction Period Obligations, and Contractor does not fulfill such obligation, then Surety shall be responsible for fulfillment of such Correction Period Obligations. Surety shall either fulfill the Correction Period Obligations itself, through its agents or contractors, or, in the alternative, Surety may waive the right to fulfill the Correction Period Obligations itself, and reimburse the Owner for all resulting costs incurred by Owner in performing Contractor's Correction Period Obligations, including but not limited to correction, removal, replacement, and repair costs.

4. The Surety's liability is limited to the amount of this Warranty Bond. Renewal or continuation of the Warranty Bond will not modify such amount, unless expressly agreed to by Surety in writing.

5. The Surety shall have no liability under this Warranty Bond for obligations of the Contractor that are unrelated to the Construction Contract. No right of action will accrue on this Warranty Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

6. Any proceeding, legal or equitable, under this Warranty Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and must be instituted within **four** years after the Surety refuses or fails to perform its obligations under this Warranty Bond.

7. Written notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown in this Warranty Bond.

8. Definitions

    8.1. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page of this Warranty Bond, including all Contract Documents and changes made to the agreement and the Contract Documents.

    8.2. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

    8.3. *Correction Period Obligations*—The duties, responsibilities, commitments, and obligations of the Contractor with respect to correction or replacement of defective Work, as set forth in the Construction Contract's Correction Period clause, EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), Paragraph 15.08, as duly modified.

    8.4. *Substantial Completion*—As defined in the Construction Contract.

    8.5. *Work*—As defined in the Construction Contract.

9. Modifications to this Bond are as follows: None

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PAYMENT BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **City of Marshalltown** Mailing address *(principal place of business)*: **24 N. Center Street** **Marshalltown, IA 50158**	Description *(name and location)*: **2020 Sanitary Sewer Rehabilitation Project – CIPP** **Marshalltown, Iowa** Contract Price: Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☒ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature)(Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-615, Payment Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

    5.1. Claimants who do not have a direct contract with the Contractor

        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

    7.2. Pay or arrange for payment of any undisputed amounts.

    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

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16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: None

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PART II - CONTRACT DOCUMENTS

B. Conditions of the Contract

1. C-700 - General Conditions

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

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National Society of Professional Engineers

1420 King Street, Alexandria, VA 22314-2794

(703) 684-2882

www.nspe.org

American Council of Engineering Companies

1015 15th Street N.W., Washington, DC 20005

(202) 347-7474

www.acec.org

American Society of Civil Engineers

1801 Alexander Bell Drive, Reston, VA 20191-4400

(800) 548-2723

www.asce.org

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

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requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

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recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

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33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

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43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

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1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

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into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

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inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

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B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

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established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

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D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

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B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

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and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

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3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

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or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

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conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

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Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

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Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

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L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

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4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

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Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

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6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

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B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

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3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

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E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

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H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

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7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

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7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

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I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

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document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

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9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

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D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

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E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

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B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

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9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

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ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

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E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

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ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

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1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

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11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

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Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

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and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

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2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

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consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

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g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

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Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

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thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

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D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

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losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

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or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

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establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

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4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

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b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

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submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

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significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

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d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

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appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

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attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

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provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

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18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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PART II - CONTRACT DOCUMENTS

B. Conditions of the Contract

2. C-800 - Supplementary Conditions

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

SC-1.01.A. Add the following sentences after the first sentence in the definition of the term "Bid":

The Bid shall mean the entire submittal including the bid form and all attachments required as listed on the Bid Form and all other attachments and supplemental documents submitted at the time of bidding. The terms "bid", "proposal", and "offer" may be used interchangeably in the bidding documents.

SC-1.01.A. Delete Paragraph 1.01.A.22. in its entirety and insert the following in its place:

22. *Engineer* – The firm of FOX Strand, 414 South 17th Street, Suite 107, Ames, Iowa 50010, Phone (515) 233-0000 and their duly authorized agents, such agents acting within the scope of the particular duties entrusted to them in each case. Engineer's Consultants include: **None.**

SC-1.01.A. Delete subparagraph 1.01.A.33 in its entirety and insert the following in its place:

33. *Resident Project Representative* – The authorized representative of the Engineer who may be assigned, either part-time or full-time, to the site or any part thereof. Refer to the attachment entitled "Attachment A – Duties, Responsibilities, and Limitations of Authority of Resident Project Representative".

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **three** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

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SC-3.01.B Add the following language at the end of Paragraph 3.01B:

Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result shall be provided whether or not specifically called for, at no additional cost to Owner.

SC-3.01 Add the following two subparagraphs after 3.01.G:

H. The Specifications may vary in form, format and style. Some specification sections are written in varying degrees of streamlined or declarative style and some sections may be relatively narrative by comparison. Omissions of such words and phrases as "the Contractor shall," "in conformity with," "as shown," or "as specified" are intentional in streamlined sections. Omitted words and phrases shall be supplied by inference. Similar types of provisions may appear in various parts of a section or articles within a part depending on the format of the section. The Contractor shall not take advantage of any variation of form, format or style in making claims for extra Work.

I. The cross referencing of specification sections under the subparagraph heading "Related Sections include but are not necessarily limited to:" and elsewhere within each specification section is provided as an aid and convenience to the Contractor. The Contractor shall not rely on the cross referencing provided and shall be responsible to coordinate the entire Work under the Contract Documents and provide a complete Project whether or not the cross referencing is provided in each section or whether or not the cross referencing is complete.

J. The Specifications as a whole will govern the construction of the entire Work. The applicable provisions thereof will govern Work to be performed under each section of the contract.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Time; Notice to Proceed*

SC-4.01.A Replace the third sentence with the following sentence:

In no event will the Contract Times commence to run later than the ninetieth (90th) day after the day of Bid opening or the thirtieth (30th) day after the Effective Date of the Contract, whichever date is earlier.

4.03 Reference Points

SC-4.03.A. Amend the first sentence of Paragraph 4.03.A. to read as follows:

Owner shall provide engineering surveys to establish two (2) reference points at the site for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03.D Add the following subparagraphs under Paragraph 5.03.D.4:

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5. Test hole information represents subsurface characteristics to the extent indicated, and only for the point location of the test hole. Contractor shall make his own interpretation of the character and condition of the materials which will be encountered between test hole locations.

6. The information provided is not guaranteed to be more than a general indication of the physical conditions likely to be found.

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None	None	None

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
None	None	None

G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at **City Hall** during regular business hours, or may request copies from Engineer.

5.05 *Underground Facilities*

SC-5.05.A. Add the following new paragraph immediately after Paragraph 5.05.A.5.:

6. Generally, service connection locations are intentionally not indicated on the Drawings. The Contractor shall have full responsibility for discovery of these existing Underground Facilities prior to excavating or trenching by contacting all local utilities and by prospecting. The cost for performing this work shall be included in the Contract Price.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None	None	None

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5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
None	None	None

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.B:

1. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be **four (4) years** after Substantial Completion.

2. Warranty Bond. After Substantial Completion, Contractor shall furnish a warranty bond issued in the form of EJCDC® C-612, Warranty Bond (2018). The warranty bond must be in a bond amount of **15 percent** of the final Contract Price. The warranty bond period will extend to a date **four (4) years** after Substantial Completion of the Work. Contractor shall deliver the fully executed warranty bond to Owner prior to or with the final application for payment, and in any event no later than 11 months after Substantial Completion.

3. The maintenance bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.

6.02 *Insurance—General Provisions*

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC-6.02 Amend the first sense of Paragraph 6.02.N:

All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused, until at least 30 days prior written notice has been given to the purchasing policyholder.

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess,

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pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: **None.**

E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	Not Applicable
Bodily injury by disease—aggregate	Not Applicable
Employer's Liability	
Each accident	$500,000
Each employee	$500,000
Policy limit	$1,000,000
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	Not Applicable

F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.

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b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.

3. Severability of interests and no insured-versus-insured or cross-liability exclusions.

4. Underground, explosion, and collapse coverage.

5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.

7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).

2. Any exclusion for water intrusion or water damage.

3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.

5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).

6. Any limitation or exclusion based on the nature of Contractor's work.

7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	**Policy limits of not less than:**
General Aggregate	$2,000,000
Products—Completed Operations Aggregate	$1,000,000
Personal and Advertising Injury	$1,000,000
Bodily Injury and Property Damage—Each Occurrence	$1,000,000

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J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	**Policy limits of not less than:**
Bodily Injury	
Each Person	$1,000,000
Each Accident	$1,000,000
Property Damage	
Each Accident	$1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$1,000,000

K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	**Policy limits of not less than:**
Each Occurrence	$5,000,000
General Aggregate	$5,000,000

L. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor's Pollution Liability	**Policy limits of not less than:**
Each Occurrence/Claim	Not Applicable
General Aggregate	Not Applicable

M. *Contractor's Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

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Contractor's Professional Liability	Policy limits of not less than:
Each Claim	$2,000,000
Annual Aggregate	$2,000,000

N. *Unmanned Aerial Vehicle Liability Insurance:* If Contractor uses unmanned aerial vehicles (UAV—commonly *referred* to as drones) at the Site or in support of any aspect of the Work, Contractor shall obtain UAV liability insurance in the amounts stated; name Owner, Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Contractor's compliance with this requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy.

Unmanned Aerial Vehicle Liability Insurance	Policy limits of not less than:
Each Claim	$1,000,000
General Aggregate	$1,000,000

Q. *Other Required Insurance:* Contractor shall purchase Railroad Protective Liability Insurance (RPLI) in conformance with Exhibit C of the Union Pacific Railroad Company and the City of Marshalltown Longitudinal Pipeline Agreement Insurance Requirements.

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04.A of the General Conditions and substitute the following in its place:

A. Installation Floater

1. Contractor shall provide and maintain installation floater insurance on a broad form or "all risk" policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work ("Covered Property"). Coverage under the Contractor's installation floater will include loss from covered "all risk" causes (perils) to Covered Property:
    a. of the Contractor, and Covered Property of others that is in Contractor's care, custody, and control;
    b. while in transit to the Site, including while at temporary storage sites;
    c. while at the Site awaiting and during installation, erection, and testing;
    d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.
2. The installation floater coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable.
3. The installation floater coverage will be in an amount sufficient to protect Contractor's interest in the Covered Property. The Contractor will be solely responsible for any deductible carried under this coverage.
4. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

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ARTICLE 7—CONTRACTORS RESPONSIBILITIES

7.02 *Supervision and Superintendence*

SC-7.02.B Add the following subparagraph under SC-7.02.B:

1. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of the Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

7.03 *Labor; Working Hours*

SC-7.03.C Replace the entire paragraph with the following:

C. In the absence of any Federal, state or local laws, regulations or covenants, the Contractor may conduct its performance of the Work at the Contractor's sole discretion, except that the cost of any overtime pay or other expense incurred by Owner for Resident Project Representative, Owner's Representative, and construction observation services, occasioned by the conduct of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day, shall be reimbursed to the Owner by the Contractor.

1. No Work shall be done between 6:00pm and 7:00am without permission of Owner. However, emergency work may be done without prior permission.

2. Night Work may be undertaken as a regular procedure with the permission of Owner; such permission, however, may be revoked at any time by Owner if Contractor fails to maintain adequate equipment and supervision for the proper prosecution and control of the Work at night.

7.04 *Services, Materials, and Equipment*

SC-7.04.A. Add the following paragraph under SC-7.04.A:

1. Where the Work requires equipment be furnished, due to the lack of standardization of equipment as produced by the various manufacturers, it may become necessary to make minor modifications in the structures, buildings, piping, mechanical work, electrical work, accessories, controls, or other work, to accommodate the particular equipment offered. All such modifications shall be subject to approval by Engineer and shall be made by Contractor at no additional cost to Owner.

SC-7.04. Add the following paragraph after SC-7.04.C:

D. All items of standard equipment shall be the latest model at the time of bid, unless otherwise specified.

7.05 *"Or Equals"*

SC-7.05. Add the following subparagraph after SC-7.05.E:

F. Certain items of equipment or supplies may be designated as Base Bid Equipment and proposed substitutions require pre-bid approval by the Engineer. Where the specification or description includes the phrase "pre-approved equivalent", "pre-approved equal", or similar language, only the specified brand of equipment or the specific supplier that is indicated in the specification or that is pre-approved during the bidding period will be allowed.

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7.07 *Concerning Subcontractors and Suppliers*

SC-7.07. Delete Paragraph 7.07.D and replace with the following:

D. Within ten days after the Effective Date of the Agreement, Contractor shall submit to Engineer for review a Subcontractors and Supplier List, with particular information regarding the qualifications of each Subcontractor identified by the Contractor as proposed to perform more than ten percent of the Work. Absent objection by the Owner prior to Commencement of Contract Times, the use of Subcontractors listed by the Contractor will be required in the performance of the work. The Owner shall be notified in writing of any proposed substitute Subcontractor for consideration following the Commencement of Contract Times.

SC-7.07 Add a new paragraph immediately after Paragraph 7.07.M:

N. The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

7.09 *Permits*

SC-7.09.A. Add the following subparagraph under paragraph 7.08.A:

1. The Owner will obtain and pay for the necessary Iowa Department of Natural Resources Wastewater Construction Permit and Iowa Department of Natural Resources Air Permit.

7.10 *Taxes*

SC-7.10 Add the following new paragraphs immediately after Paragraph 7.10.A:

B. Owner is exempt from Iowa state sales taxes and local option sales taxes on all materials and equipment to be incorporated in the work. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

C. The Contractor shall provide a listing to the City identifying all appropriate subcontractors qualified for use of the tax exemption certificate. The listing shall include the Federal Employer Identification Number (FEIN) for the Contractor and each Subcontractor.

D. The Owner will complete an on-line application to register this Contract with the Iowa Department of Revenue and Finance and will furnish the Contractor and all listed subcontractors with an authorization letter and Tax Exemption Certificate for use in the purchase of supplies and materials to be incorporated into the Work. The Contractor and subcontractors may make copies of the tax exemption certificates and authorization letters and provide a copy to each supplier providing construction materials to be incorporated into this project.

E. The Contractor shall be responsible for complying with all applicable provisions of Iowa Code Section 422.

7.11 *Laws and Regulations*

SC-7.11 Add the following new subparagraphs immediately after Paragraph 7.11.A:

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1. Federal Requirements. Specific Federal requirements shall be as specified herein and in the attachments at the end of the Supplementary Conditions.

2. Safety and Health Regulations. OSHA "Safety and Health Regulations for Construction", Chapter XVII of Title 29, CFR Part 1926, shall apply to Work under this Contract. The U.S. Department of Labor will be responsible for compliance review and enforcement of the regulations.

3. Employment Requirements. Employment requirements shall be as specified herein and in the attachments at the end of these Supplementary Conditions.

4. Nondiscrimination in Employment. Contractor and Subcontractor shall not discriminate in employment practices and shall comply with Labor Standards Provisions for Federally Assisted Construction Contracts (EPA Form included in the Contract Documents).

   Contractor acknowledges that it understands and shall be bound by the equal opportunity requirements of EPA regulations (40 CFR Part B, particularly Section 8.4 [b]), which shall be applicable throughout the performance of Work under this Contract. Contractor shall similarly bind contractually each Subcontractor. Contractor shall engage in affirmative action directed at promoting and ensuring equal employment opportunity in the workforce used under the Contract and Contractor shall require contractually the same effort of all Subcontractors whose subcontracts exceed $10,000). "Affirmative action" as used herein shall constitute a good faith effort to achieve and maintain that amount of minority employment in the onsite workforce used on the Project which corresponds, for each trade used, to the minority population in the serving labor market area from which workers are reasonably available for hire for the Project.

5. Nonsegregated Facilities. The following requirements apply to this Contract:

   NOTICE TO PROSPECTIVE FEDERALLY-ASSISTED-CONSTRUCTION CONTRACTORS

   A Certification of Nonsegregated Facilities as required by May 9, 1967, order (33 F.R. 7808, May 28, 1968) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a federally-assisted-construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity clause.

   Contractors receiving federally-assisted-construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause will be required to provide for the forwarding of the following notice to prospective Subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity clause:

   NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

   A Certification of Nonsegregated Facilities as required by the May 9, 1967, order (33 F.R. 7808, May 28, 1968) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity clause.

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Contractors receiving subcontract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause will be required to provide for the forwarding of this notice to prospective Subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity clause.

6. Violating Facilities Prohibition. The Contractor shall comply with 40 CFR 31.36(i)(12) which prohibits the procurement of materials or equipment from facilities on the EPA "List of Violating Facilities". Contractor is also prohibited from using entities listed on GSA's "List of Parties Excluded from Federal Procurement or Nonprocurement Programs".

7. Buy American Provision. The Buy American Provision of Public Law 95-217 (Section 215 of Public Law 92-500 as amended), as implemented by EPA regulations and guidance, generally requires that preference be given to the purchase of domestic construction material in the performance of this Contract.

8. Archaeological Deposits. If, during the course of construction, evidence of deposits of historical or archaeological interest is found, Contractor shall cease operations and immediately notify the Owner, who shall immediately notify the Regional Office of the Iowa Department of Natural Resources and the State Historic Preservation Office (SHPO). Once SHPO has been informed of the discovery and excavation, activities will cease until an assessment has been made by a qualified archaeologist. In the event that human remains are discovered excavation activities will cease, skeletal remains associated burial goods will not be removed from the site or otherwise disturbed, and local authorities and the Director of Burials at the Office of the State Archaeologist will be contacted immediately. No further disturbance of the deposits shall occur until Contractor has been notified by Owner that Contractor may proceed. Owner will issue a Notice to Proceed only after the state official has surveyed the find and made a determination to the Iowa Department of Natural Resources and Owner. Compensation to Contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or Change Order provisions of the Contract Documents. (Reference: 80 Stat 915, 16 USC 470, and Executive Order No. 11593 of May 31, 1971.) (36 CFR Part 800.13)

9. Clean Air Act. Contractor shall comply with all applicable standards, orders, or requirements issued under the Clean Air Act including, but not limited to, Section 306 of the Clean Air Act (42 U.S.C. 1857 (h)), Section 508 (U.S.C. 1368) Executive Order 11738, and EPA regulations (40 CFR Part 15).

10. Records. Contractor shall retain all required records for three (3) years after final payment and all other pending matters are closed. All records shall be preserved and made available to authorized representatives of the Owner, Department of Natural Resources, USEPA, and the Office of the Inspector General.

11. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Population (Exec. Order No. 12898). These four laws and Executive Order No. 12898 prohibit discrimination in the provision of services or benefits on the basis of race, color, national origin, sex, handicap or age in programs or activities receiving federal financial assistance. These anti-discrimination provisions apply to the entire operations of federal assistance recipients, not just the specific program or activity being funded by the

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assistance. The Contractor shall assure that they will comply with the requirements of the non-discrimination laws as required by the IDNR.

12. Disadvantaged Business Enterprises (DBE's). The following requirements shall apply to prevent unfair practices that adversely affect DBE's:

    a. Prime Contractor must pay its Subcontractor for satisfactory performance no more than 30 days from the Prime Contractor's receipt of payment from the SRF loan recipient.

    b. Prime Contractor must notify the SRF loan recipient in writing prior to termination of a DBE subcontractor for convenience.

    c. Prime Contractor must employ the six Good Faith Efforts to solicit a replacement subcontractor if a DBE subcontractor fails to complete work under a subcontract for any reason.

7.13 *Safety and Protection*

SC-7.13. Add the following new paragraph immediately following Paragraph 7.13.J:

K. The Contractor shall note that hydrogen sulfide, methane, or other hazardous gases may be present at several areas of the work site, including but not limited to manholes, control structures, pipelines and sewers, treatment structures, pumping stations, and process or control buildings. Contractor shall maintain safe working conditions at all times.

7.16 *Submittals*

SC-7.16.A Replace the last sentence of subparagraph 7.16.A.3 with the following:

This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation, otherwise Contractor will not be relieved of the responsibility of executing the Work in accordance with the Contract Documents, even though such Shop Drawings or Samples have been otherwise reviewed.

SC-7.16.A Add the following subparagraph under 7.16.A.3:

a. If a Shop Drawing or Sample, as submitted, indicates a variation from the Contract Requirements as set forth in the Contract Documents and Engineer finds same to be in the interest of Owner and to be so minor as not to involve a change in the Contract Price or time for performance, Engineer may approve the Shop Drawings or Samples; provided however, such departure is slight in nature and does not affect the design concept of the Work.

SC-7.16.A Add the following subparagraphs after 7.16.A.3.a:

b. Contractor shall submit all Shop Drawings and Samples sufficiently in advance of construction requirements to allow ample time for checking, correcting, resubmitting and rechecking and to avoid any delay in progress of the Work.

c. Shop Drawings and Sample submittals not conforming to requirements of this Paragraph 7.16.A and the Specifications will be returned to Contractor without action for resubmittal and the resulting delay shall be entirely the responsibility of Contractor.

SC-7.16.B. Add the following subparagraphs under subparagraph 7.16.B.1:

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c. Shop Drawings submitted as herein provided by Contractor and reviewed by Engineer for conformance with the design concept shall be executed in conformity with the Contract Documents unless otherwise required by Owner.

d. When Shop Drawings are submitted for the purpose of showing the installation in greater detail, their review shall not excuse Contractor from requirements shown on the drawings and Specifications.

e. For-Information-Only submittals upon which the Engineer is not expected to conduct review or take responsive action may be so identified in the Contract Documents.

SC-7.16.C. Add the following under Paragraph 7.16.C:

9. Engineer's review of Shop Drawings and Samples, Standard Specifications and descriptive literature submitted by Contractor will be only for general conformance with design concept, except as otherwise provided, and shall not be construed as:

   a. permitting any departure from the Contract Requirements;

   b. relieving Contractor of the responsibility for any error in details, dimensions or otherwise that may exist in such submittals;

   c. constituting a blanket approval of dimensions, quantities, or details of the material or equipment shown; or

   d. approving departures from additional details or instructions previously furnished by Engineer. Such check or review shall not relieve Contractor of the full responsibility of meeting all of the requirements of the Contract Documents.

ARTICLE 8—OTHER WORK AT THE SITE (NOT MODIFIED)

ARTICLE 9—OWNER'S RESPONSIBILITIES (NOT MODIFIED)

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. The duties, responsibilities, and limitation of authority of the Resident Project Representative are set forth in the attachment to the Supplementary Conditions entitled "Attachment A – Duties, Responsibilities, and Limitations of Authority of Resident Project Representative."

ARTICLE 11—CHANGES TO THE CONTRACT

11.07 Change of Contract Price

SC-11.07.B. Replace subparagraph 11.07.B.2 with the following:

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2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2), and shall include the cost of any secondary impacts that are foreseeable at the time of pricing the cost of extra Work; or

11.08 Change of Contract Times

SC-11.08. Add the following paragraph after paragraph 11.08.B:

C. No extension of the Contract Time will be allowed for additional Work or for claimed delay unless the additional Work contemplated or claimed delay is shown to be on the critical path of the Project's schedule of construction or Contractor can show by Critical Path Method analysis how the additional Work or claimed delay adversely affects the critical path.

11.09 Change Proposals

SC-11.09. Replace the first sentence of subparagraph 11.09.A with the following:

Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; to respond to a Change Proposal Request made by Owner or Engineer; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract.

SC-11.09. Add the following new paragraph immediately after paragraph 11.09.D:

E. Change Proposal Request: When Owner requests Contractor to present a proposal to accomplish a change in the Work, the request will be made in the form of a Change Proposal Request (CPR) prepared by Engineer. If requested by Owner or Engineer, Contractor shall provide an itemized breakdown of the cost of the change. Engineer will make recommendations to Owner concerning acceptance. Contractor is not authorized to proceed with a change contained in a CPR until a Change Order is properly signed and issued.

ARTICLE 12—CLAIMS (NOT MODIFIED)

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.03 *Unit Price Work*

SC-13.03 Replace subparagraph 13.03.C. with the following subparagraph:

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item. Work described in the Contract Documents, or reasonably inferred as required for a functionally complete installation, but not identified in the listing of unit price items shall be considered incidental to unit price work listed and the cost of incidental work included as a part of the unit price.

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SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the extended price of a particular item of Unit Price Work amounts to **10** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **25** percent from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCCEPTANCE OF DEFECTIVE WORK

14.03 Defective Work

SC-14.03. Add the following new subparagraph immediately after 14.03.F.:

G. The acceptance at any time of materials or equipment by or on behalf of Owner shall not be a bar to future rejection if they are subsequently found to be defective, inferior in quality, or not equal to the material or equipment specified, or are not as represented to Engineer or Owner.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

SC-15.01.B Add the following subparagraphs immediately after subparagraph 15.01.B.4.

5. Contractor's Application for Progress Payment shall be prepared on the form provided in the Contract Documents. The Application for Progress Payment shall reflect the total value of stored materials and equipment, the value of the work completed based on the Schedule of Values provided in Paragraphs 2.03 and 2.05 of the General Conditions, statutory 5% retainage, previous amounts paid, and the net amount due.

6. The Owner will consider payment of the Contractor's Applications for Progress Payments at its first regular City Council meeting each month. This regular meeting date shall be considered "the date established for each progress payment" in the application of the time frames established for submittal of Application for Progress Payment by the Contractor and review of Application for Progress Payment by the Engineer in Paragraph 15.01.B. of the General Conditions.

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7. Contractor's Applications for Payment shall be accompanied by the documentation specified herein.

    a. *Materials and Equipment*. Payments for stored materials and equipment shall be based only upon the actual cost of the materials and equipment to Contractor and shall not include any overhead or profit to Contractor. Partial payments will not be made for undelivered materials or equipment.
    b. *Schedules and Data*. During the progress of the Work, each Application for Payment shall be accompanied by Contractor's updated schedule of operations, or progress report, with such shop drawings schedules, procurement schedules, value of material on hand included in the application, and other data specified in Division 1 or reasonably required by Engineer.
    c. American Iron and Steel Materials Spreadsheet. During the progress of the Work, each Application of Payment shall be accompanied by an updated version of the Final De Minimum Spreadsheet in Attachment 9 and available at http://www.iowasrf.com/about_srf/use-of-american-iron-and-steel/.

SC-15.01.D.1 Delete paragraph 15.01.D.1 in its entirety and replace with the following:

1. Thirty (30) days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

15.03 *Substantial Completion*

SC-15.03.A. Add the following three new subparagraphs under paragraph 15.03.A.:

1. "Substantial Completion" means that the facilities are completed to the point that all facilities, paving operations, utility installation, seeding, and appurtenances affected by the construction are fully functional and ready for Owner's continuous use as intended, to the satisfaction of the Engineer. All performance testing and O&M manuals shall be completed prior to the date of Substantial Completion.
2. Portions of the Work not essential to facility operation, which can be completed without interruption of facility operation, may be completed after the Work is accepted as substantially complete, and may include the following items: Site Cleanup.

SC-15.03.B. Add the following subparagraph under Paragraph 15.03.B.:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner who will reimburse the Engineer. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.06 *Final Payment*

SC-15.06 Add the following paragraphs after Paragraph 15.06.A.3:

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4. Retained Funds: Retained funds may be released in accordance with the *Code of Iowa* for work that is substantially complete.

    a. Requests for early release of retained funds shall be accompanied by a sworn statement from the contractor that, ten calendar days prior to filing the request, notice was given as required in Section 7 of Chapter 26.13 to all subcontractors, sub-subcontractors, and suppliers, and by an itemized contractor's statement showing the amount of State of Iowa sales tax or use tax and to whom paid on all materials which have become part of the work for which the contractor is requesting payment.
    b. An amount equal to two-hundred percent of the value of the labor or materials yet to be provided, as determined by the engineer, will be withheld until such labor or materials are provided.
    c. An amount equal to two-hundred percent of the amount of any claims of subcontractors or suppliers will be withheld.

SC-15.06 Replace paragraph 15.06.E. with the following:

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor after 31 days after final acceptance of the completed contract by resolution of the City Council.

15.07 *Waiver of Claims*

SC-15.07 Replace paragraph 15.07.B. with the following:

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner and/or Engineer other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

SC-15.08 Add the following new Paragraph 15.08.G:

G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION (NOT MODIFIED)

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 *Attorneys' Fees*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 *Attorneys' Fees*

A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in

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an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

18.07 *Controlling Law*

SC-18.07 Replace paragraph 18.07.A. in its entirety with the following:

A. This Contract is to be governed by the law of the state of **Iowa** with venue in **Marshall County** District Court, Iowa

END OF SECTION

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PART II - CONTRACT DOCUMENTS

B. Conditions of the Contract

3. Attachments To Supplementary Conditions

a. Duties, Responsibilities and Limitations of Authority of (the Engineer's) Resident Project Representative

b. SRF Loan Forms and Requirements:

i. Attachment 1 - Certification of Nonsegregated Facilities (EPA-7 5720-4.2)

ii. Attachment 2 - Certification Regarding Debarment, Suspension, and Other Responsibilities Matters (EPA Form 5700-49)

iii. Attachment 3 - Disadvantaged Business Enterprise (DBE) Solicitation

iv. Attachment 4 - DBE Subcontractor Performance Form

v. Attachment 5 - DBE Subcontractor Utilization Form

vi. Attachment 6 - DBE Subcontractor Participation Form

vii. Attachment 7 - Other Federal Requirements Language

viii. Attachment 8 - Right of Entry and Records Retention

ix. Attachment 9 - "American Iron and Steel" Requirements

x. Attachment 10 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

c. Wage Rate Determination (Davis Bacon Prevailing Wage Rate

Attachment A

Duties, Responsibilities, and Limitations of Authority of Resident Project Representative

A. ENGINEER shall furnish a Resident Project Representative ("RPR"), assistants, and other field staff to assist ENGINEER in observing progress and quality of Work. The RPR, assistants, and other field staff under this Exhibit D may provide full time representation or may provide representation to a lesser degree.

B. Through such additional observations of Contractor's work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the Work. However, ENGINEER shall not, during such visits or a result of such observations of Contractor's work in progress, supervise, direct, or have control over the Contractor's Work nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences, or procedures selected by Contractor, for safety precautions and programs incident to the Contractor's work in progress, for any failure of Contractor to comply with Law and Regulations applicable to Contractor's performing and furnishing the Work, or responsibility of construction for Contractor's failure to furnish and perform the Work in accordance with the Contract Documents. In addition, the specific limitations set forth in Section A.1.05 of Exhibit A of the Agreement are applicable.

C. The duties and responsibilities of the RPR are limited to those of ENGINEER in the Agreement with the OWNER and the Contract Documents, and are further limited and described as follows:

1. *General*: RPR is ENGINEER's agent at the Site, will act as directed by and under the supervision of ENGINEER and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the Contractor's work in progress shall in general be with ENGINEER and Contractor, keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

2. *Schedules*: Review the progress schedule, schedule of Shop Drawings and Sample submittals, and schedule of values prepared by Contractor and consult with ENGINEER concerning acceptability.

3. *Conference and Meetings*. Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

4. *Liaison*:

    a. Serve as ENGINEER's liaison with Contractor, working principally through Contractor's superintendent and assist in understanding the intent of the Contract Documents.

    b. Assist ENGINEER in serving as OWNER's liaison with Contractor when Contractor's operations affect OWNER's on-Site operations.

    c. Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.

5. *Interpretation of Contract Documents*: Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by ENGINEER.

6. *Shop Drawings and Samples*:

    a. Record date of receipt of Samples and approved Shop Drawings.

    b. Receive Samples which are furnished at the Site by Contractor, and notify ENGINEER of availability of Samples for examination.

    c. Advise ENGINEER and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by ENGINEER.

7. *Modifications*. Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to Contractor in writing decisions as issued by ENGINEER.

8. *Review of Work and Rejection of Defective Work*:

    a. Conduct on-Site observations of Contractor's work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.

    b. Report to ENGINEER whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. *Inspections, Tests, and System Startup:*

    a. Consult with ENGINEER in advance of scheduled major inspections, tests, and systems startups of important phases of the Work.

    b. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate OWNER's personnel, and that Contractor maintains adequate records thereof.

    c. Observe, record, and report to ENGINEER appropriate details relative to the test procedures and systems startups.

    d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections, and report to ENGINEER.

10. *Records:*

    a. Maintain at the Site orderly files for correspondence, reports for job conferences, reproductions of original Contract Documents including all Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawings and Sample submittals received from and delivered to Contractor, and other Project related documents.

b. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER.

c. Record names, addresses and telephone numbers of all Contractors, subcontractors, and major suppliers of materials and equipment.

d. Maintain records for use in preparing Project documentation.

e. Upon completion of the Work, furnish original set of all RPR Project documentation to ENGINEER.

11. *Reports*.

a. Furnish to ENGINEER periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawings and Sample submittals.

b. Draft and recommend to ENGINEER proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Furnish to ENGINEER and OWNER copies of all inspection, test, and system startup reports.

d. Report immediately to ENGINEER the occurrence of any Site accidents, any Hazardous Environmental Conditions, emergencies, or acts of God endangering the Work, and property damaged by fire or other causes.

12. *Payment Requests*. Review Application for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to ENGINEER for review and forwarding to OWNER prior to payment for that part of the Work.

14. *Completion:*

a. Before ENGINEER issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.

b. Observe whether Contractor has arranged for inspection required by Laws and Regulations, including, but not limited to those to be performed by public agencies having jurisdiction over the Work.

c. Participate in a final inspection in the company of ENGINEER, OWNER, and Contractor and prepare a final list of items to be completed or corrected.

d. Observe whether all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance and issuance of the Notice of Acceptability of the Work.

D. Resident Project Representative shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of ENGINEER’s authority as set forth in the Agreement or the Contract Documents.

3. Undertake any of the responsibilities of Contractor, subcontractors, suppliers, or Contractor’s superintendent.

4. Advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor’s work unless such advise or directions are specifically required by the Contract Documents.

5. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the activities or operations of OWNER or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by ENGINEER.

7. Accept Shop Drawings or Sample submittals from anyone other than Contractor.

8. Authorize OWNER to occupy the Project in whole or in part.

SRF Required Front-End Specifications

PLEASE NOTE: Attachment 10 is a new program requirement and is effective for all SRF projects bid after January 2021.

Attachment 1: Certification of Non-Segregated Facilities Form *(to be completed and signed by Prime Contractor and submitted with the bid)*

Attachment 2: Statement in Advertisement for Bids on Debarment and Suspension/Certification Regarding Debarment and Suspension Form *(to be completed and signed by Prime Contractor and submitted with the bid)*

Attachment 3: Disadvantaged Business Enterprise Certification Form *(to be completed and signed by Prime Contractor and submitted with the bid)*

Attachment 4: DBE Program Subcontractor Performance Form (*to be completed and signed by Prime and DBE Subcontractor for each subcontract and submitted with the bid)*

Attachment 5: DBE Program Subcontractor Utilization Form *(to be completed and signed by Prime Contractor and submitted with the bid)*

Attachment 6: DBE Program Subcontractor Participation Form *(for voluntary use of DBEs)*

Attachment 7: Other Federal Requirements Language

A. Standard Equal Employment Opportunity Specifications
B. Federal Labor Standards Provisions (including Davis-Bacon prevailing wage rates**)
C. Preservation of Open Competition and Government Neutrality
D. Historical and Archeological Finds
E. Prohibitions on Procurement from Violating Facilities

Attachment 8: Right of Entry and Records Retention

Attachment 9: Use of American Iron and Steel

Attachment 10: Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment *(to be completed and signed by Prime Contractor and submitted with the bid)*

***The Davis Bacon wage determination received from the Iowa Finance Authority must also be included in the front-end specifications.*

Attachment 1
SRF Required Front-End Specifications
(This form must be completed and signed by Prime Contractor and submitted with the bid)

U.S. Environmental Protection Agency
Certification of Non-Segregated Facilities

(Applicable to contracts, subcontracts, and agreements with applicants who are themselves performing federally assisted construction contracts, exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause.)

By the submission of this bid, the bidder, offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national original, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NON-SEGREGATED FACILITIES

A Certification of Non-segregated Facilities, as required by the May 9, 1967, order (33 F.R. 7808, May 28, 1968) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

_____
Signature Date

_____
Name and Title of Signer (Please Type)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

EPA-7 5720-4.2

Attachment 2
SRF Required Front-End Specifications

(This form must be completed and signed by the Prime Contractor and submitted with the bid)

Debarments and Suspensions

Any bidder or equipment supplier whose firm or affiliate is listed in on the U.S. General Services Administration Excluded Parties List will be prohibited from the bidding process. The excluded parties records search engine is located at the System for Award Management (SAM) website: https://www.sam.gov/SAM/. Pursuant to 2 CFR Part 180, as supplemented by 2 CFR 1532, any entity submitting a bid while the SAM website lists that entity as having an active exclusion will be determined by the DNR to be a non-responsive bidder and will not be able to receive SRF funding.

United States Environmental Protection Agency Washington, DC 20460

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and the principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U SC Sec. 10 01, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____

Typed Name & Title of Authorized Representative

_____

Signature of Authorized Representative Date

☐ I am unable to certify to the above statements. My explanation is attached.

Attachment 3

SRF Required Front-End Specifications

(This form must be completed and signed by Prime Contractor and submitted with the bid)

Disadvantaged Business Enterprise (DBE) Solicitation

It is EPA's policy that recipients of EPA financial assistance through the State Revolving Fund programs award a "fair share" of subagreements to small, minority and women-owned businesses, collectively know as Disadvantaged Business Enterprises (DBEs). Iowa's Fair Share goals are:

	Minority-Owned Business Enterprise (MBE) Goal	Women-Owned Business Enterprise (WBE) Goal
Construction	1.7%	2.2%
Supplies	0.6%	5.6%
Services	2.5%	11.3%
Goods/Equipment	2.5%	10.4%
Average	1.8%	7.4%

Only work performed by certified DBEs can be counted toward the goals. In Iowa, DBEs must be certified through the Iowa Department of Transportation (IDOT). Information on certification requirements and a list of certified DBEs is on the IDOT website at https://secure.iowadot.gov/DBE/Home/Index/.

Prime contractors' DBE requirements for SRF projects include:

- Taking affirmative steps for DBE participation
- Documenting the efforts and the proposed utilization of certified DBEs

PROJECT INFORMATION

SRF Applicant:	
Bidder:	
Address:	
Contact Person:	
Signature:	
Phone Number:	
E-Mail Address:	
Check if Prime Contractor is: ☐ **Minority-Owned** ☐ **Women-Owned**	

GOOD FAITH EFFORTS CHECKLIST

Please complete the checklist to determine if you have complied with the requirement to make good faith efforts to ensure that certified DBEs have the opportunity to compete for procurements funded by EPA financial assistance funds. Bidders/offerors must make good faith efforts prior to submission of bids/proposals.

1. Did you ensure that DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities? ☐ Yes ☐ No

2. Did you make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process? This includes, whenever possible, posting solicitation for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date. ☐ Yes ☐ No

3. Did you consider in the contracting process whether firms competing for large contracts could subcontract with DBEs? This will include dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process. ☐ Yes ☐ No

4. Did you encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually? ☐ Yes ☐ No

5. Did you use the services of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce to identify potential subcontractors? ☐ Yes ☐ No

6. List the potential DBE subcontractors that were contacted. Only list those that are certified through the Iowa Department of Transportation.

Name	**How Contacted (e.g. letter, phone call, fax, e-mail)**	**Response (e.g. did not respond, not interested, not competitive)**

PROPOSED UTILIZATION OF DBE SUBCONTRACTORS

Please include Attachments 4 and 5 to document the proposed utilization of certified DBE subcontractors.

CONTRACT ADMINISTRATION PROVISIONS

Several contract provisions are required to prevent unfair practices that adversely affect DBEs. These include:

1. Prime Contractor must pay its Subcontractor for satisfactory performance no more than 30 days from the Prime Contractor's receipt of payment from the SRF loan recipient.

2. Prime Contractor must notify the SRF loan recipient in writing prior to termination of a DBE subcontractor for convenience.

3. Prime Contractor must employ the six Good Faith Efforts to solicit a replacement subcontractor if a DBE subcontractor fails to complete work under a subcontract for any reason.

Attachment 4

SRF Required Front-End Specifications

(This form must be completed and signed by Prime and DBE Subcontractor for each subcontract and submitted with the bid)

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

This form is intended to capture the DBE[1] subcontractor's[2] description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name	Project Name	
Bid/Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact
Address		
Telephone No.	Email Address	
Prime Contractor Name	Issuing/Funding Entity	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor

DBE Certified by ____ DOT _____ SBA _____Other: _____	Meets/exceeds EPA certification standards? _____ YES _____ NO _____ Unknown

[1]A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certification as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

[2]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	**Print Name**
Title	**Date**

Subcontractor Signature	**Print Name**
Title	**Date**

Attachment 5
SRF Required Front-End Specifications
(This form must be completed and signed by Prime Contractor and submitted with the bid if utilizing DBE subcontractors)

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or intended use of identified certified DBE[1] subcontractors[2] and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name	Project Name	
Bid/Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact
Address		
Telephone No.	Email Address	
Issuing/Funding Entity		
I have identified potential DBE certified subcontractors _____ YES _____ NO If yes, please complete the table below. If no, please explain: _____		

Subcontractor Name/Company Name	Company Address/Phone/Email	Estimated Dollar Amount	Currently DBE Certified?

Continue on back if needed

[1]A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certification as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

[2]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	**Print Name**
Title	**Date**

IASRF6100-4 DBE Subcontractor Utilization Form – Page 2

Attachment 6
SRF Required Front-End Specifications
(This form is for the voluntary use of DBE Subcontractors)

Disadvantaged Business Enterprise Program
DBE Subcontractor Participation Form

An EPA Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. ***The use of this form by DBE subcontractors is voluntary and is not required for bidding.*** This form gives a DBE[1] subcontractor[2] the opportunity to describe work received and/or report any concerns regarding the EPA-funded project (e.g. in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the EPA DBE Coordinator at any time during the project period of performance.

Subcontractor Name	Project Name	
Bid/Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact
Address		
Telephone No.	Email Address	
Prime Contractor Name	Issuing/Funding Entity	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

[1]A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certification as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

[2]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

Please use the space below to report any concerns regarding the above EPA-funded project:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Subcontractor Signature	**Print Name**
Title	**Date**

Return to: Regional Coordinator, Small Business Utilization, U.S. Environmental Protection Agency, Region 7, 11201 Renner Blvd., Lenexa, KS 66219

Attachment 7
SRF Required Front-End Specifications

Other Federal Requirements Language

A. Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:
   a. “Covered area” means the geographical area described in the solicitation from which this contract resulted;
   b. “Director” means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
   d. "Minority" includes:
      (i) Black (all persons having origin in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Sub-continent, or the Pacific Islands); and
      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 6-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor’s or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employee in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a

Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work in being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal emp1oyment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor employees are assigned to work. The Contractor, where possible will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's effort, to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The

Contractor shall provide notice of these programs to the source complied under 7b above.
f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and test to be used in the selection process.
j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
1. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
m. Ensure that seniority practices, job classifications work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
p. Conduct a review, at least annually, of all supervisors’ adherence to and performance under the Contractor’s EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetable or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps at least as extensive as those standards prescribed in paragraph 7 of these specifications so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Federal Register, Vol. 43, No. 68 - Friday, April 7, 1978 (Corrected May 5, 1978).
Effective Date: May 8, 1978
Federal Register, Vol. 45, No. 194. Paragraph 4, revised October 3, 1980
Effective Date: September 30, 1980

APPENDICES A and B-80

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

(Executive Order 11246)

1. The Offerors or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

(See Appendix B-80 and Appendix A Below)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and in the regulations in 41 CFR Part 60—4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60—4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60—4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer Identification number of the subcontractor, estimated dollar amount of the subcontract, and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is (State of Iowa).

APPENDIX A

The following goals and timetables for female utilization shall be included in all Federal and federally assisted construction contracts and subcontracts in excess of $10,000. The goals are applicable to the contractor’s aggregate on-site construction workforce whether or not part of that workforce is performing work on a Federal or federally assisted construction contract or subcontract.

Area covered: Goals for Women apply nationwide.

Timetable Goals (percent)
From Apr. 1, 1978 until March 31, 1979 . . . . . .3.1
From Apr. 1, 1979 until March 31, 1980 . . . . . .5.0
From Apr. 1, 1980 until March 31, 1981 . . . . . .6.9

Published, Federal Register May 5, 1978

APPENDIX B-80

Until further notice, the following goals for minority utilization in each construction craft and trade shall be included in all Federal or federally assisted construction contracts and subcontracts in excess of $10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor’s total onsite construction workforce, regardless of whether or not part of that workforce is performing work in a Federal, federally assisted or nonfederally related project, contract or subcontract. Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60—4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply with the applicable SMSA of EA goal contained in this appendix B-80.

Economic Areas

State: Iowa Goal %

096 Dubuque IA:
SMSA Counties:
2200 Dubuque, IA …….. 0.6
IA Dubuque
Non-SMSA
Counties ……..… 0.5
IA Allamakee, IA Clayton, IA Delaware, IA, Jackson IA, Winneshiek

099 Davenport Rock Island Moline, IA-IL:
SMSA Counties:
1960 Davenport Rock Island Moline, IA-IL …..… 4.6
IL Henry, IL Rock Island Moline, IA Scott

Non-SMA
Counties ……. 3.4
IL Carroll, IL Hancock, IL Henderson, IL ,Mercer, IL Whiteside, IA Clinton, IA Des Moines, IA Henry, IA Lee, IA Louisa, IA, Muscatine, MO Clark

100 Cedar Rapids, IA:
SMSA Counties:
1360 Cedar Rapids, IA ……. 1.7
IA Linn

Non-SMSA Counties ……..…… 1.5
IA Benton, IA Cedar, IA Iowa, IA Johnson, IA, Jones, IA, Washington

101 Waterloo, IA:
SMSA Counties:
8920 Waterloo-Cedar Falls, IA …… 4.7
IA Black Hawk

Non-SMSA Counties ……..… 2.0
IA Bremer, IA Buchanan, IA Butler, IA Cerro Gordo, IA Chickasaw, IA Fayette, IA Floyd, IA Franklin, IA Grundy, IA Hancock, IA Hardin, IA Howard, IA Mitchell, IA Winnebago, IA Worth

102 Fort Dodge, IA:
Non-SMSA Counties …….. 0.4
IA Buena Vista, IA Calhoun, IA Carroll, IA Clay, IA Dickinson, IA Emmet, IA Greene, IA Hamilton, IA Humboldt, IA Kossuth, IA Palo Alto, IA Pocahontas, IA Sac, IA Webster, IA Wright

103 Sioux City, IA:
SMSA Counties:
7720 Sioux City, IA-NE ……..……..… 1.9
IA Woodbury, NE Dakota

Non-SMSA Counties …… 1.2
IA Cherokee, IA Crawford, IA Ida, IA Monona, IA O'Brien, IA Plymouth, IA Sioux, NE Antelope, NE Cedar, NE Cuming, NE Dixon, NE Knox, NE Madison, NE Pierce, NE Stanton, NE Thurston, NE Wayne, SD Bon Homme, SD Clay, SD Union, SD Yankton

104 Des Moines, IA:
SMSA Counties:
2120 Des Moines, IA ……..…… 4.5
IA Polk, IA Warren

Non SMSA Counties: ……..……. 2.4
IA Adair, IA Appanoose, IA Boone, IA Clarke, IA Dallas, IA Davis, IA Decatur, IA Guthrie, IA Jasper, IA Jefferson, IA Keokuk, IA Lucas, IA Madison, IA Mahaska, IA Marion, IA Marshall, IA Monroe, IA Poweshiek, IA Ringgold, IA Story, IA Tama, IA Union, IA Van Buren, IA Wapello, IA Wayne

143 Omaha, NE:
SMSA Counties:
5920 Omaha, NE-IA ……..……..…… 7.6
IA Pottawattamie, NE Douglas, NE Sarpy

Non-SMSA Counties ……..... 5.3
IA Adams, IA Audubon, IA Cass, IA Fremont, IA Harrison, IA Mills, IA Montgomery, IA Page, IA Shelby, IA Taylor, NE Burt, NE Cass, NE Colfax, NE Dodge, NE Platte, NE Saunders, NE Washington

Published, Federal Register October 3, 1980

B. Federal Labor Standards Provisions (including Davis-Bacon prevailing wage rates)

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

(1) Minimum wages. (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill,

except as provided in Sec. 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that, the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The EPA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records. (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/whd/programs/dbra/forms.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its

own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a ``Statement of Compliance,'' signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under Sec. 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under Sec. 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the ``Statement of Compliance'' required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's

hourly rate) specified in the contractor's or subcontractors registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (and any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility. (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) Contract Work Hours and Safety Standards Act. The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Sec. 5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The loan recipient shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the

subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in Sec. 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

C. Preservation of Open Competition and Government Neutrality Towards Government Contractors' Labor Relations on Federal and Federally Funded Construction Projects (Executive Order 13202, as amended by Executive Order 13208)

Executive Order 13202, signed February 17, 2001 and amended April 4, 2001, requires all executive agencies that issue grants to ensure Government neutrality toward contractors' labor relations. This applies to recipients of SRF assistance. The Executive Order prohibits discrimination against contractors and their employees in construction contracts based upon labor affiliation or lack thereof.

SRF assistance recipients and any construction managers acting on their behalf must ensure that bidding specifications, project agreements, and other controlling documents do not require, prohibit, or otherwise discriminate, with respect to labor affiliation or lack thereof.

D. Historical and Archeological Finds

If, during the course of construction, evidence of deposits of historical or archeological interest is found, the contractor shall cease operations affecting the find. The owner shall then notify the State Revolving Fund Environmental Review Specialist, who shall in turn notify the State Historic Preservation Office. The SRF shall consult with the SHPO and other interested parties to determine the proper course of action regarding the discovery. No further disturbance of the deposits shall ensue until the SRF Environmental Review Specialist determines that the project activities in that area may proceed. Compensation to the contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the specifications.

Authority for this derives from the National Historic Preservation Act (16 U.S.C. §§ 470 *et seq.*) and 36 CFR Part 800. If human remains are discovered then state law also applies IC 263B.

E. Prohibitions on Procurement from Violating Facilities (Section 306, Clean Air Act; Section 508, Clean Water Act; Executive Order 11738)

Both the Clean Water Act and the Clean Air Act prohibit federal agencies from extending assistance by way of loans or contracts to persons who have been convicted of violations of either law. Executive Order 11738 was issued to coordinate enforcement by the U.S. Environmental Protection Agency, which shall designate facilities which have given rise to a conviction for an offense under the criminal provisions of the Clean Air Act and the Clean Water Act.

The Executive Order also prohibits agencies from extending assistance to facilities that are not in compliance with either Act.

SRF assistance recipients may not procure goods, services, or materials from suppliers listed by the EPA as violators.

The Excluded Parties Listing search engine is located at the System for Award Management (SAM) website: https://www.sam.gov/SAM/.

Attachment 8
SRF Required Front-End Specifications

Right of Entry and Records Retention

The recipient shall provide access at all times for the Department of Natural Resources, the Iowa Finance Authority, the state auditor, and the U.S. EPA Office of the Inspector General to all project records and documents for inspection and audit purposes for a period of three years after the date of last loan payment. The same access to the project site(s) shall be provided for inspection purposes.

567 Iowa Administrative Code paragraph 92.8(2).e. State inspections. Personnel of the department shall have the right to examine all construction aspects of the project, including materials and equipment delivered and stored on site for use on the project.

Attachment 9
SRF Required Front-End Specifications

"American Iron and Steel" Requirements

H.R. 3547, the "Consolidated Appropriations Act, 2014," enacted January 17, 2014 by the U.S. Congress, includes "American Iron and Steel" provisions that require Clean Water and Drinking Water State Revolving Fund assistance recipients of these funds to use iron and steel produced in the United States.

H.R. 3547 includes the following language in Division G, Title IV, under the heading, "Use of American Iron and Steel":

> Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.
>
> (2) In this section, the term "iron and steel products" means the following products made primarily of iron and steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.
>
> (b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the "Administrator") find that—
>
> (1) Applying subsection (a) would be inconsistent with the public interest;
>
> (2) Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quantity; or
>
> (3) Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.
>
> (c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

The final guidance and any published waivers are found at: https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement. In particular the contractor should pay attention to the guidance for documentation of compliance. There is also a waiver for incidental items; in order to qualify for this waiver the total materials and costs for the project must be tracked and incidental items identified.

Sample "American Iron and Steel" Contract Language

In order to fulfill the requirements, the assistance recipient must in good faith design the project and solicit bids for construction with U.S.-made iron and steel. The following information will be included in any contracts resulting from this request for bids:

The Contractor acknowledges to and for the benefit of the City of _____ ("Purchaser") and the State of Iowa (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund and such law contains provisions commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement.

The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Sample Certifications

As indicated in the contract language, it will be the responsibility of the Contractor to obtain certifications that the products and materials used in the project are U.S.-made. EPA recommends the use of a step certification process for documenting compliance with AIS requirements, similar to one used by the Federal Highway Administration. Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. Each handler (supplier, fabricator, manufacturer, processor, coater, etc.) of the iron and steel products certifies that their step in the process was domestically performed.

The following information is provided as a sample letter of step certification for AIS compliance. Documentation must be provided on company letterhead. In this example, there may be multiple letters from different manufacturers if one manufacturer did not perform all of the steps.

Date

Company Name
Company Address
City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx

2. Xxxx

3. Xxxx

Such process took place at the following location:

_____

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the U.S. and providing detailed information on the steps involved.

The following is a template for this type of final certification.

Template American Iron and Steel Certification Letter

On Manufacturer's Letterhead

IRON & STEEL, INC.
1959 Steel Drive
Ironville, OH 12345

MATERIAL CERTIFICATION

April 30, 2015

RE: Job Name: Waterprojectville, Iowa – 2015 State Revolving Fund Water Infrastructure Project
SRF Project Number: CS1920999 01

References the SRF Project

I certify that the processes for manufacturing or fabricating the following products and/or materials provided for the subject project took place at the following U.S. locations:

Quantity	Description	Manufacturing Processes	Location Where Processes Occurred
3 count	AB123456 4" Gate Valve	Melting, poured, machined	Ironville, OH
60 count	XY654321 Reinforced Concrete Manhole	Melted, rolled, fabricated	Steel City, IA
60 count	XZ123456 Manhole Cover	Melted, cast, finished	Stainless, MS
1200 linear feet	AB654321 4" Ductile Iron Water Pipe	Melted, rolled, finished	Pipetown, CA

I further certify that the products and/or materials are in full compliance with the American Iron and Steel requirements as mandated in the U.S. Environmental Protection Agency's State Revolving Fund programs. If any of the above compliance statements change while providing material to this project we will immediately notify the supplier, prime contractor, consulting engineer, or project owner.

Specifies the Products and Quantities

Specifies the Manufacturing Processes and the U.S. Locations Where They Were Performed

On behalf of IRON & STEEL, INC.,

Jane Smith
Jane Smith
Product Quality Manager

Signature of Manufacturer's Representative

Covered and Non-Covered Items

The EPA issued a waiver for De Minimis incidental components of eligible water and wastewater infrastructure projects. Funds used for such De Minimis incidental components cumulatively may comprise no more than a total of 5% of the total cost of the materials used in and incorporated into a project. The cost of an individual incidental item may not exceed 1% of the total cost of the materials used in and incorporated into a project.

De Minimis incidental items include miscellaneous, generally low-cost components that are essential for, but incidental to, the construction and are incorporated into the physical structure of the project. For many of these incidental components, the country of manufacture and the availability of alternatives are not readily or reasonably identifiable prior to procurement in the normal course of business. For others, the country of manufacture may be known but the miscellaneous character in conjunction with the low cost, individually and (in total) as typically procured in bulk, mark them as properly incidental.

Examples of incidental components could include small washers, screws, fasteners (i.e., nuts and bolts), miscellaneous wire, corner bead, ancillary tube, etc. Examples of items that are clearly not incidental include significant process fittings (i.e., tees, elbows, flanges, and brackets), distribution system fittings and valves, force main valves, pipes, treatment and storage tanks, large structural supports, etc.

In consultation with their contractors, assistance recipients should determine the items to be covered by this waiver and must retain relevant documentation (i.e. invoices) as to those items. Assistance recipients must summarize in reports to the State of Iowa the types and/or categories of items to which this waiver is applied, the total cost of incidental components for each type or category, and the calculations by which they determined the total cost of materials used in and incorporated into the project.

The successful bidder will fill out the materials spreadsheet (shown below) and submit it to the assistance recipient to indicate iron and steel items proposed to be procured for the project.

American Iron and Steel Materials Spreadsheet – to be Submitted by Successful Bidder
Iowa Department of Natural Resources - January 2021
Based on EPA Memorandum (4/15/2014): De Minimis Waiver of Section 436 of P.L. 113-76, Consolidated Appropriation Acts (CAA), 2014

Project:			
Bidder:		Date:	

*Covered Product Categories include: Lined or unlined pipes or fittings; manhole covers; municipal castings; pipe clamps and restraints; valves; structural steel; hydrants, tanks; flanges; reinforced precast concrete; construction materials.

**Incidental items are miscellaneous, generally low-cost items, often procured in bulk, such as washers, screws, fasteners, small amounts of wire, etc.

	Covered Products Category*	Description of Covered Products	Documentation Will be Obtained	Item is Incidental and will be claimed under De Minimis Waiver**	Bid Amount Covered Products	Bid Amount Incidentals
1	Choose an item.					
2	Choose an item.					
3	Choose an item.					
4	Choose an item.					
5	Choose an item.					

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At the end of construction, the contractor will submit a final list showing covered items being claimed as incidental components under the De Minimis Waiver. Assistance recipients will complete a De Minimis Waiver Incidental Components List for the entire project to demonstrate compliance with the De Minimis Waiver cost requirements outlined above.

American Iron and Steel - De Minimus Waiver Incidental Components List

Iowa Department of Natural Resources – January 2021

Based on EPA Memorandum (4/15/2014): De Minimus Waiver of Section 436 of P.L. 113-76, Consolidated Appropriation Acts (CAA), 2014

This form is to be used by the State Revolving Fund (SRF) applicant to identify all non-domestic iron and steel incidental components permanently incorporated into an SRF project that meet the requirements of the public interest De Minimis Waiver. This form can also be used by individual contractors to submit their final incidental components list to the SRF applicant.

SRF Applicant:					
SRF Project #:		Submitted By:			
Date:		Individual Contractor De Minimis List ☐ Final De Minimis List for SRF Project ☐			
Total Materials Cost:		Total amount claimed as De Minimis Incidental Components:		Percent: *(must be 5% or less of total materials cost)*	

	Contractor Name	Covered Products	Description of Covered Products *(list each item type separately)*	Date Purchased	Individual Item/Unit Cost	Quantity Claimed as Incidental	Dollar Amount Incidental Components
Example	*JB Construction*	*Construction materials*	*Steel Doors*	*1-21-2020*	*$500*	*5*	*$2500*
1		Choose an item.					
2		Choose an item.					
3		Choose an item.					

These documents are available on-line at [http://www.iowasrf.com/about_srf/use-of-american-iron-and-steel/.](http://www.iowasrf.com/about_srf/use-of-american-iron-and-steel/)

Attachment 10
SRF Required Front-End Specifications
(This form must be completed and signed by Prime Contractor and submitted with the bid)

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

This term and condition implements 2 CFR 200.216 and is effective for obligations and expenditures of EPA financial assistance funding on or after 8/13/2020. EPA recipients and subrecipients, including borrowers under EPA funded revolving loan fund programs, are prohibited from obligating or expending loan or grant funds to:

(a) Procure or obtain, extend or renew a contract to procure or obtain;
(b) Enter into a contract (or extend or renew a contract) to procure; or
(c) Obtain the equipment, services, or systems that use "covered telecommunications equipment or services" identified in the regulation as a substantial or essential component of any system, or as critical technology as part of any system.

Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the System for Award Management exclusion list, website: **https://www.sam.gov/SAM/.**

(1) As described in Public Law 115-232, section 889, covered telecommunications equipment or services includes:

(i) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(ii) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(iii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iv) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(2) Consistent with 2 CFR 200.471, costs incurred for telecommunications and video surveillance services or equipment such as phones, internet, video surveillance, and cloud servers are allowable except for the following circumstances:

(i) Obligating or expending EPA funds for covered telecommunications and video surveillance services or equipment or services to procure (enter into, renew or extend contracts) or obtain the equipment, services, or systems as described in 2 CFR 200.216.

I understand the above prohibitions and certify that the project will be in compliance with all the requirements.

_____
Typed Name & Title of Authorized Representative

_____
Signature of Authorized Representative Date

"General Decision Number: IA20220081 02/25/2022

Superseded General Decision Number: IA20210081

State: Iowa

Construction Types: Heavy and Highway

Counties: Adair, Adams, Allamakee, Appanoose, Audubon, Benton, Black Hawk, Boone, Bremer, Buchanan, Buena Vista, Butler, Calhoun, Carroll, Cass, Cedar, Cerro Gordo, Cherokee, Chickasaw, Clarke, Clay, Clayton, Clinton, Crawford, Dallas, Davis, Decatur, Delaware, Des Moines, Dickinson, Dubuque, Emmet, Fayette, Floyd, Franklin, Fremont, Greene, Grundy, Guthrie, Hamilton, Hancock, Hardin, Harrison, Henry, Howard, Humboldt, Ida, Iowa, Jackson, Jasper, Jefferson, Johnson, Jones, Keokuk, Kossuth, Lee, Linn, Louisa, Lucas, Lyon, Madison, Mahaska, Marion, Marshall, Mills, Mitchell, Monona, Monroe, Montgomery, Muscatine, O'Brien, Osceola, Page, Palo Alto, Plymouth, Pocahontas, Polk, Pottawattamie, Poweshiek, Ringgold, Sac, Shelby, Sioux, Story, Tama, Taylor, Union, Van Buren, Wapello, Warren, Washington, Wayne, Webster, Winnebago, Winneshiek, Woodbury, Worth and Wright Counties in Iowa.

HIGHWAY CONSTRUCTION PROJECTS and HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be

adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

* SUIA2021-001 10/18/2017

	Rates	Fringes
Carpenter & Piledrivermen		
ZONE 1	$ 29.27	14.58
ZONE 2	$ 27.48	14.73
ZONE 3	$ 27.48	14.73
ZONE 4	$ 26.85	12.30
ZONE 5**	$ 25.75	10.70
CONCRETE FINISHER		
ZONE 1	$ 29.05	7.60
ZONE 2	$ 29.05	7.60
ZONE 3	$ 29.05	7.60
ZONE 4	$ 25.95	6.95
ZONE 5	$ 24.90	6.95
ELECTRICIAN (STREET AND HIGHWAY LIGHTING AND TRAFFIC SIGNALS)		
ZONE 1, 2, AND 3	$ 30.40	9.80
ZONE 4	$ 29.10	8.80
ZONE 5	$ 26.95	7.80
IRONWORKER (SETTING OF STRUCTURAL STEEL)		
ZONE 1	$ 32.25	11.60
ZONE 2	$ 30.16	12.05
ZONE 3	$ 30.16	12.05
ZONE 4	$ 28.00	11.15
ZONE 5**	$ 26.15	10.30
LABORER		
ZONE 1, 2 AND 3		
GROUP A	$ 24.08	10.65
GROUP AA	$ 26.46	10.65
GROUP B	$ 22.23	10.65
GROUP C	$ 19.15	10.65
ZONE 4		
GROUP A	$ 21.37	9.83
GROUP B	$ 20.05	9.83
GROUP C	$ 17.17	9.83
ZONE 5		
GROUP A	$ 21.77	8.38
GROUP B	$ 19.27	8.38
GROUP C	$ 18.42	8.38
POWER EQUIPMENT OPERATOR		
ZONE 1		

GROUP A	$ 33.25	15.50
GROUP B	$ 31.70	15.50
GROUP C	$ 29.20	15.50
GROUP D	$ 29.20	15.50
ZONE 2		
GROUP A	$ 32.55	15.50
GROUP B	$ 30.95	15.50
GROUP C	$ 28.40	15.50
GROUP D	$ 28.40	15.50
ZONE 3		
GROUP A	$ 30.45	25.90
GROUP B	$ 28.65	25.90
GROUP C	$ 27.65	25.90
GROUP D	$ 27.65	25.90
ZONE 4		
GROUP A	$ 31.35	13.85
GROUP B	$ 30.21	13.85
GROUP C	$ 28.13	13.85
GROUP D	$ 28.13	13.85
ZONE 5		
GROUP A	$ 28.52	11.50
GROUP B	$ 27.48	11.50
GROUP C	$ 25.75	11.50
GROUP D	$ 24.75	11.50

TRUCK DRIVER (AND PAVEMENT MARKING DRIVER/SWITCHPERSON)

ZONE 1	$ 25.25	11.45
ZONE 2	$ 25.25	11.45
ZONE 3	$ 25.25	11.45
ZONE 4	$ 25.00	7.50
ZONE 5	$ 23.05	7.50

ZONE DEFINITIONS

ZONE 1 The Counties of Polk, Warren, and Dallas for all Crafts, and Linn County Carpenters only.

ZONE 2 The Counties of Dubuque for all Crafts and Linn County for all Crafts except Carpenters.

ZONE 3 The Cities of Burlington (including West Burlington), Clinton, Fort Madison, Keokuk, and Middleton (including the Iowa Army Ammunition Plant) and Muscatine (and abutting municipalities of any such cities).

ZONE 4 Story, Black Hawk, Cedar, Jasper, Jones, Jackson, Louisa, Madison, and Marion Counties; Clinton County (except the City of Clinton), Johnson County, Muscatine County (except the City of Muscatine), the City of Council Bluffs, Lee County and Des Moines County.

ZONE 5 All areas of the state not listed above.

LABORER CLASSIFICATIONS - ALL ZONES

GROUP AA - {Skilled pipelayer (sewer, water and conduits) and tunnel laborers; asbestos abatement worker} (Zones 1, 2 and 3).

GROUP A - Carpenter tender on bridges and box culverts; curb machine (without a seat); deck hand; diamond & core drills; drill operator on air tracs, wagon drills and similar drills; form setter/stringman on paving work; gunnite nozzleman; joint sealer kettleman; laser operator; powderman tender; powderman/blaster; saw operator; {pipelayer (sewer, water, and conduits); sign erector*; tunnel laborer; asbestos abatement worker (Zones 4 and 5)}, sign erector.

GROUP B - Air, gas, electric tool operator; barco hammer; carpenter tender; caulker; chain sawman; compressor (under 400 cfm); concrete finisher tender; concrete processing materials and monitors; cutting torch on demolition; drill tender; dumpmen; electric drills; fence erectors; form line expansion joint assembler; form tamper; general laborer; grade checker; handling and placing metal mesh, dowel bars, reinforcing bars and chairs; hot asphalt laborer; installing temporary traffic control devices; jackhammerman; mechanical grouter; painter (all except stripers); paving breaker; planting trees, shrubs and flowers; power broom (not self-propelled); power buggyman; rakers; rodman (tying reinforcing steel); sandblaster; seeding and mulching; sewer utility topman/bottom man; spaders; stressor or stretcherman on pre or post tensioned concrete; stringman on re/surfacing/no grade control; swinging stage, tagline, or block and tackle; tampers; timberman; tool room men and checkers; tree climber; tree groundman; underpinning and shoring caissons over twelve feet deep; vibrators; walk behind trencher; walk behind paint stripers; walk behind vibrating compactor; water pumps (under three inch); work from bosun chair.

GROUP C - Scale weigh person; traffic control/flagger, surveillance or monitor; water carrier.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS - ALL ZONES

GROUP A - All terrain (off road) forklift; asphalt breakdown roller (vibratory); asphalt laydown machine; asphalt plant; asphalt screed; bulldozer (finish); central mix plant; concrete pump; crane; crawler tractor pulling scraper; directional drill (60,000 (lbs) pullback and above); dragline and power shovel; dredge engineer; excavator (over cu. yd.); front end loader (4 cy and over); horizontal boring machine; master mechanic; milling machine (over 350 hp); motor grader (finish); push cat; rubber tired backhoe (over cu. yd.); scraper (12 cu. yd. and over or finish); Self-propelled rotary mixer/road reclaimer; sidebroom tractor; slipform portland concrete paver; tow or push boat; trenching machine (Cleveland 80 or similar)

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GROUP B - Articulated off road hauler, asphalt heater/planer; asphalt material transfer vehicle; asphalt roller; belt loader or similar loader; bulldozer (rough); churn or rotary drill; concrete curb machine; crawler tractor pulling ripper, disk or roller; deck hand/oiler; directional drill (less than 60,000 (lbs) pullback); distributor; excavator (1/2 cu. yd. and under); form riding concrete paver; front end loader (2 to less than 4 cu. yd.); group equipment greaser; mechanic; milling machine (350 hp. and less); paving breaker; portland concrete dry batch plant; rubber tired backhoe (1/2 cu. yd. and under); scraper (under 12 cu. yd.); screening, washing and crushing plant (mobile, portable or stationary); shoulder machine; skid loader (l cu. yd. and over); subgrader or trimmer; trenching machine; water wagon on compaction.

GROUP C - Boom & winch truck; concrete spreader/belt placer; deep wells for dewatering; farm type tractor (over 75 hp.) pulling disc or roller; forklift; front end loader (under 2 cu. yd.); motor grader (rough); pile hammer power unit; pump (greater than three inch diameter); pumps on well points; safety boat; self-propelled roller (other than asphalt); self-propelled sand blaster or shot blaster,

water blaster or striping grinder/remover; skid loader (under 1 cu. yd.); truck mounted post driver.

GROUP D - Boiler; compressor; cure and texture machine; dow box; farm type or utility tractor (under 75 hp.) pulling disk, roller or other attachments; group greaser tender; light plants; mechanic tender; mechanical broom; mechanical heaters; oiler; pumps (under three inch diameter); tree chipping machine; truck crane driver/oiler.

** CARPENTERS AND PILEDRIVERMEN, or IRONWORKERS (ZONE 5)
Setting of structural steel; any welding incidental to bridge or culvert construction; setting concrete beams.

* ADDED CRAFT - SIGN ERECTOR

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were

prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter

* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

PART II - CONTRACT DOCUMENTS

B. Conditions of the Contract

4. Owner's Forms

a. C-451 - Qualifications Statement
b. C-510 – Notice of Award
c. C-550 - Notice to Proceed
d. Shop Drawing/O&M Transmittal
e. Supplier/Contractor Statement of Compliance
f. Shop Drawing Response Comments
g. C-940 Work Change Directive
h. C-941 Change Order
i. C-942 Field Order
j. C-620 Construction Progress Payment & Stored Material Summary
k. C-625 - Certificate of Substantial Completion
l. Engineer's Statement of Completion

EJCDC C-451 – BIDDER'S QUALIFICATIONS STATEMENT

ARTICLE 1—GENERAL INFORMATION

1.01 Provide contact information for the Business:

Legal Name of Business:			
Corporate Office			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			
Local Office			
Name:		Phone number:	
Title:		Email address:	
Business address of local office:			

1.02 Provide information on the Business's organizational structure:

Form of Business:	☐ Sole Proprietorship ☐ Partnership ☐ Corporation
☐ Limited Liability Company ☐ Joint Venture comprised of the following companies:	
	1.
	2.
	3.
Provide a separate Qualification Statement for each Joint Venturer.	
Date Business was formed:	State in which Business was formed:
Is this Business authorized to operate in the Project location?	☐ Yes ☐ No ☐ Pending

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			

1.04 Provide information regarding the Business's officers, partners, and limits of authority.

Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	$
Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	$
Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	$
Name:		Title:	

ARTICLE 2—LICENSING

2.01 Provide information regarding licensure for Business:

Name of License:			
Licensing Agency:			
License No:		Expiration Date:	
Name of License:			
Licensing Agency:			
License No:		Expiration Date:	

ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

3.01 Provide information regarding Business's Diverse Business Certification, if any. Provide evidence of current certification.

Certification	Certifying Agency	Certification Date
☐ Disadvantaged Business Enterprise		
☐ Minority Business Enterprise		
☐ Woman-Owned Business Enterprise		
☐ Small Business Enterprise		
☐ Disabled Business Enterprise		
☐ Veteran-Owned Business Enterprise		
☐ Service-Disabled Veteran-Owned Business		
☐ HUBZone Business (Historically Underutilized) Business		
☐ Other		
☐ None		

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ARTICLE 4—SAFETY

4.01 Provide information regarding Business's safety organization and safety performance.

Name of Business's Safety Officer:		
Safety Certifications		
Certification Name	Issuing Agency	Expiration

4.02 Provide Worker's Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

Year									
Company	EMR	TRFR	MH	EMR	TRFR	MH	EMR	TRFR	MH

ARTICLE 5—FINANCIAL

5.01 Provide information regarding the Business's financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

Financial Institution:		
Business address:		
Date of Business's most recent financial statement:		☐ Attached
Date of Business's most recent audited financial statement:		☐ Attached
Financial indicators from the most recent financial statement		
Contractor's Current Ratio (Current Assets ÷ Current Liabilities)		
Contractor's Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities)		

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ARTICLE 6—SURETY INFORMATION

6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

Surety Name:			
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location?	☐ Yes ☐ No		
Is surety listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury? ☐ Yes ☐ No			
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 7—INSURANCE

7.01 Provide information regarding Business's insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

Name of insurance provider, and type of policy (CLE, auto, etc.):			
Insurance Provider		Type of Policy (Coverage Provided)	
Are providers licensed or authorized to issue policies in the Project location?		☐ Yes ☐ No	
Does provider have an A.M. Best Rating of A-VII or better?		☐ Yes ☐ No	
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

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ARTICLE 8—CONSTRUCTION EXPERIENCE

8.01 Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for the current year:	
Estimate of revenue for the previous year:	

8.02 Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:				
As a general contractor:		As a joint venturer:		
Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been released from a bid in the past 5 years? ☐ Yes ☐ No				
Defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☐ No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☐ No				
Been a party to any currently pending litigation or arbitration? ☐ Yes ☐ No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

8.03 List all projects currently under contract in Schedule A and provide indicated information.

8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business's experience with projects similar in type and cost of construction.

8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business's key leaders as well.

ARTICLE 9—REQUIRED ATTACHMENTS

9.01 Provide the following information with the Statement of Qualifications:

A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.

B. Diverse Business Certifications if required by Paragraph 3.01.

C. Certification of Business's safety performance if required by Paragraph 4.02.

D. Financial statements as required by Paragraph 5.01.

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E. Attachments providing additional information as required by Paragraph 8.02.

F. Schedule A (Current Projects) as required by Paragraph 8.03.

G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.

H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.

I. Additional items as pertinent.

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This Statement of Qualifications is offered by:

Business: _____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

(If Business is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

_____

Phone: _____

Email: _____

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Schedule A—Current Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

EJCDC® C-451, Qualifications Statement—Schedule A—Current Projects.
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Schedule B—Previous Experience with Similar Projects

Name of Organization				
Project Owner		Project Name		
General Description of Project				
Project Cost		Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)

	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner		Project Name		
General Description of Project				
Project Cost		Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)

	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner		Project Name		
General Description of Project				
Project Cost		Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)

	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

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Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

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Schedule C—Key Individuals

Project Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Project Superintendent			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

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Safety Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

Quality Control Manager			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

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NOTICE OF AWARD

Date of Issuance:			
Owner:	City of Marshalltown	Owner's Project No.:	
Engineer:	FOX Strand	Engineer's Project No.:	2407-20A
Project:	2020 Sanitary Sewer Rehabilitation Project – CIPP		
Contract Name:			
Bidder:			
Bidder's Address:			

You are notified that Owner has accepted your Bid dated _____, 2022 for the above Contract, and that you are the Successful Bidder and are awarded a Contract for **2020 Sanitary Sewer Rehabilitation Project - CIPP**:

The Contract Price of the awarded Contract is **$_____**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Three (3) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner Three (3) counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. 3. Other conditions precedent (if any):
    a. Before you may start work at site; paragraph 2.01.B of the General Conditions provides that you must deliver to the Owner certificates of insurance which you are required to purchase and maintain in accordance with the Contract Documents.
    b. Paragraph 2.03 states that before starting construction, a preliminary progress schedule, a preliminary schedule of submittals, and a preliminary schedule of values are required.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **City of Marshalltown**

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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Copy: Engineer

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NOTICE TO PROCEED

Owner:	City of Marshalltown	Owner's Project No.:	
Engineer:	FOX Strand	Engineer's Project No.:	2407-20A
Contractor:		Contractor's Project No.:	
Project:	2020 Sanitary Sewer Rehabilitation Project - CIPP		
Contract Name:			
Effective Date of Contract:			

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **July 28, 2023**, and the date by which readiness for final payment must be achieved is **September 8, 2023**.

Before starting any Work at the Site, Contractor shall attend and participate in a Preconstruction Conference in accordance with Paragraph 2.04 of the General Conditions. Also, Contractor must submit the following to the Engineer before starting any Work at the Site:

- Subcontractor and Supplier List (Supplementary Conditions 7.07)
- Preliminary Progress Schedule (General Conditions 2.03)
- Preliminary Schedule of Submittals (General Conditions 2.03)
- Preliminary Schedule of Values (01 33 00 1.05 & General Conditions 2.03)
- Schedule of Payments (01 33 00 1.06)

Owner:	**City of Marshalltown**
By *(signature)*:	
Name *(printed)*:	
Title:	
Date Issued:	

Copy: Engineer

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SHOP DRAWING / O&M MANUAL TRANSMITTAL

Project:	Transmittal Date:
Owner:	Owner's Contract No.:
Engineer: **FOX Strand**	Engineer's Project No.:
Contractor:	

Specification Section:	☐ Shop Drawing	☐ O&M Manual
Transmittal No:	☐ 1st Submittal	☐ Resubmittal (No. ___)

Specification Paragraph Number	Description of Equipment	Manufacturer

As stated in the Contract Documents, the undersigned CONTRACTOR's submission of these Shop Drawings or samples shall constitute a representation to the OWNER and the ENGINEER that the CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers and similar data or he assumes full responsibility for doing so, and that he has reviewed and coordinated each Shop Drawing or sample with the requirements of the work and the Contract Documents and he represents to the OWNER and the ENGINEER that item(s) described by these Shop Drawings do comply with the requirements of the Contract Documents. The undersigned Contractor certifies that the equipment included in this submittal complies with the latest requirements of the Occupational Health and Safety Act of 1970 including any standards or regulations established by the U.S. Secretary of Labor in administration of said act, and the Iowa Occupational Safety and Health Statutes.

X_____
(Authorized Signature of Contractor) (Date)

_____
(Firm Name)

NOTE: All pages of this form on which equipment is listed must be signed.

FOX Strand
414 South 17th Street, Suite 107
Ames, IA 50010-8229
Phone: (515) 233-0000
FAX: (515) 233-0103

Supplier/Contractor Statement of Compliance

Project:	Transmittal Date:
Owner:	Owner's Contract No.:
Engineer: **FOX Strand**	Engineer's Project No.:
Contractor:	

Specification Section:	Transmittal No:
Equipment Description:	
Supplier/Manufacturer:	

The undersigned hereby states that the information submitted herein accurately describes the material and/or equipment to be provided and that said material and/or equipment conforms with all requirements of the Contract Documents, except as noted below:

1A ☐ No deviations from the Contract Documents included in this submittal.

(OR)

1B ☐ All deviations from the Contract Documents included in this submittal and any modifications required to the project design to accommodate the submitted material and/or equipment are noted below or on attached sheets.

2 ☐ Applicable items are clearly identified and inapplicable data are marked out on all catalog pages included with this submittal.

3 ☐ Applicable receiving, handling and storage requirements are included with this submittal.

List of Deviations:

Supplier Authorized Signature:	Contractor Authorized Signature:
Date:	Date:
Phone:	Phone:

FOX Strand
414 South 17th Street, Suite 107
Ames, IA 50010-8229
Phone: (515) 233-0000
FAX: (515) 233-0103

AMERICAN IRON & STEEL ACT TRANSMITTAL

Project: **2020 Sanitary Sewer Rehabilitation - CIPP**	Transmittal Date:
Owner: **City of Marshalltown, Iowa**	Owner's Contract No.:
Engineer: FOX Strand	Engineer's Project No.: **2407-20A**
Contractor:	
Specification Section:	
Transmittal No:	

		American Iron and Steel Act Compliance					
1	2	3	4	5		6	
No.	Product	Not Covered	Not Covered - Steel <50% material value	Covered &	Certification Letter Attached	Incidental &	De Minimumis Record Updated & Invoice Saved
1		☐	☐	☐	☐	☐	☐
2		☐	☐	☐	☐	☐	☐
3		☐	☐	☐	☐	☐	☐
4		☐	☐	☐	☐	☐	☐
5		☐	☐	☐	☐	☐	☐
6		☐	☐	☐	☐	☐	☐
7		☐	☐	☐	☐	☐	☐
8		☐	☐	☐	☐	☐	☐
9		☐	☐	☐	☐	☐	☐
10		☐	☐	☐	☐	☐	☐
11		☐	☐	☐	☐	☐	☐
12		☐	☐	☐	☐	☐	☐
13		☐	☐	☐	☐	☐	☐
14		☐	☐	☐	☐	☐	☐
15		☐	☐	☐	☐	☐	☐

The undersigned CONTRACTOR has verified that all products submitted comply with the American Iron and Steel Act requirements as described in the Contract Documents. The CONTRACTOR certifies that the required documentation for products covered under the act has been included with this submittal as indicated above.

X_____
(Authorized Signature of Contractor) (Date)

_____
(Firm Name)

NOTE: All pages of this form on which equipment is listed must be signed.

FOX Strand
414 South 17th Street, Suite 107
Ames, IA 50010-8229
Phone: (515) 233-0000

SUBMITTAL RESPONSE COMMENTS

Project:

FOX Project No.:

Contractor:

Date Received:

Submittal No.:

Item(s):

Manufacturer:

Submittal Type

- ☐ Shop Drawing
- ☐ Closeout – O & M Manual
- ☐ Closeout – Startup Report
- ☐ Closeout – Warranty
- ☐ Closeout – Spare Parts
- ☐ Training
- ☐ Other (_____)

- ☐ A – No Exception Taken
- ☐ B – Address Notations, No Resubmittal
- ☐ C – Revise & Resubmit Items Noted
- ☐ D – Revise & Resubmit Entire Submittal
- ☐ E – Rejected for the Following Reasons
- ☐ I – For Information Only

C – Revise & Resubmit Items Noted (do not resubmit entire shop drawing)

D – Revise & Resubmit Entire Submittal: only items specifically noted by Engineer shall be revised. Any other revisions shall be clearly noted on a separate sheet by the Contractor and attached to the resubmittal.

NOTE: This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve the Contractor from compliance with the requirements of the Contract Documents. Approval of a specific item shall not include approval of an assembly of which the item is a component. The Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work of all trades; and for performing all work in a safe and satisfactory manner.

Comments:

1.

2.

3.

By: _____

Date: _____

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	
Date Issued:	Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: $ _____ **[increase] [decrease] [not yet estimated]**.

Contract Time: _____ days **[increase] [decrease] [not yet estimated]**.

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

	Recommended by Engineer	Authorized by Owner
By:		
Title:		
Date:		

EJCDC® C-940, Work Change Directive.
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CHANGE ORDER NO.: [Number of Change Order]

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Date Issued: Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

	Recommended by Engineer (if required)	Accepted by Contractor
By:	_____	_____
Title:	_____	_____
Date:	_____	_____
	Authorized by Owner	Approved by Funding Agency (if applicable)
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

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FIELD ORDER NO.: [Number of Field Order]

Owner:	City of Marshalltown	Owner's Project No.:	SAN21001
Engineer:	FOX Strand	Engineer's Project No.:	2407-20A
Contractor:		Contractor's Project No.:	
Project:			
Contract Name:			
Date Issued:		Effective Date of Field Order:	

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

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Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			
Application No.:		**Application Date:**	
Application Period:	**From**	**to**	

1. Original Contract Price				$ -
2. Net change by Change Orders				$ -
3. Current Contract Price (Line 1 + Line 2)				$ -
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)				$ -
5. Retainage				
a.	X	$ -	Work Completed	$ -
b.	X	$ -	Stored Materials	$ -
c. Total Retainage (Line 5.a + Line 5.b)				$ -
6. Amount eligible to date (Line 4 - Line 5.c)				$ -
7. Less previous payments (Line 6 from prior application)				
8. Amount due this application				$ -
9. Balance to finish, including retainage (Line 3 - Line 4)				$ -

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor:

Signature: **Date:**

Recommended by Engineer		**Approved by Owner**	
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	
Approved by Funding Agency			
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	

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Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
Original Contract								
			-			-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
	Original Contract Totals	$ -	$ -	$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
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Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
Change Orders								
						-		-
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						-		-
	Change Order Totals	$ -	$ -	$ -	$ -	$ -		$ -
Original Contract and Change Orders								
	Project Totals	$ -	$ -	$ -	$ -	$ -		$ -

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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____
Engineer: _____
Contractor: _____
Project: _____
Contract: _____

Owner's Project No.: _____
Engineer's Project No.: _____
Contractor's Project No.: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Original Contract											
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				Original Contract Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____ Owner's Project No.: _____

Engineer: _____ Engineer's Project No.: _____

Contractor: _____ Contractor's Project No.: _____

Project: _____

Contract: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Change Orders											
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				Change Order Totals	$ -		$ -	$ -	$ -		$ -
Original Contract and Change Orders											
				Project Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
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Stored Materials Summary

Contractor's Application for Payment

Owner:
Engineer:
Contractor:
Project:
Contract:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

Application No.: Application Period: From to Application Date:

A	B	C	D	E	F	G	H	I	J	K	L	M
						Materials Stored			Incorporated in Work			
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored ($)	Amount Stored this Period ($)	Amount Stored to Date (G+H) ($)	Amount Previously Incorporated in the Work ($)	Amount Incorporated in the Work this Period ($)	Total Amount Incorporated in the Work (J+K) ($)	Materials Remaining in Storage (I-L) ($)
								-			-	-
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								-			-	-
								-			-	-
					Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

EJCDC C-620 Contractor's Application for Payment
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CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	City of Marshalltown	Owner's Project No.:	
Engineer:	FOX Strand	Engineer's Project No.:	2407-20A
Contractor:		Contractor's Project No.:	
Project:	2020 Sanitary Sewer Rehabilitation Project - CIPP		
Contract Name:			

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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Engineer's Statement of Completion

Project: **2020 Sanitary Sewer Rehabilitation Project - CIPP**	Date of Contract:
Owner: **City of Marshalltown**	Owner's Contract No.:
Engineer: **FOX Strand**	Engineer's Project No.: **2407-20A**
Contractor:	

I hereby state that the construction of _____ by a Contract dated _____ has been satisfactorily completed in general compliance with the terms, conditions, and stipulations of said Contract.

The work was completed on _____. The Contract completion date is _____.

I further state that the total amount due to the Contractor for the fulfillment of said Contract is $_____.

The derivation of this total amount is tabulated on the attached sheet.

Ninety-five percent (95%) of the total amount due to the Contractor should be paid after the acceptance of the construction by resolution of the City Council. The remaining five percent (5%) shall then be paid no sooner than thirty (30) days following formal acceptance of the construction by the City Council provided that no unpaid claims exist in connection with this Contract. The Contractor will receive interest on any unpaid balance at the maximum legal rate from and after thirty (30) days following acceptance of the project by the City Council.

Signed:

FOX Strand

By: _____

Iowa Registration No.: _____

Date: _____

FOX PN: _____

Accepted by:

Owner: _____

Resolution: _____

Date: _____

Signed: _____

Title: _____

Attest: _____

Distribution:
Engineer
Contractor
Owner
IDNR

PART II - CONTRACT DOCUMENTS

C. Specifications

SECTION 01 11 00

PROJECT REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. General Description of the Work: The work to be performed under these Contract Documents consists of modifications and additions to the Marshalltown Water Pollution Control Plant (WPCP) located in Marshalltown, Iowa. The following is a general description of the principal work elements of the project:

1. Sanitary sewer improvements shall include, but not be limited to approximately 70,000 linear feet of sanitary sewer CIPP pipe lining. This shall include sanitary sewer televising pre and post construction inspection televising, point repairs, manhole replacement, and associated other work for construction.

1.2 COORDINATION

A. The Contractor shall plan, schedule, and coordinate his operations in a manner that will facilitate the simultaneous progress of the Work under the various Sections of this Contract.

B. The Work shall be coordinated with the Owner to minimize interference with operation of water distribution system. The maximum time that water service may be interrupted to a home or business is four (4) hours, and all water service shall be functional between the hours of 5 PM and 8 AM.

C. Contractor shall coordinate all work at each site location as to minimize disturbance to property owners by planning the work thoroughly in advance of beginning construction. Contractor shall provide door hangars to all neighboring property owners in the vicinity of construction as well as those impacted by the work. Provide the city at least 72 hours notice prior to closing roadways as well as provide a summary of the road closures to be completed and the time frame for the changes in traffic patterns that will be required to complete the work.

D. The Contractor shall be responsible for all bypassing to allow the work to be completed including pumps and other materials and equipment to complete the work.

E. Installation of equipment or devices without regard to coordination of access requirements and confirmation with the Owner's designated representative will result in removal and reinstallation of the equipment and/or changes in the provided access at the Contractor's expense.

F. The Work shall be coordinated with the Owner to minimize interference with operation of and performance of the existing facilities. The Contractor shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period. Any temporary facilities or periods of operation interference shall be coordinated with and approved by the Owner prior to initiation. Special conditions that warrant Contractor's coordination include:
   1. Piping and equipment modifications shall be made in such a manner as to minimize the down time of the existing facilities. Contractor shall coordinate with the Owner and, when necessary, obtain IDNR permission for all activities that will cause a disruption in operation of the existing facilities.
   2. Any sanitary sewer piping that requires bypass pumping shall be completed by the contractor.
   3. Water services shall be coordinated with the City of Marshalltown and the Water Works department.
   4. Items indicated under Section 1.03 Schedule.
   5. Coordination of the tie-in to existing services and connections.

1.3 SCHEDULE

A. Prior to beginning any work that may impact the sanitary sewer system, the Contractor shall submit a detailed schedule of construction to the Engineer for review as indicated in the General Conditions and detailed in Section 01 33 00. The Contractor's schedule shall be subject to the approval of the Engineer and Owner. The schedule shall include details as to any temporary piping that will be provided, and the manner of operations required to accommodate the schedule being proposed. Any changes in the schedule after initial approval shall be subject to the approval of the Engineer and Owner.

B. Each Contractor shall have labor and materials on hand so their work can progress according to the construction schedule. It shall be the responsibility of the General Contractor to see that all Subcontractors adhere to the construction schedule.

C. Progress meetings:
   1. Contractor shall schedule and hold regular progress meetings at least monthly and at other times as requested by the Engineer or required by progress of the Work.
   2. Contractor, Engineer, and all subcontractors active on the site shall be represented at each meeting. Contractor may, at his discretion or at the request of the Engineer, have representatives of suppliers, manufacturers, and other subcontractors attend meetings.
   3. The Engineer shall preside at the meetings and provide for keeping and distribution of minutes. The purpose of these meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in schedule, and resolve other problems that may arise.

D. The Contractor is solely responsible for scheduling work so that the project is constructible without loss of water and sanitary sewer service.

1.4 WORK BY PUBLIC UTILITIES

A. Work by public utilities shall be coordinated by the Contractor and paid directly to the utility by the Owner. In general, work required by utilities is as follows**:**
   1. Electrical – None.
   2. Telephone/Internet - None.
   3. Natural gas - None.

B. In some locations, coordination of removal and/or relocation of existing utilities is necessary to complete the work. Contractor shall coordinate all efforts to remove and relocate all utilities as necessary to complete the work and shall be considered incidental.

1.5 LAND FOR CONSTRUCTION PURPOSES

A. Contractor will be permitted to use available land belonging to or leased by the Owner, on or near the site of the Work, for construction purposes and for the storage of materials and equipment. The location and extent of the areas available to the Contractor shall be as indicated on the Drawings. Any additional right-of-way desired by the Contractor shall be acquired at his expense, and the Contractor shall hold harmless the Owner and Engineer from claims for damages made by the owners of such additional right-of-way.
   1. Contractor may elect to use the City Water Pollution Control Plant (WPCP) for additional laydown area. If Contractor elects to use the WPCP as a laydown area, temporary construction safety fencing and signage shall be erected, and any disturbed area shall be restored and seeded to the Owner's satisfaction.
   2. A location for a laydown area shall be coordinated with the City of Marshalltown.

B. Any storage of materials and equipment within a flood plain shall be solely at the Contractor's risk. Flood plain boundaries may not be indicated on the plans. Contractor shall verify location and impact of flood plain on project prior to construction.

C. Some property around Linn Creek is owned by the Union Pacific Railroad (UPRR). The Contractor shall adhere to the UPRR permit requirements for construction and access and shall cooperation with the UPRR within the right-of-entry permit provide by the railroad. See drawings for approximate construction limits. The City anticipates holding a joint meeting with the railroad and the Contractor to review additional construction coordination prior to construction. The railroad has personnel safety requirements when working within Union Pacific Railroad Property (hard hats, vests, etc.) that must be adhered to at all times.

1.6 SITE ACCESS

A. The Marshalltown Water Pollution Control Plant site address is 1001 Woodland Street Marshalltown, IA 50158.

B. Access to the construction shall be limited to street and alley right-of-way or as indicated on the plans.

C. Access on private property is limited to easement area.

D. Access on Union Pacific Railroad shall be limited to the areas indicated on the plans and within the limits of construction, or as approved by the railroad.

E. The Contractor shall take care to minimize damage to the existing roads or roads on the project sites. Any damage caused by the Contractor, including the Contractor's equipment, employees, subcontractors and their employees, material deliveries or other such person under the Contractor's direction, shall be repaired at no additional cost to the Owner to the satisfaction of the Engineer. The Contractor shall document the condition of the existing access road with photographs and/or video prior to beginning construction activities.

F. Access on private property is limited to easement areas. Easement information can be obtained from the City of Marshalltown upon request.

1.7 NOTICES

A. The Contractor shall notify owners of adjacent properties and utilities when prosecution of the Work may affect them. When it is necessary to temporarily deny access by owners or tenants to their property, or when any utility service connection must be interrupted, the Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs.

B. Notices, whether given orally or in writing, shall include appropriate information concerning the interruption and instruction on how to limit their inconvenience.

C. Contractor shall provide door hangars to all neighboring properties during cleaning and televising operations to inform the public of the work that is to be completed and an estimate time frame for which it will take to be completed.

1.8 LINES AND GRADES

A. All Work shall be done to the lines, grades and elevations indicated on the Drawings.

B. All survey, layout, and measurement Work shall be performed by the Contractor as part of the Work.

C. Construction staking will be supplied by FOX Strand, in general conformance with the Urban Specifications. The Contractor shall preserve the stakes. All stakes shall be set once. Restaking or staking requested other than those specified will be considered additional services and will be furnished at the Contractor's request using the normal hourly rate. The Contractor shall give the Engineer 48-hour notice prior to the need for stakes. The contractor shall contact Seth Polich at FOX Stand at the office at 515-233-0000 or by mobile at 515-520-0603.

1.9 SALVAGE OF MATERIALS AND EQUIPMENT

A. Existing materials and equipment removed and not reused or salvaged to Owner as a part of the Work shall become the Contractor's property and shall be removed from the site. The Contractor shall be responsible for proper disposal of such materials. Contractor shall carefully remove in a manner to prevent damage to all materials and equipment specified or indicated to be salvaged and reused or to remain property of the Owner. The Contractor shall store and protect salvaged items specified or indicated to be reused in the Work.

B. Existing materials and equipment removed by the Contractor shall not be reused in the Work except where so specified or indicated. Salvaged items not to be reused in the Work, but to remain Owner's property, shall be delivered by Contractor in good condition to Owner at the project site.

C. Any items to be salvaged that are damaged in removal, storage or handling through carelessness or improper procedures shall be replaced by Contractor in kind or with new items. Contractor may at his option furnish and install new items in lieu of those specified or indicated to be salvaged and reused, in which case such removed items will become the Contractor's property.

1.10 CONNECTIONS TO EXISTING FACILITIES

A. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines and utilities such as water, sewer, gas, telecommunications and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.

B. Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously if necessary to complete connections in the minimum time. Operation of valves, hydrants, or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

1.11 UNFAVORABLE CONSTRUCTION CONDITIONS

A. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to work which will not be affected adversely by such conditions.

B. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the work in a proper and satisfactory manner.

1.12 CLEAN UP

A. Contractor shall keep the premises occupied by the Contractor free from accumulations of waste materials, debris, and rubbish at all times. Contractor shall provide adequate trash receptacles about the work site, promptly empty containers when filled, and properly dispose of waste materials at his expense. Wastes shall not be buried, burned on the site, or disposed of in storm drains, sewers, streams or waterways. Contractor shall dispose of all materials according to local and state jurisdictional regulations and/or requirements.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. This Section outlines submittals required by the General Conditions, Supplementary Conditions and such other submittals by the Contractor to the Owner/Engineer as may be required herein.

1.2 REFERENCED SECTIONS

A. Substitute and "Or-Equal" Items: See Article 10 of the Instructions to Bidders.

B. Bonds and Insurance: See Article 2.01 of the General Conditions for submittal requirements.

C. Preliminary Progress Schedule: See Article 2.03 of the General Conditions for submittal requirements.

D. Preliminary Schedule of Submittals: See Article 2.03 of the General Conditions for submittal requirements.

E. Preliminary Schedule of Values: See Article 2.03 of the General Conditions for submittal requirements.

F. "Or Equals": See Article 7.05 of the General Conditions.

G. Substitutes: See Article 7.06 of the General Conditions.

H. Subcontractors and Supplier List: See Article 7.07 of the Supplementary Conditions for submittal requirements.

1.3 SUBSTITUTES AND "OR-EQUAL ITEMS"

A. Base Bid Equipment:
   1. Substitute Base Bid equipment manufacturers must be pre-approved prior to bidding, as stipulated in the Instruction to Bidders.
   2. If pre-approved by the Engineer, the Base Bid price shall include all associated costs of changes in structures, buildings, piping, wiring, equipment and other components of the Work necessary to accommodate the substitute equipment, as well as the cost of all additional drawings requested by the Engineer to illustrate to the satisfaction of the Engineer that such changes will not adversely affect the design concept or other components of the Work.
   3. Pre-approval of a product, manufacturer or supplier does not exempt the Contractor from meeting all of the requirements of the Contract Documents, nor does it give any prior acceptance of any equipment, software or services. The Contract Documents are the final authority for acceptance of the work provided. The pre-bid submittal is not a part of the Contract Documents, and as such, does not exempt the Contractor from the requirements for submittals described hereinafter.
   4. Information contained in the pre-bid submittal shall be considered public information. All data submitted will become and shall remain the property of the Owner, and none shall be returned.

B. Other Equipment: Pre-Bid approval of other substitute equipment or materials is not required. Requests and submittals shall be subject to General Conditions, Articles 7.05 and 7.06.

1.4 REFERENCED SECTIONS

A. Bonds and Insurance: See Article 2.01 of the General Conditions for submittal requirements.

B. Preliminary Progress Schedule: See Article 2.03 of the General Conditions for submittal requirements.

C. Preliminary Schedule of Submittals: See Article 2.03 of the General Conditions for submittal requirements.

D. Subcontractor and Supplier List: See Article 7.07 of the Supplementary Conditions for submittal requirements.

1.5 SUBMITTALS SCHEDULE

A. Contractor shall submit a preliminary Schedule of Submittals within 10 days after the Effective Date of the Agreement in accordance with the General Conditions. The preliminary Schedule of Submittals shall include shop drawings, O&M manuals, samples, and all other submittals required according to the Contract Documents. The preliminary Schedule of Submittals shall be in PDF format for review. The preliminary Schedule of Submittals shall be horizontal bar-chart format that is clearly readable when printed on 8.5 x 11 or 11x17 paper. The chart shall also include dates for submitting, review and return of initial submittals and resubmittals. The date required for each submittal's return to avoid delay in any activity beyond the scheduled start date shall be indicated. The schedule shall incorporate the Shop Drawing and Operation and Maintenance Manual numbering system described below.

B. The Contractor shall include the specified time for two submittal reviews (initial and one resubmittal) for each submittal and the allocated Contractor time for resubmittals as specified herein**.**

C. The schedule shall be provided as two documents organized by: (1) increasing CSI specification number and (2) chronological order of submittals. Both schedules shall include all required submittals (e.g.: shop drawings, O&Ms, samples, etc.) according to the Contract Documents

D. Engineer's Review of preliminary Schedule of Submittals:
   1. The Project Engineer's review of the preliminary Schedule of Submittals shall not relieve the Contractor of the responsibility to perform the Work according to the Contract Documents.

E. All initial submittals shall be submitted to the Engineer prior to 50 percent completion. Failure to comply with this Contract requirement shall result in withholding of payment.

F. Engineer review periods for initial and resubmittals shall be as specified herein and shall be included in the construction Progress Schedule. Account for multiple transmittals under any specification section where partial submittals will be transmitted.

G. All Contractor resubmittals shall be submitted within 30 calendar days.

H. Operation and Maintenance Manuals (O&Ms) shall be submitted within 60 days of submittals approval or 14 days prior to equipment shipment, whichever is first. Failure to comply with this Contract requirement shall result in the Owner withholding payment.

1.6 SCHEDULE OF PAYMENTS

A. The schedule of estimated monthly progress payments shall be submitted by the Contractor to the Engineer within 10 days after the Effective Date of the Agreement. The sum of the listed progress payments shall equal the Contract Price.

B. The Schedule of Payments shall be in tabular form listing the number of anticipated payments based on the construction schedule with respect to calendar dates. Dates for submittal by Contractor to the Engineer for review, Engineer review period, and action by the Owner shall be indicated for each progress payment. The amounts for materials, completed work, retainage, previous payments and net amount shall be indicated in the Schedule, and the Schedule of Payments shall be revised and resubmitted with each application for progress payment reflecting actual amounts for the previous month and adjustments in future amounts based on previous submittals.

1.7 PROGRESS REPORTS

A. A written progress report shall be furnished to the Engineer with each application for progress payment. Each report shall include sufficient narrative to describe current and anticipated delaying factors, effects on the construction schedule, and proposed corrective action. Any Work reported complete, but which is not readily apparent to the Engineer, must be substantiated with satisfactory evidence.

1.8 CONSTRUCTION PHOTOGRAPHS

A. The Contractor shall take a minimum of 36 digital photographs of the construction site and pertinent features prior to commencement of the Work and submitted to the Engineer within 5 days. The same views shall be rephotographed upon completion of all construction activities and submitted with Contractor's application for final payment. Twelve (12) to 36 digital photographs, depending on construction activity, shall be taken each month by the Contractor at the direction of the Engineer and submitted with the Contractor's application for progress payment to document the progress of the work. Pictures shall be a mixture that reflect work completed as indicated in the corresponding pay request and of items which would otherwise be covered by subsequent work.

B. Pictures shall be marked with photo date, description and location of each photo.

C. Digital photographs shall be with a minimum picture quality of 4 megapixel.

1.9 SHOP DRAWINGS

A. Shop Drawing Schedule: The Contractor shall submit the shop drawing schedule to the Engineer within ten days after the Effective Date of the Agreement. The shop drawing schedule shall be in tabular form listing all materials and equipment for which shop drawings are required, the date for intended submission of the drawing to the Engineer for review, and the date required for its return to avoid delay in any activity beyond the scheduled start date. The schedule shall incorporate the Shop Drawing and Operation and Maintenance Manual numbering system described below.

B. Submittal Process for Shop Drawings:
   1. Shop Drawings shall be submitted in a single, originally created PDF file for each specification section. Submittal of multiple specification sections will be returned without review.
   2. Engineering data covering all equipment, fabricated materials, and construction materials which become a permanent part of the Work under this Contract shall be submitted to Engineer for review. These data shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and operation of component materials and devices; the external connections, anchorages, and supports required; performance characteristics; and dimensions needed for installation and correlation with other materials and equipment.
   3. Submittals shall be accompanied by the Shop Drawing/O&M Manual Transmittal form included in these Contract Documents duly signed and dated by the Contractor. Engineer will not accept submittals from anyone other than Contractor.
   4. Submittals shall be divided and organized by specification section. Items contained in each submittal may be grouped with like items from the same specification section. However, submittal of items that are specified in separate specification sections in a common shop drawing shall not be accepted. All items contained in the submittal shall be listed separately on the form with the applicable Specification paragraph number, description and intended use of the item, name of manufacturer/supplier, and submittal reference number; missing information may be cause for rejection without review. When catalog pages are submitted, applicable items shall be clearly identified and inapplicable data marked out.
   5. A summary of warranty periods, items covered or not covered under the warranty, and other terms or restrictions shall be submitted with the shop drawing for review. Actual warranty certifications, if required or applicable, may be submitted when available.
   6. The Contractor shall submit one (1) electronic copy of each shop drawing in a single, originally created PDF file.

a. Originally created PDF's include those created with "CutePDF Writer," "PDF creator," or other sufficient software as opposed to scanned documents, which can reproduce with lesser resolution/quality and cause delays.
b. The .pdf sheets within the document shall be the same size as the original size of the document. For example, an 8.5x11 sheet should not be provided as a 11x17 PDF.
c. Shop drawings which are submitted in multiple PDF files without pre-approval by the Engineer shall be returned to the Contractor without review.
d. The Contractor shall submit shop drawings electronically via email to the engineer.
e. Shop Drawings which are submitted in paper format instead of electronically will be converted to PDF files by the Engineer and the Contractor shall reimburse to the Owner all associated fees for the Engineer to convert these documents including time for scanning and general organization. The minimum fee for the Engineer to convert a single shop drawing to PDF format shall be $250.
f. Index Sheets, tabs and/or divider pages shall be included in the electronic document. Create bookmarks in the PDF navigation frame for each entry, tab or divider page.
g. Each submittal shall include the Contractor's certification of approval (and other associated submittal forms) as a representation to the Owner and Engineer that Contractor accepts full responsibility for determining and verifying all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, and that he has reviewed or coordinated each submittal with the requirements of the Work and the Contract Documents.

7. Submittals shall be numbered using the following identification system:
   a. The general format for the submittal/resubmittal numbering system shall be "ID1-ID2-ID3", where:
      1) ID1 is the specification section for the given item as indicated in the Contract Documents.
      2) ID2 is the consecutive number (01, 02, 03, etc .) indicating the sequence of items submitted under a common specification section.
      3) ID3 is the consecutive number (0, 1, 2, etc.) indicating the submittal number for the item (0 for the 1st submittal, 1 for the first resubmittal, 2 for the second resubmittal, etc.).
   b. Example 1: If the water main pipe is specified under Section 02510, and this is the first submittal of items under that section, the submittal number should be 02510-01-0.
   c. Example 2: If the sewer manholes were submitted earlier as submittal number 02530-01-0, but a resubmittal is required, the submittal number for the resubmittal should be 02530-01-1.
   d. Example 3: If the plug valves were submitted earlier as submittal number 15100-01-0, and the telescoping valves are also specified in Section 15100, the submittal number should be 15100-02-0.
8. Submittals for all material and/or equipment shall also include the Supplier/ Contractor Statement of Compliance form included in these Contract Documents, duly signed and dated by the supplier or manufacturer and the Contractor. This form shall be prepared by the supplier or manufacturer of the submitted data, stating that the item(s) covered is in compliance with the Contract Documents. Failure to submit this form may be cause for rejection without review. All deviations from the Contract Documents shall be identified on each submittal and shall be tabulated in the Supplier/Contractor Statement of Compliance form and attached to the Shop Drawing Transmittal form. Such submittals, as pertinent to the deviation, shall indicate essential details of all changes proposed by Contractor including modifications to other facilities that may be a result of the deviation and all required piping and wiring diagrams.
9. All Submittals shall also include the American Iron & Steel Act Transmittal as well as the required American Iron & Steel Act documentation. Submittals that do not include this form and the required documentation will be rejected without review.
10. Submittals for all material and/or equipment shall also include receiving, handling and storage requirements.

11. The Contractor shall accept full responsibility for the completeness of each submittal, and, in the case of a resubmittal, shall verify that all exceptions previously noted by Engineer have been taken into account. In the event that more than one resubmittal is required because of failure of Contractor to account for exceptions previously noted, Contractor shall reimburse Owner for the charges of Engineer for review of the additional submittals.
12. Engineer's review of drawings and data submitted by Contractor will cover only general conformity to the Drawings and Specifications, external connections, and dimensions which affect the layout. Engineer's review does not indicate a thorough review of all dimensions, quantities, and details of the material, equipment, device, or item shown. Engineer's review of submittals shall not relieve Contractor from responsibility for errors, omissions, or deviations, nor responsibility for compliance with the Contract Documents.
13. The Engineer's Shop Drawing Response Comments, appropriately completed, will accompany all submittals when returned to the Contractor. Review status designations listed on the Engineer's response form are defined as follows:
    a. A - No Exception Taken: Fabrication, delivery, and installation may proceed as indicated in the submittal and in accordance with the Contract Documents.
    b. B - Address Notations, No Re-submittal: The submittal generally conforms with the design concept and the Contract Documents, and notations noted are considered minor or for Contractor information. Fabrication, delivery, and installation may proceed at the Contractor's discretion in accordance with the submittal, notations, and the Contract Documents. No re-submittal of information is required
    c. C - Revise and Resubmit Items Noted: The submittal generally conforms to the design concept and the Contract Documents; however certain items require explanation or re-submittal. Make revisions noted for specific items and re-submit only those items and respond to specific questions regarding the submittal.
    d. D - Revise and Resubmit Entire Submittal: The submittal generally conforms with the design concept and the Contract Documents; however, corrections noted are considered significant. Make all corrections noted and re-submit entire submittal for further review.
    e. E - Rejected for the Following Reasons: The submittal and/or content do not comply with requirements of the Contract Documents as specifically noted. Resubmit in accordance with Contract Documents.
    f. I – Engineer Review Not Required: Submittal for information only not requiring engineer approval.
14. Engineer's submittal review period shall be 21 consecutive calendar days in length, except as specified below, and shall commence on the first calendar day immediately following the date of submittal, the date of arrival of the submittal, or resubmittal in the Engineer's office. The time required for delivery of the submittal or resubmittal to the Contractor shall not be considered a part of the submittal review period. Special mailing or delivery requirements of the Contractor shall be at his expense.
    a. If multiple submittals are submitted within the same 21-day period, the Contractor shall submit a prioritized list for review, indicating the order in which the shop drawings are requested to be returned. The first submittal will be returned within the 21-day review period, and two days shall be added to the review period for each subsequent submittal.
15. Any need for more than one re-submittal, or any other delay in obtaining Engineer's review of submittals, shall not entitle Contractor to extension on the Contract Time unless delay of the Work is directly caused by a change in the Work authorized by a Change Order or by failure of Engineer to review any submittal within the submittal review period.

1.10 SURVEY AND LAYOUT DATA

A. All field books, notes, and other data developed by Contractor in performing surveys and layouts as a part of the Work shall be neat and legible and made available to the Engineer for examination throughout the construction period. Copies shall be furnished to the Resident Project Representative for use in checking Contractor's layout.

B. All such data shall be submitted to Engineer with other documentation required for final acceptance of the Work to be transmitted to the Owner by Engineer with other records upon completion of the Work.

1.11 RECORD DOCUMENTS

A. The Contractor shall submit with the application for final payment the Record Documents to Engineer including Drawings, Specifications, Addenda, written Amendments, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and final samples and shop drawings. The Record Documents shall be in good condition, show the actual installed location and dimensions, and all changes made during construction.

1.12 FINAL WARRANTY CERTIFICATES

A. Contractor shall amend and resubmit the warranty certificate provided with the O&M Manual to include the original signature(s) by the Manufacturer and the start and the end of dates of the warranty period for each item which is required to be covered under a Manufacturer’s warranty. The start date shall be the date of Substantial Completion. The Final Warranty Certificates shall be uploaded to the electronic construction management software as a submittal with a cover sheet. Two (2) hard copies of the Final Warranty Certificate shall also be provided to the Owner for insertion in the hard copies of the Final O&M manual.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. This section describes quality control testing to be performed by the Owner and Contractor. In general, laboratory and/or field testing will not be required unless specifically required by the Specifications; however, if the quality of the material is questionable or unknown, the Contractor shall furnish acceptable proof of its quality and conformance to the described and specified standards.

1.2 QUALITY ASSURANCE

A. All tests to determine compliance with the Contract Documents shall be performed by an independent commercial testing firm acceptable to the Engineer. The testing firm's laboratory shall be staffed with experienced technicians, properly equipped and fully qualified to perform the tests in accordance with the specified standards.

B. Testing services provided by Owner are for the sole benefit of Owner; however, test results shall be available to Contractor. Testing necessary to satisfy Contractor's internal quality control procedures shall be the sole responsibility of Contractor.

1.3 TESTING SERVICES

A. Services furnished by Contractor:
   1. Unless otherwise specified, Contractor shall provide all testing services in connection with the following:
      a. Concrete materials and mix design.
      b. Concrete temperature, slump, air entrainment and compressive/flexural strength.
      c. Pipe pressure and leakage tests.
         1) Work to be completed by the Soils Testing Laboratory:
            a) Instructions at start of earthwork.
            b) Approval of surface conditions.
            c) Approval of fill materials.
            d) Testing of fill and backfill materials including but not limited to gradation, moisture density and in-place field moisture density.
      d. CIPP liner testing.
      e. Televising of pipe installations and CIPP pipe lining. Submit televising videos as specified under Section 01 33 00 and SUDAS 4050 and 4060.
      f. Excluding those services furnished by the Owner, all other tests and engineering data stipulated in the Specifications and required for Engineer's review.
      g. All other tests and engineering data stipulated in the Specifications and required for Engineer's review.
   2. Contractor shall furnish all sample materials at no additional cost to Owner and cooperate in the testing activities including sampling. Contractor shall interrupt the Work when necessary to allow testing including sampling to be performed. Contractor shall have no claim for an increase in Contract Price or Contract Times due to such interruptions. When testing activities including sampling are performed in the field by Engineer, Resident Project Representative, or testing firm's personnel, Contractor shall furnish personnel and facilities to assist in the activities.

3. Transmittal of Test Reports: Written reports of tests and engineering data furnished by Contractor for Engineer's review of materials and equipment proposed for use in the Work shall be submitted as specified in Section 01 33 00 for Shop Drawings. The testing firm retained by the Contractor shall furnish sufficient copies of test reports for Engineer, Owner, and Contractor.

B. Services furnished by Owner:
   1. Unless otherwise specified, Owner shall provide for additional tests at the discretion of Owner and at the Owner's expense.
   2. The Contractor shall be responsible for coordinating his work with the testing firm(s) procured by the Owner. A minimum of 48 hours' notice shall be provided prior to the need for field testing.

1.4 OFFSITE INSPECTION

A. When Specifications require inspection of materials or equipment during the production, manufacturing, or fabrication process, or before shipment, such services will be performed by Engineer or an independent testing or inspection firm acceptable to Engineer. The cost of such inspections shall be borne by Owner.

B. Contractor shall give appropriate written notice to Engineer not less than 10 days before offsite inspection services are required. Contractor shall provide the producer, manufacturer, Engineer, and/or fabricator safe access to the appropriate or applicable facilities while cooperating with inspecting personnel in the performance of their duties. Copies of all reports on offsite inspections shall be given to Engineer and Contractor.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. This section describes the temporary facilities necessary for the execution of the work by Contractor. The Contractor, in examining the site, shall note that all construction operations and storage of equipment, materials, and tools shall be confined to the limitations of the site and additional lands acquired by the Owner as defined on the Site Plan of the Drawings.

1.2 TEMPORARY BUILDINGS

A. During the performance of the Work, the Contractor may maintain a suitable field office at the site of the Work that may be the headquarters of his resident superintendent. All Record Documents shall be maintained at the WPCP, and any communications given to the resident superintendent or delivered to the field office suitably addressed shall be deemed to have been delivered to the Contractor.

B. The Contractor shall erect and maintain such other temporary buildings and structures as necessary to secure and protect materials and equipment utilized in the execution of the work. At the end of the construction, all temporary buildings shall be removed from the site and other lands used by the Contractor.

1.3 TEMPORARY UTILITIES

A. Electrical Power: The Contractor shall provide and pay all charges for electrical power for temporary building(s) and for heating, lighting, operation of Contractor's equipment, or for any other use by the Contractor.

B. Telephone: The Contractor shall provide and pay all charges for telephone service to his field office and other locations as deemed necessary by the Contractor. Telephone service shall be provided and maintained at the site by the Contractor for communication.

C. Water:
All water required for and in connection with the Work to be done under this contract shall be obtained by the Contractor from the Water Works at an approved location at no additional cost to the Owner and shall be considered incidental to the work:
1. The Contractor shall procure such water in the location and in the manner designated by the Engineer and the Owner.
2. The Contractor, at his own expense, shall make authorized connections and provide means for delivering the water to the work site.
3. The Contractor shall prevent waste and needless use of water.

D. Sanitary Facilities:
1. The Contractor shall furnish temporary sanitary facilities at the site for the needs of all construction workers and others performing work or furnishing services on the Project. The Contractor's personnel, subcontractor's personnel, and others performing work or furnishing services for the Contractor will not be allowed to use the Owner’s sanitary facilities.
2. The Contractor shall enforce the use of such temporary sanitary facilities by all personnel at the site. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If chemical toilets are provided, at least one toilet will be furnished for each 20 individuals.

E. Natural or LP Gas: The Contractor shall provide and pay all charges for natural or LP gas service to temporary buildings and other facilities operated and maintained by the Contractor. The Contractor shall be responsible for heating costs during construction of new structures.

F. Utilities serving others: All utility services to businesses and residences shall remain active during construction.

1.4 MAINTENANCE OF TRAFFIC

A. Public Traffic: The Contractor shall conduct his work to minimize interference with public travel, whether vehicular or pedestrian. Such maintenance of traffic will not be required when the Contractor has obtained permission from the owner and tenant of private property or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.
   1. Contractor is responsible for all traffic control. Control measures shall meet requirements by the Iowa Department of Transportation and/or the local municipal ordinance. All traffic control devices shall be furnished, erected, maintained, relocated, and removed by the Contractor.

B. Detours: Where required by the authority having jurisdiction that traffic be maintained and whenever it is necessary to cross, obstruct, or close roads, driveways and sidewalks, whether public or private, the Contractor shall provide and maintain suitable and safe detours or other temporary expedients for the accommodation of public and private travel, and shall give reasonable notice to owners before interfering with private drives.

C. Iowa Department of Transportation (IDOT) Requirements: If construction involves any work on IDOT right-of-way, the Contractor shall be responsible for meeting all requirements of the IDOT with regard to safety, signage, detours, permits, and other requirements at no additional cost to the Owner.

D. Parking: The Contractor shall prepare and maintain suitable parking area(s) for use of all Contractor's personnel and others performing work or furnishing services for the Contractor in connection with the Work. No parking by the Contractor's personnel will be permitted where parking may interfere with public traffic or the Owner's operations.

E. For further requirements related to traffic control SUDAS Section 1070, paragraphs 2.02.B. and 2.06 shall apply. Removal of controls at project completion shall also be included.

1.5 BARRICADES AND TEMPORARY CONSTRUCTION FENCING

A. All roads and drives which are closed to traffic shall be protected by effective barricades and warning signs. All open trenches and other excavations shall have suitable barricades, signs, lights, and temporary fencing to provide adequate protection to the public. Other obstructions such as material piles and equipment shall be protected with similar warning signs, fencing, and lights operating from sunset to sunrise.

B. All barricades, signs, lights, fencing, and other protective devices shall be installed and maintained in conformity with applicable statutory requirements, or as required by the authority having jurisdiction.

1.6 ENVIRONMENTAL PROTECTION

A. Dust Control:
   1. The Contractor shall take reasonable measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. Dust prone materials in piles or in transit shall be covered when practical to prevent blowing.
   2. Buildings and operating facilities which are affected adversely by dust shall be adequately protected from dust. Existing and new equipment which may be adversely affected by dust shall be adequately protected.

B. Temporary drainage facilities and erosion control:

1. The Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the site in the performance of the Work. Drainage facilities shall be adequate to prevent damage to the Work, the site, and adjacent property.
2. Existing drainage channels and conduits shall be cleaned, enlarged, or supplemented as necessary to carry all increased runoff attributable to the Contractor's operations. The Contractor shall prevent erosion of soil on the site and adjacent properties resulting from construction activities. Effective measures such as silt fences, dikes, ditch checks, preservation of natural vegetation, and suitable ground cover shall be initiated prior to clearing, grading, excavation, or other operations that will disturb natural protection of soils.

C. Pollution Control: The Contractor shall prevent the pollution of soil, surface watercourses, and groundwater by controlling sanitary wastes, sediments, debris, chemicals, solvents, and other substances utilized in the performance of the Work. No sanitary wastes will be permitted to enter any drain other than a sanitary sewer. No sediment, debris, or other substances will be permitted to enter sanitary sewers.

1.7 PROTECTION OF TREES AND PLANTS

A. All trees and other vegetation which must be removed to perform the Work shall be removed and properly disposed of by the Contractor; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the Drawings. All trees and plants not removed shall be protected against injury from construction operations by the Contractor.

B. The Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades, trimming to prevent damage from construction equipment, and installing underground facilities by hand or tunneling methods. Designated trees shall not be endangered by stockpiling excavated material or storing equipment against the trunk.

C. When injury or removal of trees designated to be preserved cannot be avoided, or when removal and replacement is indicated on the Drawings, each tree injured beyond repair or removed shall be replaced with a similar tree of the nearest size available.

1.8 DAMAGE TO EXISTING PROPERTY

A. The Contractor will be held responsible for any damage to existing structures, Work, materials, or equipment because of his operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, the Owner. The Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other means necessary for such protection.

B. The Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or personnel to or from the Work. The Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SUPPLEMENTAL DIVISION 3 - TRENCH AND TRENCHLESS CONSTRUCTION

SECTION 3010 - TRENCH EXCAVATION AND BACKFILL

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 3 – EXECUTION

3.06 (REVISE) PIPE BEDDING AND BACKFILL SEE DIVISION 4

SECTION 3020 - TRENCHLESS CONSTRUCTION (BORING, JACKING, AND TUNNELING)

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 2 – PRODUCTS

2.01 CARRIER PIPE

A. Carrier Pipe Installed within Casing Pipe:

1. **Sanitary Sewer Gravity Main:** (DELETE) ~~Comply with Section 4010, 2.01~~.
    a. (ADD) All gravity piping installed in an encasement pipe or installed by boring shall be restrained joint pipe.
    b. (ADD) Pipe and couplings shall be made from unplasticized PVC compounds meeting ASTM D2241 and have a minimum cell classification of 12454, as defined in ASTM D1784. Pipe joints shall meet the standards of ASTM D3212 and have elastomeric gaskets conforming to ASTM F477.
    c. (ADD) Nominal outside diameters and wall thicknesses of thrust-restrained pipe shall conform to the requirements of ASTM D2241, SDR 21 pipe. Pipe shall be furnished in standard lengths of 10 or 20 feet. All pipe shall be marked with the following: Nominal pipe size, material code designation, DR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers.
    d. (ADD) Pipe shall be joined:

1) (ADD) Using non-metallic couplings to form an integral system for maximum reliability and interchangeability. High-strength, flexible thermoplastic splines shall be inserted into mating, precision machined grooves in the pipe and coupling to provide full 360º restraint with evenly distributed loading.

2) (ADD) Push-Together restraint system with internal steel locking ring providing uniform circumferential contact.

e. (ADD) Pre-Approved piping includes Certa-Flo® PVC Gravity Sewer Pipe with Certa-Lok® Restrained Joints, and Integral Bell; or Engineer approved equal.

2. Sanitary Sewer Force Main:

b. Restrained Joint PVC Pipe: (DELETE) ~~Comply with Section 4010, 2.02.~~

1) (ADD) All pressure piping installed in encasement pipe or installed by boring shall be restrained joint pipe.

2) (ADD) Pipe and couplings shall be made from unplasticized PVC compounds having a minimum cell classification of 12454-B, as defined in ASTM D1784. The compound shall qualify for a Hydrostatic Design Basis (HDB) of 4000 psi for water at 73.4ºF, in accordance with the requirements of ASTM D2837.

3) (ADD) Nominal outside diameters and wall thicknesses of thrust-restrained pipe shall conform to the requirements of AWWA C900, DR18 pipe. Pipe shall be furnished in standard lengths of 20 feet. All pipe shall be marked with the following: Nominal pipe size, material code designation, DR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers.

4) (ADD) Pipe shall be joined:

a) (ADD) Using non-metallic couplings to form an integral system for maximum reliability and interchangeability. High-strength, flexible thermoplastic splines shall be inserted into mating, precision machined grooves in the pipe and coupling to provide full 360º restraint with evenly distributed loading.

b) (ADD) Push-Together restraint system with internal steel locking ring providing uniform circumferential contact.

7) (ADD) Couplings shall be designed for use at or above the rated pressures of the pipe with which they are utilized and shall incorporate twin elastomeric sealing gaskets meeting the requirements of ASTM F477. Joints shall be designed to meet the leakage test requirements of ASTM D3139.

8) (ADD) Pre-Approved restrained joint piping is: Certa-Lok C900/RJ, C905/RJ piping; Diamond Lok-21; Eagle Loc900; or Engineer approved equal.

5. (DELETE) ~~Water Main:~~

   a. (DELETE) ~~Restrained Joint Ductile Iron Pipe: Comply with Section 5010, 2.01.~~

   b. (DELETE) ~~Restrained Joint PVC Pipe: Comply with Section 5010, 2.01.~~

B. Carrier Pipe Installed without a Casing Pipe:

1. Sanitary Sewer Gravity Main:

   b. (DELETE) ~~Vitrified Clay Pipe: Comply with Section 4010, 2.01.~~

   d. Restrained Joint PVC Pipe: Comply with (DELETE) ~~Section 4010, 2.02~~ (ADD) 2.01.

2. Sanitary Sewer Force Main:

   b. Restrained Joint PVC Pipe: Comply with (DELETE) ~~Section 4010, 2.02~~ (ADD) 2.01.

4. (DELETE) ~~Water Main:~~

   a. (DELETE) ~~Restrained Joint Ductile Iron Pipe: Comply with Section 5010, 2.01.~~

   b. (DELETE) ~~Restrained Joint PVC Pipe: Comply with Section 5010, 2.01.~~

2.02 CASING PIPE

D. (ADD) PVC Encasement Pipe:

1. (ADD) Meet the requirements of 2.02 for force main C900, DR 18 rated pipe.
2. (ADD) PVC encasement pipe shall be furnished with gasket joints conforming to ASTM D3139. Rubber gaskets shall conform to the requirement of ASTM F477.
3. (ADD) Minimum inside diameter as specified in the contract documents. If diameter is not specified, use a minimum inside casing diameter of at least 4 inches greater than the largest outside diameter of the carrier pipe, including pipe bells.

2.03 CASING SPACERS

C. (ADD) Casing spacers will be required on all gravity sewer piping and on force main piping where encasement piping exceeds 20 feet in length.

2.06 CASING END SEAL

C. (ADD) Casing end seals are required on all encasement pipes.

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SUPPLEMENTAL DIVISION 4 - SEWERS AND DRAINS

SECTION 4010 - SANITARY SEWERS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.08 MEASUREMENT AND PAYMENT

M. (ADD) Ductile Iron Fittings and Restraining Devices:

1. **Measurement:** Each fitting and/or restraining device installed, including gaskets and fasteners, will be counted.
2. **Payment:** Payment will be made at the unit price for each fitting and/or restraining device installed.

1.09 (ADD) ACCEPTANCE CHECKLIST & MAINTENANCE BOND

Prior to final acceptance of the work, the contractor shall file with the City Clerk of the City of Marshalltown a maintenance bond guaranteeing suitable repairs of any defects or failures due to deficiencies in materials or inadequacies in workmanship for a period of 4 years for all improvements following completion of construction. The bond shall be for a sum equal to the total amount of the project. The contractor shall also file with the City Engineer all other required acceptance checklist items including testing/inspection forms, lateral construction forms, as-built drawings, construction costs and engineering certificate of completion forms. The acceptance checklist and warranty bond form are provided at end of section.

PART 2 - PRODUCTS

2.01 SANITARY SEWER (Gravity Mains)

A. Solid Wall Polyvinyl Chloride Pipe (PVC) 8 inch to 15 inch:

1. Comply with ASTM D 3034, SDR 26, (DELETE) ~~unless SDR 35 is specified.~~
2. Pipe stiffness per ASTM D 2412.
   b. (DELETE) ~~SDR 35: Minimum pipe stiffness of 46 psi.~~

C. Corrugated Polyvinyl Chloride Pipe (PVC) 8 inch to 36 inch:

5. (ADD) This pipe shall not be used without prior approval by Engineer.

D. Closed Profile Polyvinyl Chloride Pipe (PVC) 21 inch to 36 inch:

5. (ADD) This pipe shall not be used without prior approval by Engineer.

E. Polyvinyl Chloride Composite Pipe (truss type PVC) 8 inch to 15 inch:

5. (ADD) This pipe shall not be used without prior approval by Engineer.

F. Reinforced Concrete Pipe (RCP) 18 inch to 144 inch:

3. (ADD) This pipe shall not be used without prior approval by Engineer.

H. Vitrified Clay Pipe (VCP) 8 inch to 42 inch:

4. (ADD) This pipe shall not be used without prior approval by Engineer.

I. Double Walled Polypropylene Pipe 12 inch to 30 inch:

4. (ADD) This pipe shall not be used without prior approval by Engineer.

J. Triple Walled Polypropylene Pipe 30 inch to 36 inch:

4. (ADD) This pipe shall not be used without prior approval by Engineer.

2.02 SANITARY SEWER FORCE MAINS

A. Ductile Iron Pipe (DIP) 4 inch to 54 inch: Comply with the DIP requirements in Section 4010, 2.01. (DELETE) ~~If joint restraints are specified, comply with Section 5010, 2.03.~~

B. Polyvinyl Chloride Pipe (PVC): (DELETE) ~~Comply with the requirements in Section 5010, 2.01 for PVC pipe.~~ Provide restrained joints when specified.

1. (ADD) Polyvinyl chloride pipe 4-inches to 24-inches shall be C 900, DR 18 rated pipe.
2. (ADD) Polyvinyl chloride pipe 2-inches to 3-inches shall be pressure Class 200, SDR 21 rated pipe.
3. (ADD) The pipe shall be made from Type 1, Grade 1, Class 12454-B compounds conforming to ASTM D 1784 with a hydrostatic design basis (HDB) of 4,000 psi as per ASTM D 2837.
4. (ADD) All pipe shall be marked with the following: Nominal pipe size, material code designation, DR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers. All sanitary sewer force main pipes shall be installed with a locating tape to distinguish force main sewer from potable water.
5. (ADD) The PVC pipe shall be furnished in 20-foot laying lengths. Longer lengths will be allowed only if the Contractor certifies that he will provide equipment on the project to fully support the pipe while being transported and distributed over the project.
6. (ADD) All PVC pipe shall be furnished with gasket joints conforming to ASTM D 3139. Rubber gaskets shall conform to the requirement of ASTM F 477.
7. (ADD) The ends of the pipe to be inserted into couplings or joints shall be factory marked to allow field checking of the depth of setting of the pipe in the joint socket.

C. Sewage Air Release Valve: (ADD) See Part 2.07.

1. **(DELETE) ~~General~~**: ~~Consists of an elongated tapered or conical body and a float to operate (open and close) under pressure without spillage. Provide~~

~~valves suitable for pressures up to 150 psi. Use a float with a linkage connection to the seal plug assembly to prevent irregular air release and protect the connecting rod. Ensure the bottom of the valve body is sloped or funnel-shaped to encourage the accumulated sewage and solids to drain from the valve. Preserve a volume of air at all times between the liquid sewage and the seal plug assembly. Provide a flushing port with attachments for backwashing.~~

2. **(DELETE) ~~Materials~~**:

   a. (DELETE) **~~Body and Cover:~~**

      1) (DELETE) ~~Stainless Steel: ASTM A 351.~~

      2) (DELETE) ~~Cast Iron: ASTM A 126, Grade B.~~

      3) (DELETE) ~~Ductile Iron: ASTM A 536, Grade 65-45-12. 4) Other corrosion resistant materials.~~

   b. (DELETE) ~~Internal Metal Components: Stainless steel.~~

   c. (DELETE) ~~Float: Stainless steel, ASTM A 240, Type 304 or Type 316, or foamed polypropylene.~~

   d. (DELETE) ~~Seal Plug Assembly: Stainless steel, foamed polypropylene, EPDM rubber, Nitrile (Buna-N) rubber, and reinforced nylon~~.

3. (DELETE) ~~Tapping Saddle: Stainless steel or nylon.~~

4. (DELETE)~~ Pit: Construct according to Figure 4010.202.~~

D. Tracer Wire: (DELETE) ~~Comply with Section 5010, 2.05.~~ (RETAIN) Tracer wire will be required on all force mains (ADD) and sewer services extending from the main to the property line.

1. (ADD) Tracer wire shall be 12-gauge solid copper or high strength stainless steel wire with a 45-mil polyethylene coating. Provide sufficient length to be continuous over each separate run of nonmetallic pipe.

2. (ADD) The splice kit shall be an inline resin splice kit with split bolt (1 kV and 5 kV) for use with single conductor and unshielded cable splices in direct bury and submersible applications.

3. (ADD) The ground rods shall be a 3/8 inch diameter, 60 inch steel rod uniformly coated with metallically bonded electrolytic copper.

4. (ADD) Wire shall be connected with a high-strength, corrosion-resistant copper alloy ground rod clamp.

E. Tracer Wire Station:

1. (DELETE)~~ Two internal terminals with shunt.~~

2. (DELETE) ~~Five to six foot plastic post (color as specified by the Jurisdiction)~~.

3. (DELETE) ~~Removable top cap with lock.~~

4. (DELETE) ~~Decals indicating “Sewer Force Main” or similar language.~~

1 (ADD) All tracer wires are to be connected to a cast iron or ABS/PVC tamper proof tracer wire access box. The cover is to be manufactured of cast iron and ABS/PVC components produced in the USA. Cast iron collar & cover is to be manufactured in accordance with ASTM A48 Class 25. The ABS is to be manufactured in accordance with ASTM D1788. The cover shall be lettered “Sewer” and shall have a standard AWWA size cast-in pentagonal bolt. Box will be a minimum of 3 inches in diameter.

2. (ADD) Tracer Wire Access Box shall be Valvco Pipe Tracer Wire Terminal Box or Engineer approved equal.

2.04 SANITARY SEWER SERVICE

E. Service Pipe: Use products as required by local plumbing code or regulations, if applicable. Otherwise, use the following:

1. PVC:

   b. PVC plastic meeting ASTM D 1784, Cell Classification 12454. (ADD) (Rigid PVC or CPVC).

2.06 SANITARY SEWER CLEANOUT

A. Comply with (DELETE) ~~Figure 4010.203~~ (ADD) MP-4.

2.07 (ADD) AIR RELEASE AND COMBINATION VALVES

A. Sewage Air Release Valves:

1. Sewage Air Release Valves shall release accumulated air (gases) from the system while it is under pressure and operating. The valve’s design will enable the separation of the liquid from the sealing mechanism and assures optimum working conditions.

2. The valve shall incorporate an air-gap separation between the sewage and sealing mechanism. This will be obtained by a single float. The valve will operate with working pressures of 0.2 – 10 bar. The valve shall withstand 230-psi test.

3. All internals shall be easily removed without removing the main valve from the lines.

4. The valve inlet shall be 2 inch N.P.T. All fittings to connect to force main shall be brass or stainless steel. A two (2) inch ball valve will be installed below the valve to allow for removal of valve without shutting down the system. Ball valve will be brass or stainless steel.

5. The body shall be Reinforced Nylon Composite, Cast Iron, Steel or Stainless Steel. Cast iron and steel valves shall be coated with a fusion bonded epoxy.

6. Internal metal materials shall be stainless steel. Float shall be a foamed polypropylene material.

7. The sewage air release valve shall be as manufactured by A.R.I. Flow Control Accessories Models S-025 or S-020 or Engineer approved equal.

B. Combination Valves

1. Combination Valves shall have three components:

   a. Air & vacuum component discharges large volumes of air during filling of the system.

   b. Air & vacuum component admits large volumes of air during drainage and at water column separation.

   c. The air release component releases entrapped air in pressurized systems.

2. The valve's design will enable the separation of the liquid from the sealing mechanism and assures optimum working conditions.

3. The valve shall incorporate an air-gap separation between the sewage and sealing mechanism. This will be obtained by a single float. The valve will operate with working pressures of 0.5 – 10 bar. Valves with working pressures lower than 0.5 bar and higher than 10 bar will be allowed. The valve shall withstand a minimum 215-psi test.

4. All internals shall be easily removed without removing the main valve from the lines.

5. The valve inlet shall be 2 inch N.P.T. All fittings to connect to force main shall be brass or stainless steel. A two (2) inch ball valve will be installed below the valve to allow for removal of valve without shutting down the system. Ball valve will be brass or stainless steel.

6. The body shall be Reinforced Nylon Composite, Cast Iron, Steel or Stainless Steel. Cast iron and steel valves shall be coated with a fusion bonded epoxy.

7. Internal metal materials shall be stainless steel. Float shall be a foamed polypropylene material.

8. The combination valve shall be as manufactured by A.R.I. Flow Control Models D-025, D-025L, D-26 or Engineer approved equal.

C. Tapping Saddle:

1. The body shall be made of high strength ductile iron per ASTM A536.

2. The clamping band shall be a double wide band with 5/8" UNC threaded bolts of 18-8 type 304 stainless steel with stainless steel spring tension washers under the nuts.

3. The gasket shall be EPDM rubber per ASTM-D2000.

4. The finish on saddle body shall be fusion bonded epoxy coating approximately 12 mils thick.

5. Pre-Approved saddles are as manufactured by: Ford Meter Box Co., style FC202; JCM Industries, Inc., Model No. 406; Mueller Company, DR 2; Style 202NS as manufactured by Romac Industries; or Engineer approved equal.

D. Construct Air Release/Combination Valve manhole in accordance with MP-3 details.

2.08 (ADD) GRAVITY PVC PIPE FITTINGS

A. Repair couplers, tees, wyes, and bends for Polyvinyl Chloride (PVC) gravity pipe fittings shall be manufactured from the same material as piping.

B. Gaskets for elastomeric joints shall conform to the requirements of ASTM F477.

C. Solvent Cement for solvent weld joints shall conform to the requirements of ASTM Specification D2564 and shall be applied in conformance with ASTM D2855. Solvent weld joints will be allowed on PVC cleanout risers only.

D. Sewer "Wyes" for service connections on new sewer piping shall be in-line sewer wyes. Saddle wyes will not be permitted for use without permission from Engineer.

E. Sewer “Wyes” for existing piping connections shall be: Romac “CB” Sewer Saddle by Romac Industries Inc.; Inserta-Tee by Fowler Manufacturing Co.; or Engineer approved equal.

2.09 (ADD) TRANSITION COUPLINGS (GRAVITY PIPING)

A. Gasket:

1. Manufactured to meet the material requirements of:

   a. CSA B602 - mechanical couplings for drain, waste, vent pipe and sewer pipe

   b. ASTM D5926 - Standard Specification for Poly Vinyl Chloride (PVC) Gaskets for Drain, Waste, and Vent (DWV), Sewer, Sanitary, and Storm Plumbing Systems

   c. ASTM C1173 - Standard Specification for Flexible Transition Couplings for Underground Piping Systems

B. Clamps

1. Manufactured to the requirements of CSA B602
2. Clamp Housing 301 Stainless Steel
3. Clamp Band 301 Stainless Steel
4. Clamp Screw 305 Stainless Steel
5. Installation Torque 60 in-lbs

C. Shear Ring

1. 0.012" Thick, 300 Series Stainless Steel
2. Width manufactured according to coupling width (1.50", 2.13", or 4")
3. Length manufactured according to coupling diameter
4. Clamps spot welded in place

D. Coupling

1. Manufactured to conform to the performance requirements of:

a. ASTM C1173 - standard specification for flexible transition couplings for underground piping systems

b. CSA B602 - mechanical couplings for drain, waste, vent pipe and sewer pipe

c. Maximum test pressure: 4.3 PSI (29.6KPA)

d. Maximum operating temperature: 140° F non-consistent

E. (ADD) Pre-Approved transition couplers are Strong Back RC Series Repair Couplings manufactured by Fernco Inc. or Engineer approved equal.

2.10 (ADD) FITTINGS FOR PVC FORCE MAIN PIPE

A. All fitting shall be same materials as pipe supplied.

B. Repair couplers and gaskets shall be pressure rated same as piping and meet the following specifications, standards and approvals:

1. NSF Standards 14 & 61

2. ASTM D1784 materials

3. ASTM D3139 joints

4. DR 18 dimensions and pressure ratings per ASTM D2241 for C900 Pipe

5. SDR 21 dimensions and pressure ratings per ASTM D2241 for pressure class 200 pipe

6. ASTM F477 gaskets

C. All other fittings for use on four (4) inches and larger PVC pipe will be ductile iron fittings conforming to the requirements of paragraph 2.01 above, with the exception of transition couplers as specified in paragraph 2.11.

D. Fittings for use on 3" or smaller PVC pipe shall be gasket PVC push-on style fittings conforming to ASTM D2241, ASTM F477, and ASTM D3139. Fittings shall be made to the same quality as the piping furnished.

2.11 (ADD) TRANSITION COUPLINGS FOR FORCE MAIN PIPING

A. The couplings used for transitions between piping of different materials shall be a wide-range flexible coupler with a sleeve type design meeting the requirements of AWWA C219.

1. The coupling body shall be a center sleeve fabricated of high strength carbon steel tubing equivalent to ANSI/AWWA C200. The transition couplers will be readily available in nominal diameter ranges from 1.5 to 24 inches on all pipe classes.

2. Compression End Rings: One gasket compression end ring per coupling end. End rings to be of either one or two bolt designs, fabricated of carbon steel equivalent to ASTM A576. (One bolt per end in Nominal Size ranges of 2 to 12 inches and two bolts per end on the 16 to 24-inch nominal diameter coupling.)

3. Hydraulic Wide Range Gasket: Chloramine Resistant NSF-61 approved EPDM gasket designed with a multi-layered wide range removable outer layer. Gasket hydraulically actuated with a pressure-equalizing dam, pressure cavity and sealing lip for working pressure of 260 psi (1.5 to 16 inches) and 232 psi (18 to 24-inch nominal diameter coupling).
4. Fasteners shall be grade 304 (A2) or 316 (A4) stainless steel with yield strengths that conform to all nationally recognized standards. Bolts to be coated with an anti-seize type coating to prevent galling.
5. The interior and exterior coatings shall NSF-61 approved fusion bonded epoxy coating conforming to AWWA C213.
6. When properly installed the coupling will provide a minimum deflection of 8 degrees, up to 260 psi working pressure and 3/8-inch longitudinal pipe movement without leakage. (Flanged adapters will provide half the longitudinal movement and deflection.)
7. All products will be proof tested to a minimum of 1.5 times working pressure.

B. Flanged couplers shall consist of one compression end and gasket, coupling center sleeve, and AWWA Class "D" Flange (per AWWA C207).

C. Pre-Approved transition couplers are: Hymax-2000 Series wide range coupling; Hymax-2100 Series wide range flanged coupling adapter; “Macro” extended range coupling by Romac Industries, Inc.; or Engineer approved equal.

2.12 (ADD) FASTENERS

All fasteners in buried locations shall be Grade 304 (A2) or Grade 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

2.13 (ADD) LUBRICANT FOR GASKETED PIPE

Lubricant shall be an emulsified polymer-based product, specifically formulated to be water-soluble without causing turbidity. Lubricant shall not transfer taste and/or odor to new water main installations. Lubricant must not promote bacterial growth and be safe for use on all metal and plastic pipes. Lubricant shall be easily flushed from the line and be non-reactive to chlorinated water. Lubricant should work easily on both wet and dry surfaces.

2.14 (ADD) POLYETHYLENE WRAP

All ductile fittings shall be wrapped with polyethylene plastic film having a minimum thickness of 0.008 inches or with a cross woven polyethylene plastic film having a minimum thickness of 0.004 inches.

2.15 (ADD) RESTRAINING DEVICES

A. Restraint devices for use on ductile iron and C-900 PVC “push-on” joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All

devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Block Buster Series 1390-C; Star Pipe Products Allgrip series 3600 and Pipe Restrainers Series 1200S; EBAA Iron, Inc. Mega-Lug Series 1700; or Engineer approved equal.

B. Restraint devices for use on mechanical joint to C-900 PVC, shall be constructed of high strength ductile iron, conforming to the requirements of ASTM A536, Grade 65-45-12, and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1500; Star Pipe Products, Allgrip Series 3600; Romac Industries, Inc GripRing; Romac Industries, Inc RomaGrip; EBAA Iron, Inc. Mega-Lug Series 2000; or Engineer approved equal.

C. Restraint devices for use on mechanical joint ductile iron, shall be constructed of high strength ductile iron, conforming to the requirements of ASTM A536, Grade 65-45-12, and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1300-C; Star Pipe Products, Allgrip Series 3600; Romac Industries, Inc. GripRing; EBAA Iron, Inc. Mega-Lug Series 1100; or Engineer approved equal.

2.16 (ADD) GATE VALVES

A. Gate valves shall be resilient wedge type manufactured to meet all applicable requirements of AWWA Standard for Resilient Seated Gate Valve C509 or C515.

B. All valves shall have non rising stems, opening by turning left and provided with standard 2-inch square nut operator (hand-wheel operator in manholes) with arrow cast in metal to indicate direction of opening.

C. Cast iron wedge shall have sealing surfaces of the wedge permanently bonded with resilient material to meet ASTM tests for rubber to metal bond ASTM D429. Each valve shall have a smooth unobstructed waterway free from any sediment pockets. Stuffing boxes shall be O Ring seal type with 2 rings located in stem above thrust collar. Low friction torque reduction thrust bearings shall be located both above and below the stem collar.

D. Body and cover bolts and nuts shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

E. Exterior and interior coatings in accordance with ANSI/AWWA C550 for potable water.

F. Non rising stems shall be in full compliance with AWWA specification with cast integral stem collar and furnished of bronze conforming to ASTM B584 Alloy A. Stem nuts shall be independent of wedge and shall be made of solid bronze conforming to ASTM B62.

G. Valves shall have hydrostatic shell test of 400 psi and shut-off test of 200 psi. At the 200-psi shut-off test, valve must be bubble tight with a zero (0) leakage allowance.

H. Resilient wedge gate valves shall be the product of a manufacturer having a minimum of five (5) years' experience in the manufacture of water works and distribution valves.

I. Pre-Approved resilient wedge gate valves are as manufactured by: American Darling Valve Co.; Mueller Company; Clow Valve Division; American AVK Company; or Engineer approved equal.

2.17 (ADD) VALVE BOXES

A. Valve boxes shall be cast iron, 5 1/4" inside diameter, adjustable valve boxes of the screw type with sufficient length for the pipe bury as shown. Where the valve box is shown or required on control manholes, the length shall be sufficient to penetrate the valve marker and the Type II reinforced manhole cover. The cast iron cover of the valve box shall have an arrow indicating the direction of opening.

B. Covers for sewer piping shall have the word "SEWER" cast on the top.

C. Pre-Approved valve boxes and covers are as manufactured by: Tyler Pipe Utilities Division; Mueller Co.; or Engineer approved equal.

D. Each valve box shall be furnished with valve box centering adaptor compatible with the valve boxes furnished.

3.05 FORCE MAIN INSTALLATION

A. General: (DELETE) ~~Install according to Section 5010~~.

1. (ADD) The Contractor shall install restraining devices in accordance with the manufacturer's recommendations.
2. (ADD) Restraining devices shall be installed on all mechanical joint fittings.
3. (ADD) Joint restraining devices shall be installed on all joints within 30 feet of all fittings.

B. Tracer Wire: (ADD) See 3.14 Below.

1. Required for all force main installations and sanitary sewer services that extend from the main to the property line. (DELETE) ~~Comply with Section 5010.~~
2. (DELETE) ~~Install tracer wire station at each end of the force main and at additional locations specified in the contract documents.~~
3. (DELETE) ~~Bury end of tracer wire station 2 feet and compact.~~

3.10 SANITARY SEWER CLEANOUT

A. Provide cleanouts where specified in the contract documents. Comply with (DELETE) ~~Figure 4010.203~~ (ADD) Standard Detail MP-4.

3.12 CONFLICTS

A. Horizontal Separation of Gravity Sewers from Water Mains: Separate gravity sewer mains from water mains by a horizontal distance of at least 10 feet unless:

   3. When it is impossible to obtain the required horizontal clearance of 3 feet and a vertical clearance of 18 inches between sewers and water mains, the sewers must be constructed of water main materials meeting the requirements of **(DELETE)** ~~Section 5010, 2.01~~ **(ADD)** 2.02. However, provide a linear separation of at least 2 feet.

B. Separation of Sewer Force Mains from Water Mains: Separate sewer force mains and water mains by a horizontal distance of at least 10 feet unless:

   1. The force main is constructed of water main materials meeting a minimum pressure rating of 150 psi and the requirements of (DELETE) ~~Section 5010, 2.01~~ (ADD) 2.02 and

3.14 (ADD) TRACER WIRE INSTALLATION

A. Tracer wire shall be installed on all force main piping and sanitary sewer services in the trench at the same time as the pipe or immediately prior to starting the backfill of the trench.

B. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.

C. Splices will be allowed at pipeline intersections, manholes, bored crossings, locator boxes and at other locations as agreed upon by the Engineer. Splices in tracer wire will be made with split bolt or compression-type connectors. Wire nuts may not be used. A waterproof connection is necessary to prevent corrosion. Splices shall be completed in accordance with the manufacturer's recommendations.

D. Install tracer wire on all sanitary sewer services from the main to the end of the service. Install ground rod at sewer wye and at service end. Connect wire to ground rods and extend wire to the ground surface and loop the wire in a tracer wire terminal box. These boxes shall be located at the connection to sewer service with at least two feet of extra wire inside the box. The tracer wire terminal box must be installed flush with the finished grade.

E. Install tracer wire on all force main piping. A ground rod shall be installed at each end of the piping and at all tracer wire terminal boxes. Tracer wire terminal boxes shall be installed at each end of the force main piping and as directed by the Engineer.

F. Prior to final acceptance, all tracer wire shall be electrically tested for continuity from one exposed end to another.

G. See MP-1 and MP-2 for additional details.

3.15 (ADD) VALVE INSTALLATION

A. All valves shall be installed in locations as shown on the plans or as directed by the Engineer.

B. The valve and joints shall be installed in accordance with the manufacturer's recommendations.

C. All pipe bevels shall be removed prior to installation of any valve or ductile iron fitting.

3.16 (ADD) VALVE BOX INSTALLATION

A. All foreign material and debris shall be removed from the top of the valve operator prior to setting the valve box.

B. Valve box centering device shall be installed to center valve box on valve.

C. Valve boxes shall be centered and plumb over the operating nut of the valve and shall be set so that no shock or stress will be transmitted to the valve.

D. Tops of the valve boxes shall be set flush with the valve identification collar or manhole cover unless otherwise directed.

3.17 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

1. MP-1 Typical Sanitary Sewer Service Detail
2. MP-2 Typical Sanitary Sewer Service with Riser Detail
3. MP-3 Typical Air Release/Combination Valve Manhole Detail
4. MP-4 Typical Service Line Cleanout Detail
5. MP-8 Typical Sanitary Sewer Utility Crossing Detail
6. MR-5 Typical Street Utility Section Detail

B. Deleted SUDAS Figures

1. 4010.201 Sanitary Sewer Service Stub
2. 4010.201 Sanitary Sewer Service Stub
3. 4010.202 Sewage Air Release Valve Pit
4. 4010.203 Sanitary Sewer Cleanout

MARSHALLTOWN SPECIAL PROVISIONS
FINAL ACCEPTANCE CHECKLIST

A. Deflection/Mandrel Testing – all Flexible Sanitary Sewer Pipe

B. Low Pressure Air Testing of Pipe – For Sanitary Sewer

C. Lateral Construction Forms – All Sanitary Sewer Laterals

D. Warranty Bond – Sanitary and Storm Sewers (See Specifications Part I)

E. TV Inspection – For Sanitary and Storm Sewer Pipe.

F. As-Built Drawings – For Sanitary and Storm Sewers

G. Engineering Certificate of Completion in accordance with the Plans and Specifications – Sanitary and Storm Sewers

H. Contractors Cost of Construction Report - This is to meet the financial reporting requirements of the city (GASB 34)

DEFLECTION TESTING OF FLEXIBLE PIPE

Deflection tests shall be performed on all flexible sanitary sewer pipes. The deflection test shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5%. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe and the tests shall be performed without mechanical pulling devices.

PROJECT NAME: _____

LOCATION: _____

CONTRACTOR: _____

SECTION TESTED

Start Station: _____ MH Upstream _____ Pipe Diameter: _____

End Station: _____ MH Downstream _____ Length: _____

Date Of Test: _____ Pass ☐

Date Of Construction _____ Fail ☐

MANUFACTURER OF TEST DEVICE AND DIAMETER _____

_____

Comments _____

_____

Inspector _____

SECTION TESTED

Start Station: _____ MH Upstream _____ Pipe Diameter: _____

End Station: _____ MH Downstream _____ Length: _____

Date Of Test: _____ Pass ☐

Date Of Construction _____ Fail ☐

MANUFACTURER OF TEST DEVICE AND DIAMETER _____

_____

Comments _____

_____

Inspector _____

SECTION TESTED

Start Station: _____ MH Upstream _____ Pipe Diameter: _____

End Station: _____ MH Downstream _____ Length: _____

Date Of Test: _____ Pass ☐

Date Of Construction _____ Fail ☐

MANUFACTURER OF TEST DEVICE AND DIAMETER _____

_____

Comments _____

_____

Inspector _____

LOW PRESSURE TESTING OF SANITARY SEWER LINE (ASTM: F 1417)

PROJECT NAME: _____
LOCATION: _____
CONTRACTOR: _____

LIST SECTION TESTED: DATE: _____
Start Station.: _____ MH Upstream _____
End Station: _____ MH Downstream _____
Pipe Dia. _____ Length _____
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Min(s)
Comments:

TEST INFORMATION:

Constant Pressure Method:
Rotameter reading: _____ cf/min
Computed Air Loss: _____ cf/min

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.1 for acceptance: Yes __ No __

Time-Pressure Drop Method
Time for 1.0 psi drop: _____ Min(s) --OR--
Variance in Test Pressure: _____ psi
Variance allowed by local jurisdiction: _____ psi

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.2 for acceptance: Yes _____ No _____

LIST SECTION TESTED: DATE: _____
Start Station.: _____ MH Upstream _____
End Station: _____ MH Downstream _____
Pipe Dia. _____ Length _____
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Min(s)
Comments:

TEST INFORMATION:

Constant Pressure Method:
Rotameter reading: _____ cf/min
Computed Air Loss: _____ cf/min

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.1 for acceptance: Yes __ No __

Time-Pressure Drop Method
Time for 1.0 psi drop: _____ Min(s) --OR--
Variance in Test Pressure: _____ psi
Variance allowed by local jurisdiction: _____ psi
CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.2 for acceptance: Yes _____ No _____

LIST SECTION TESTED: DATE: _____
Start Station.: _____ MH Upstream _____
End Station: _____ MH Downstream _____
Pipe Dia. _____ Length _____
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Min(s)
Comments:

TEST INFORMATION:

Constant Pressure Method:
Rotameter reading: _____ cf/min
Computed Air Loss: _____ cf/min

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.1 for acceptance: Yes __ No __

Time-Pressure Drop Method
Time for 1.0 psi drop: _____ Min(s) --OR--
Variance in Test Pressure: _____ psi
Variance allowed by local jurisdiction: _____ psi

CONCLUSION: The section of pipe tested complies with ASTM: F 1417, 8.2.2 for acceptance: Yes _____ No _____

Testing procedures observed and Information recorded by:

_____
Project Representative

Results reviewed and affirmed by:

_____
Project Engineer

City of Marshalltown, Iowa

SANITARY SEWER LATERAL CONSTRUCTION FORM

Project Number _____

Date Wye Installed: 20___
4Date Service Installed: 20___ (NA) if no service

Street Address: (or) _____
General Location: _____

Upstream Manhole # _____ Downstream Manhole # _____

Service Status: _____ 1 - Active 2 - Inactive 3 - Abandoned

Connection Type: _____ 2 - Wye 3 - MH stub 4 - Tap

Diameter (inches): _____

Pipe Material: _____ 1 - VCP 2 - PVC 3 - Concrete 4 - RCP
5 - DIP 6 – CIP 7 - CMP

Slope/Fall (%): _____ Length (feet): _____

Source of Data: _____ 1 - Construction Inspection 2 – Superintendent

Direction from Main: _____ Distance from Upstream MH (feet): _____

Depth at Main (feet): _____ Depth at Property Line (feet): _____

Depth at service end (feet): _____ (NA) if no service

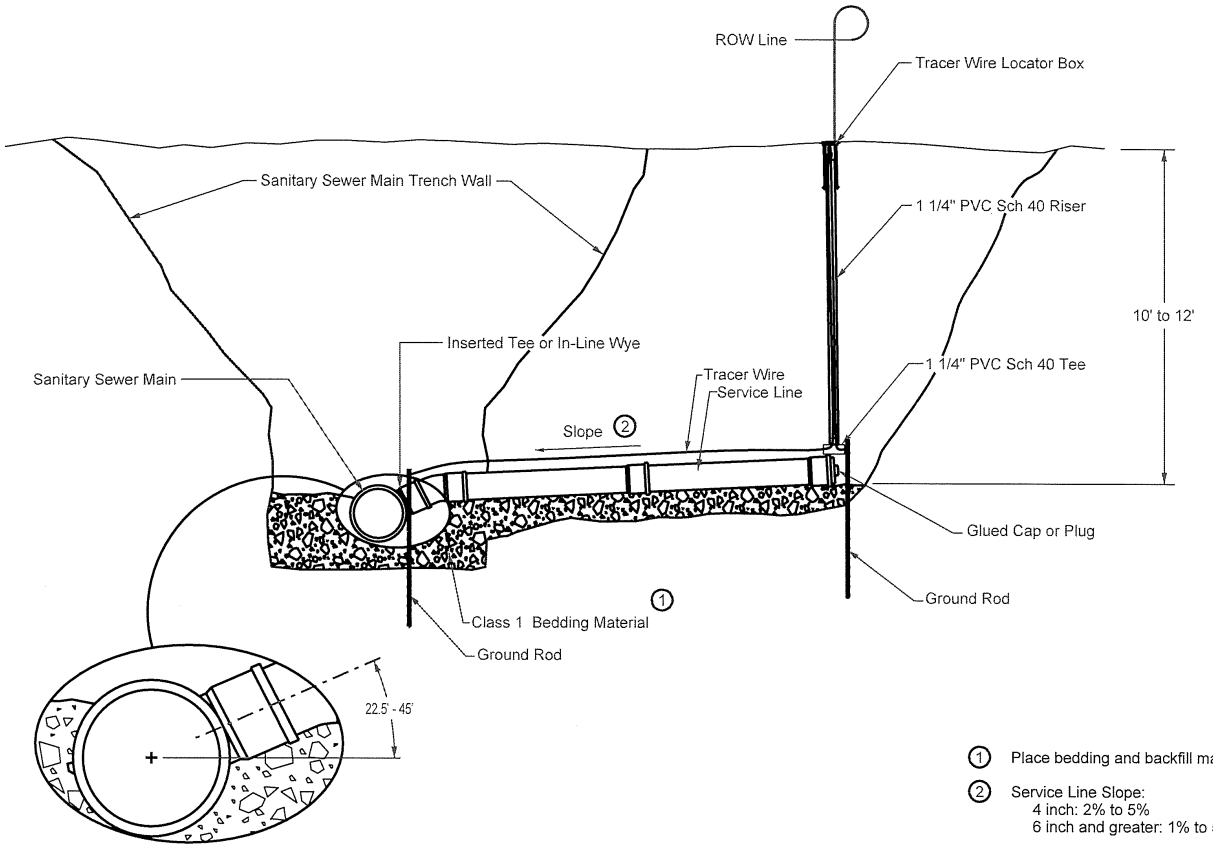
Indicate North:

○ ----------○
Upstream Downstream
MH# _____ MH# _____

Station: _____ Station: _____

Wye Station: _____
Service end Station: _____
Service Offset Direction/Distance (feet): _____

Inspector: _____
Department of Public Works
Engineering Division



(1) Place bedding and backfill material as required for sewer main.

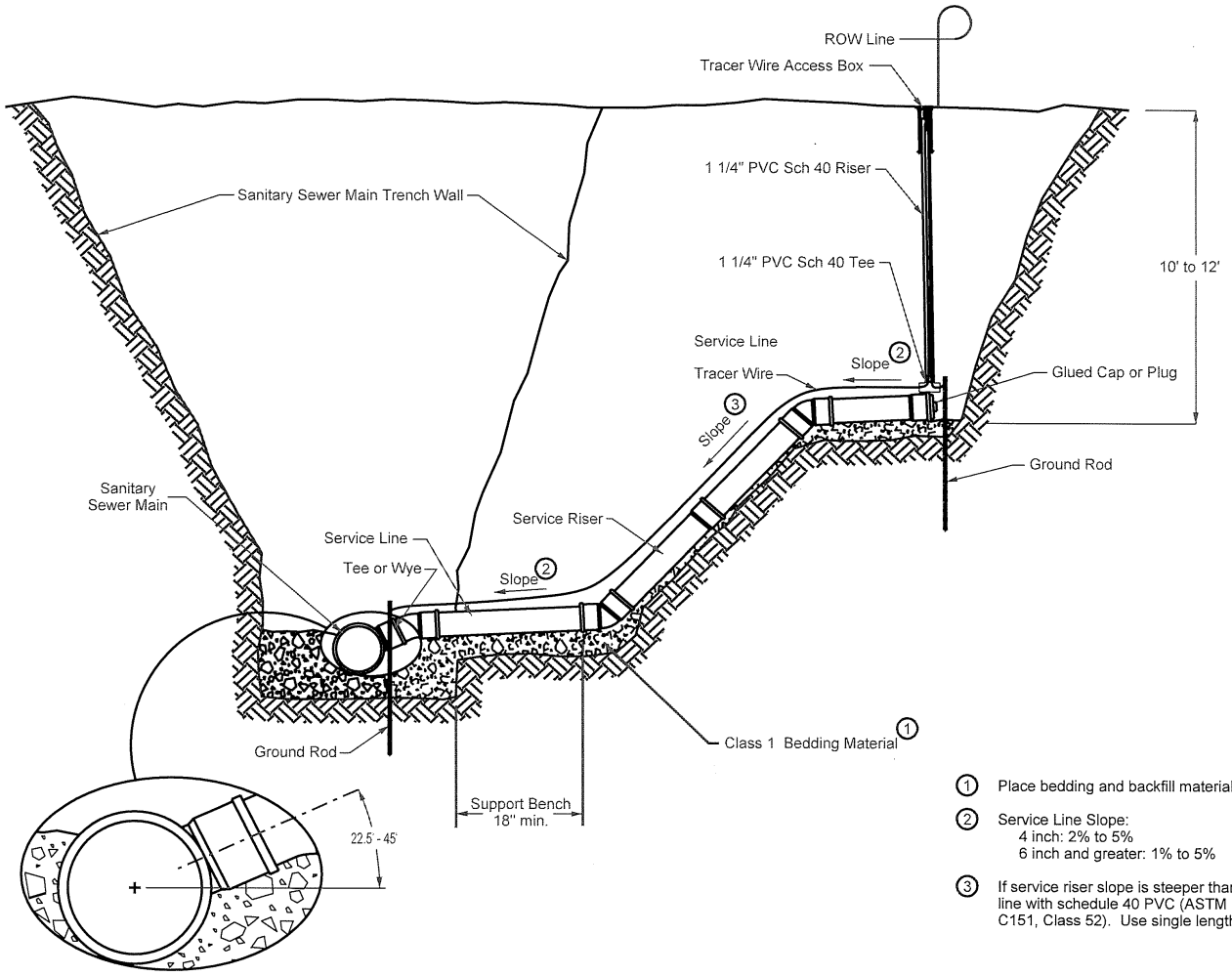
(2) Service Line Slope:
4 inch: 2% to 5%
6 inch and greater: 1% to 5%

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER SERVICE DETAIL

DATE: 05/20/19

MP-1



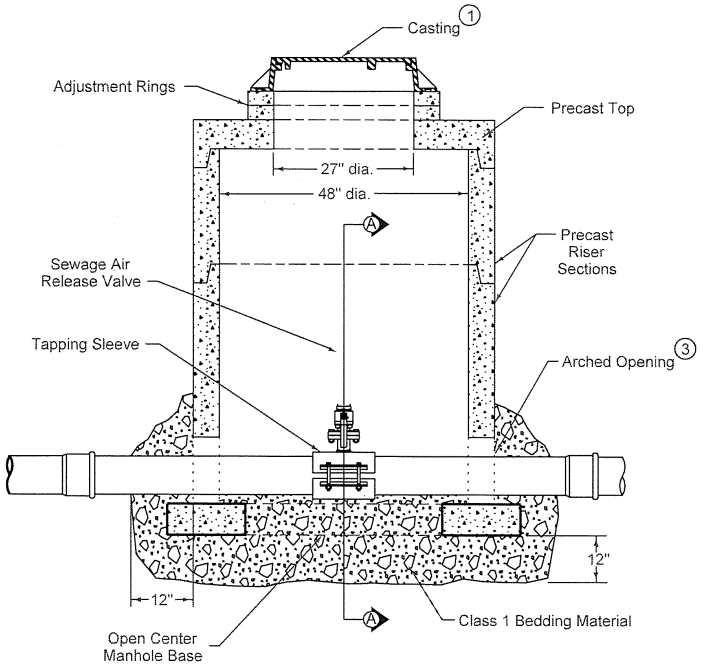
1. Place bedding and backfill material as required for sewer main.
2. Service Line Slope:
   4 inch: 2% to 5%
   6 inch and greater: 1% to 5%
3. If service riser slope is steeper than 1:1, construct riser of entire service line with schedule 40 PVC (ASTM D 1785) or ductile iron (AWWA C151, Class 52). Use single length of pipe for riser, if possible.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

DATE: 05/20/19

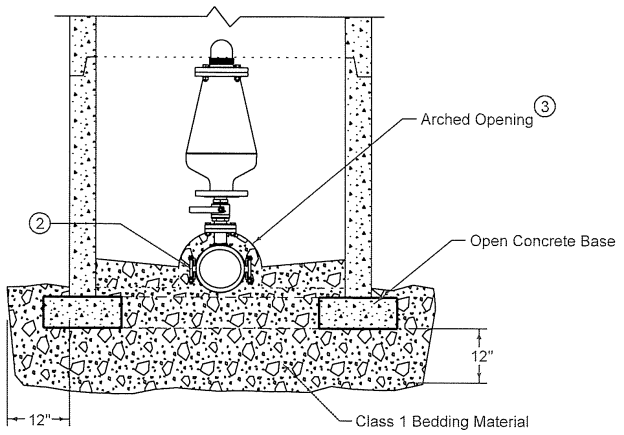
TYPICAL SANITARY SEWER SERVICE WITH RISER DETAIL

MP-2



TYPICAL SECTION

1. Water Tight Casting.
2. Place bedding material to springline of pipe.
3. Prevent riser from bearing on pipe by providing an arched opening with a diameter up to 6 inches larger than pipe diameter.

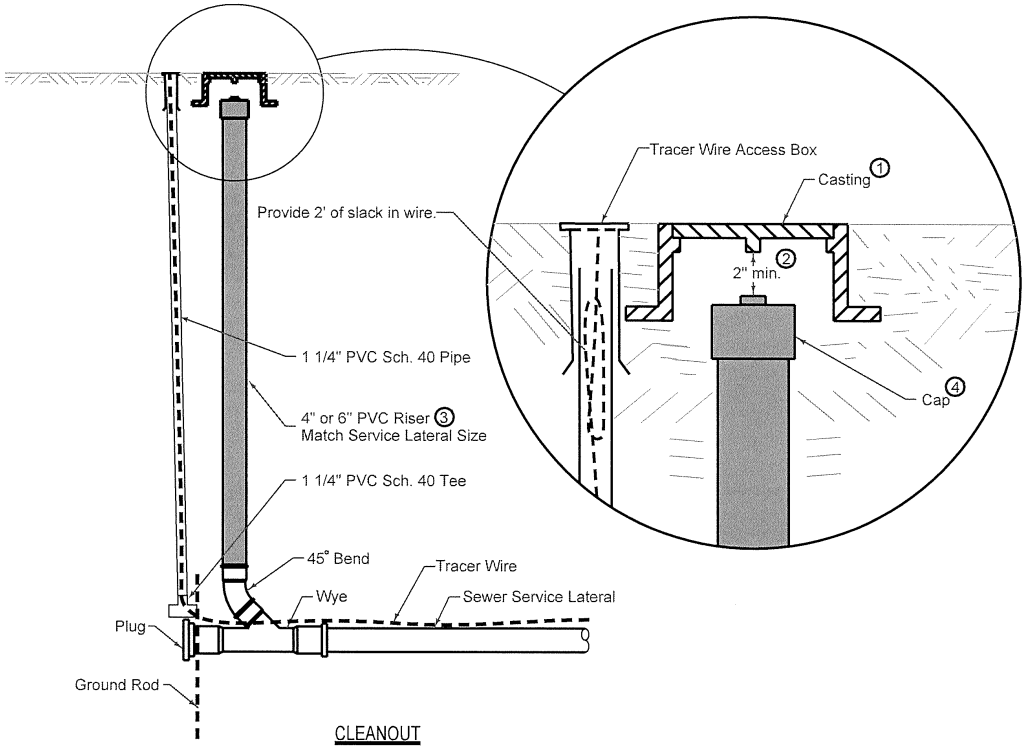


SECTION A-A

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

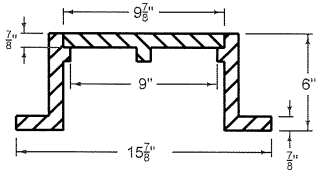
TYPICAL AIR RELEASE/COMBINATION VALVE MANHOLE DETAIL

MP-3



CLEANOUT

1. Standard duty casting. Mark lid with "Sanitary" or "Sanitary C.O." Casting will be provided in all hard surfaced areas.
2. Do not allow casting to bear on top of riser pipe.
3. 4-inch or 6-inch PVC Service Pipe
4. Threaded PVC cap or iron body ferrule with brass screw plug



CASTING 1

(Dimensions are nominal)

the City of Marshalltown

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SERVICE LINE CLEANOUT DETAIL

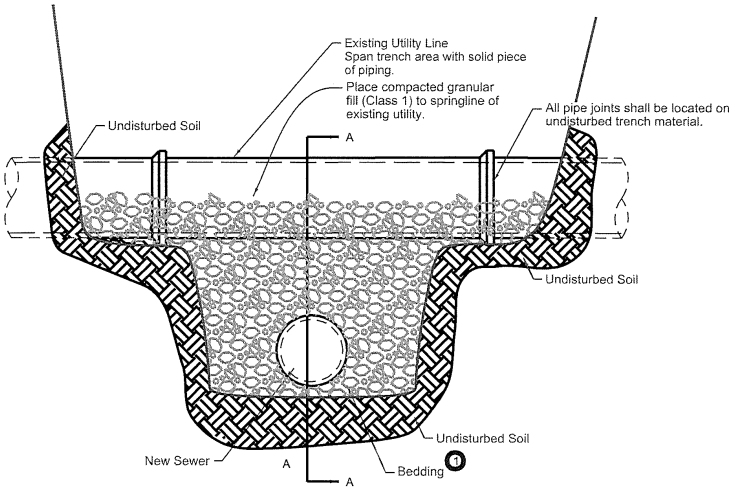
DATE: 05/20/19

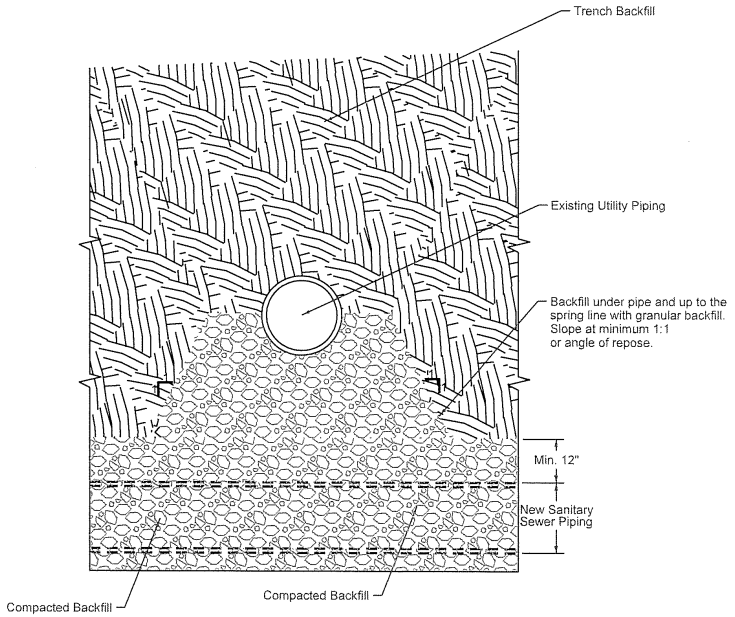
MP-4

The Contractor may, at their option, use flowable mortar to support the existing utility line (sewer lines, water lines, gas lines, etc.) in place of the compacted backfill. Flowwable fill will be placed in same configuration as granular backfill or as directed by the Engineer.

Allow flowable mortar fill to cure a minimum of 24 hours before placing backfill material.

① Bedding shall comply with Class 1 gradation. Material shall be placed in lifts not exceeding 12-inches and compacted to 95% Standard proctor density. Care shall be taken not to displace either pipe during backfill.





SECTION A-A

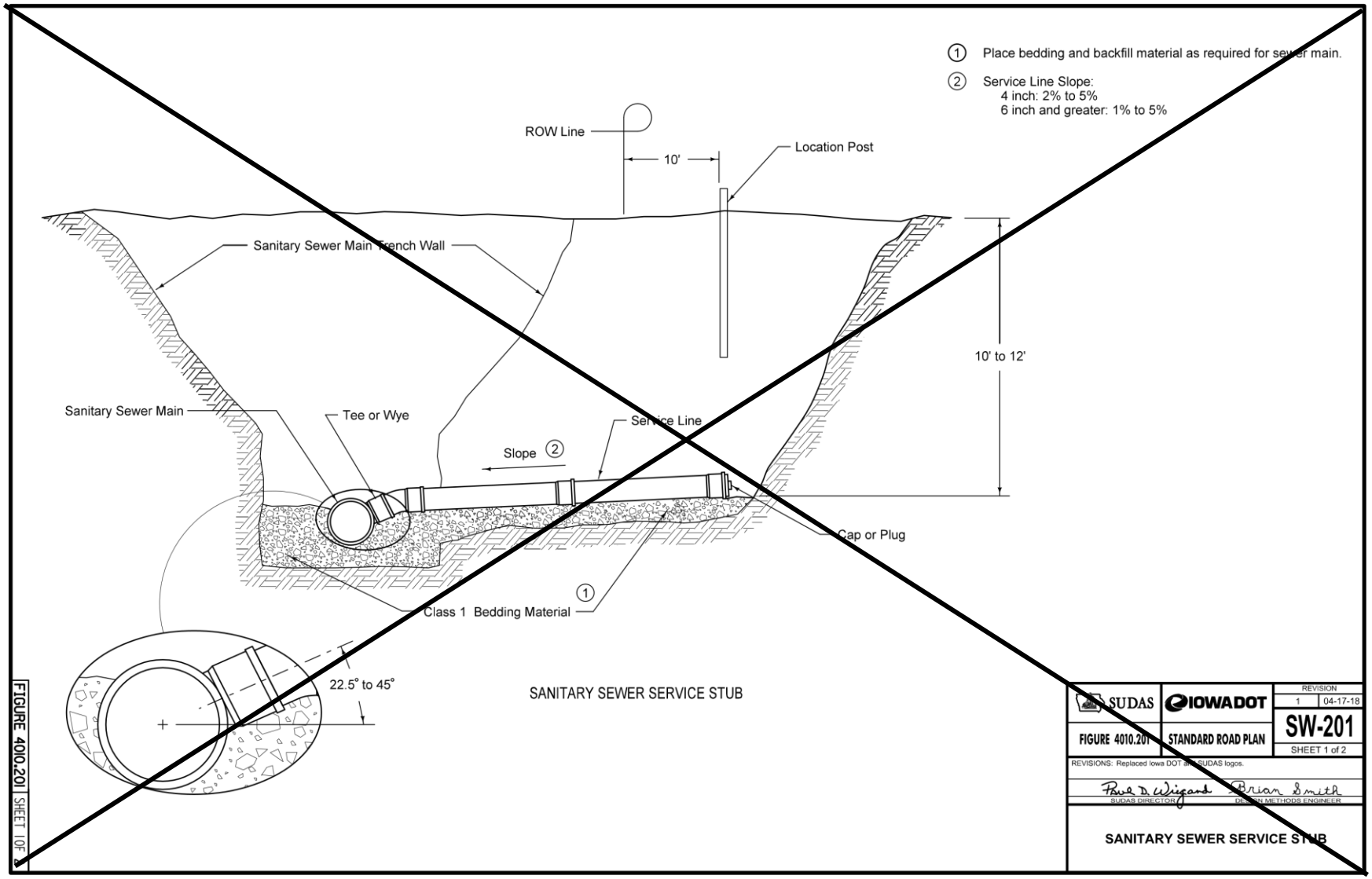
the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER UTILITY CROSSING DETAILS

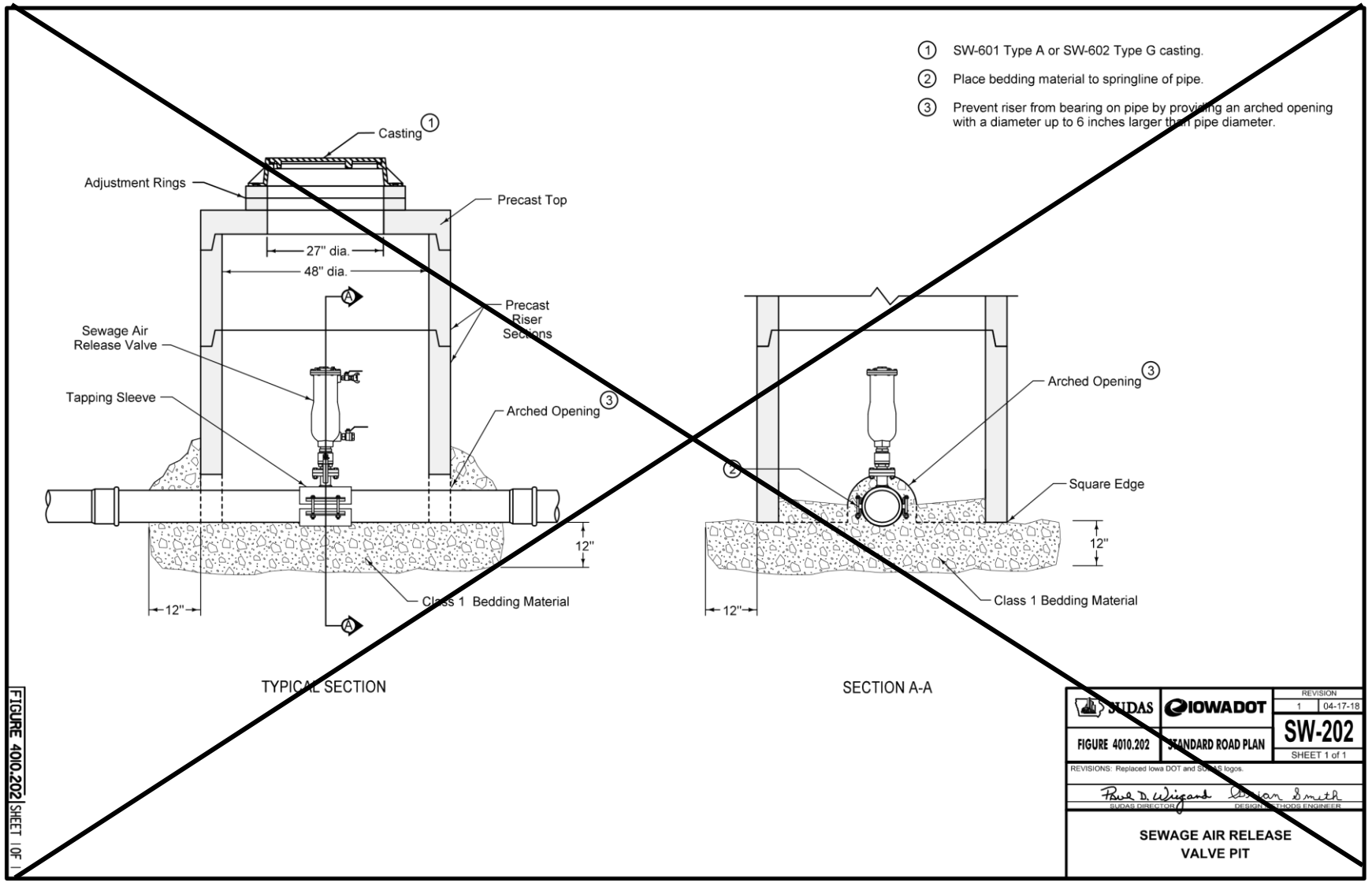
DATE: 05/20/19

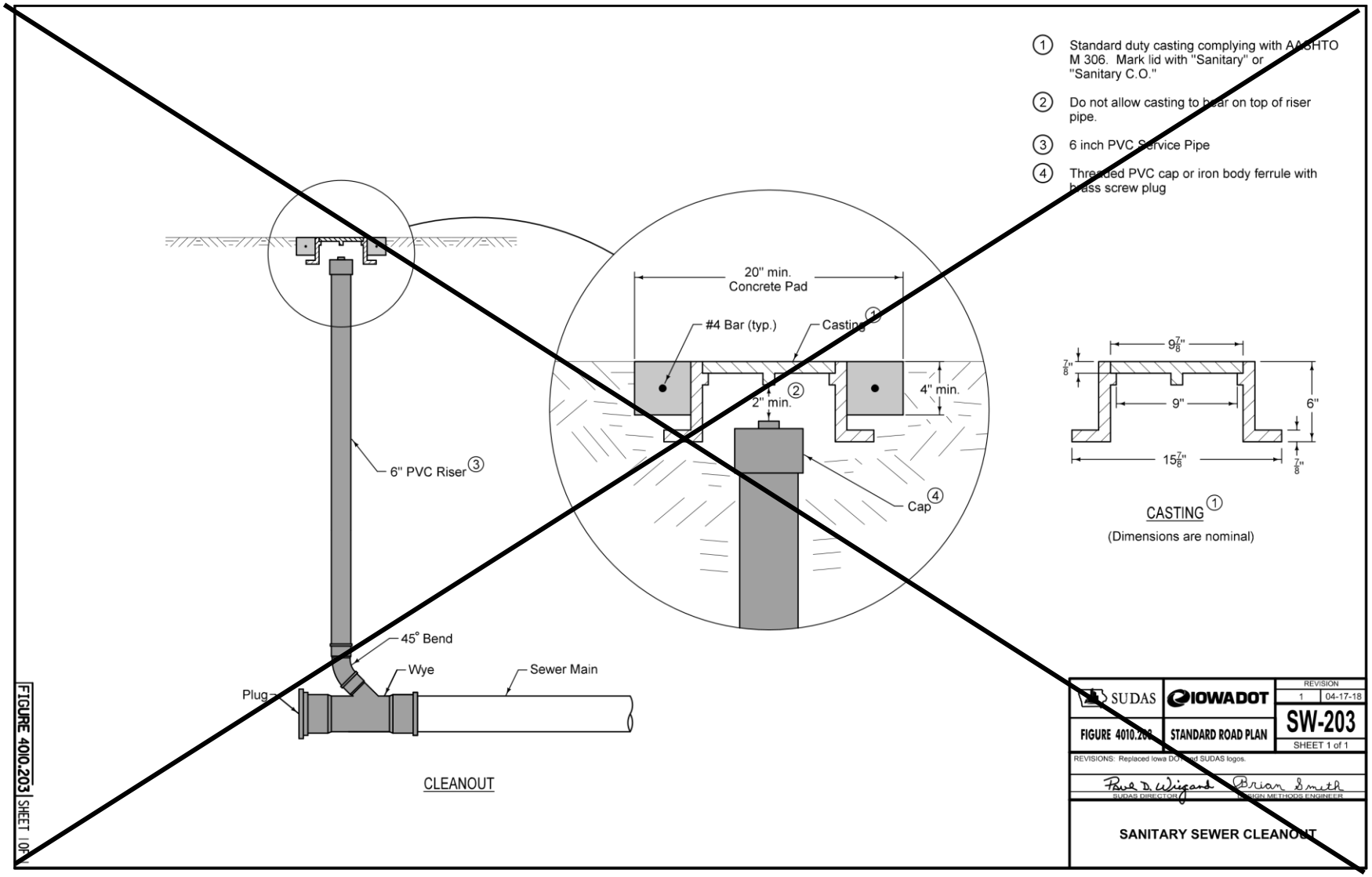
MP-8

MR-5 TYPICAL STREET
UTILITY LAYOUT
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA
5 OF 5
PUBLIC WORKS DEPARTMENT 24 NORTH CENTER STREET
MARSHALLTOWN, IOWA 50158 (641) 754-5724
City of Marshalltown
TYPICAL STREET UTILITY SECTION DETAIL
NO SCALE
STREET LIGHTING
MIN. 5' - MAX. PROPERTY LINE ELECTRICAL
ROW LINE
3'-5'
MAX. 5' CABLE TV
ELECTRICAL LINES
CABLE TELEVISION LINES
STORM SEWER LINES AND STRUCTURES
UNDERDRAINS
10' MIN. WATERMAIN SEPARATION
SANITARY SEWER LINES AND MANHOLES
MAX. 5' TELEPHONE
WATER LINES AND VALVES
ROW LINE
MIN. 5' - MAX. PROPERTY LINE GAS
FIRE HYDRANTS
GAS LINES
TELEPHONE LINES


1 Place bedding and backfill material as required for sewer main.
2 Service Line Slope:
4 inch: 2% to 5%
6 inch and greater: 1% to 5%
ROW Line
10'
Location Post
Sanitary Sewer Main Trench Wall
10' to 12'
Sanitary Sewer Main
Tee or Wye
Service Line
Slope 2
Cap or Plug
1
Class 1 Bedding Material
22.5° to 45°
SANITARY SEWER SERVICE STUB
FIGURE 4010.201 SHEET 1OF 2
SUDAS
IOWA DOT
REVISION
1 04-17-18
FIGURE 4010.201
STANDARD ROAD PLAN
SW-201
SHEET 1 of 2
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SANITARY SEWER SERVICE STUB

SUDAS
IOWA DOT
STANDARD ROAD PLAN
FIGURE 4010.201
SW-201
SHEET 2 of 2
REVISION
1 04-17-18
REVISIONS - Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
SUDAS TECHNICAL ENGINEER
SANITARY SEWER SERVICE STUB
1 Place bedding and backfill material as required for sewer main
2 Service Line Slope:
4 inch: 2% to 5%
6 inch and greater: 1% to 5%
3 If service riser slope is steeper than 1:1 construct riser of entire service line with schedule 40 PVC (ASTM D 1785) or ductile iron (AWWA C151, Class 52). Use single length of pipe for riser, if possible
10' to 12'
Location Post
10'
ROW Line
Cap or Plug
Slope 2
Service Line
Slope 3
Class 1 Bedding Material 1
Service Riser
Slope 2
Support Bench 18" min.
Service Line
Tee or Wye
Sanitary Sewer Main Trench Wall
Sanitary Sewer Main
22 5° to 45°
SANITARY SEWER SERVICE STUB WITH RISER
FIGURE 4010.201 SHEET 2 OF 2


1 SW-601 Type A or SW-602 Type G casting.
2 Place bedding material to springline of pipe.
3 Prevent riser from bearing on pipe by providing an arched opening with a diameter up to 6 inches larger than pipe diameter.
Casting 1
Adjustment Rings
Precast Top
27" dia.
48" dia.
Precast Riser Sections
Sewage Air Release Valve
Tapping Sleeve
Arched Opening 3
12"
12"
Class 1 Bedding Material
A
TYPICAL SECTION
Arched Opening 3
2
Square Edge
12"
12"
Class 1 Bedding Material
SECTION A-A
SUDAS
IOWA DOT
REVISION
1 04-17-18
FIGURE 4010.202
STANDARD ROAD PLAN
SW-202
SHEET 1 of 1
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SEWAGE AIR RELEASE VALVE PIT
FIGURE 4010.202 SHEET 1 OF 1


1 Standard duty casting complying with AASHTO M 306. Mark lid with "Sanitary" or "Sanitary C.O."
2 Do not allow casting to bear on top of riser pipe.
3 6 inch PVC Service Pipe
4 Threaded PVC cap or iron body ferrule with brass screw plug
20" min.
Concrete Pad
#4 Bar (typ.)
Casting 1
2" min. 2
4" min.
6" PVC Riser 3
Cap 4
45° Bend
Wye
Sewer Main
Plug
CLEANOUT
9 7/8"
7/8"
9"
6"
15 7/8"
7/8"
CASTING 1
(Dimensions are nominal)
SUDAS
IOWA DOT
REVISION
1 04-17-18
FIGURE 4010.203
STANDARD ROAD PLAN
SW-203
SHEET 1 of 1
REVISIONS: Replaced Iowa DOT and SUDAS logos.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
SANITARY SEWER CLEANOUT
FIGURE 4010.203 SHEET 1 OF 1

SECTION 04020 - STORM SEWERS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.09 (ADD) ACCEPTANCE CHECKLIST & MAINTENANCE BOND

Prior to final acceptance of the work, the contractor shall file with the City Clerk of the City of Marshalltown a maintenance bond guaranteeing suitable repairs of any defects or failures due to deficiencies in materials or inadequacies in workmanship for a period of 4 years for all improvements following completion of construction. The bond shall be for a sum equal to the total amount of the project. The contractor shall also file with the City Engineer all other required acceptance checklist items including testing/inspection forms, lateral construction forms, as-built drawings, construction costs and engineering certificate of completion forms. The acceptance checklist and warranty bond form are provided at end of section.

3.02 PIPE INSTALLATION

A. General:

8. (ADD) All lift holes in the pipe shall be filled with concrete.

9. (ADD) Protect utilities crossing the sewer main trench.

B. Trenched:

7. (ADD) No more than 300-feet of trench shall be left open at any time. Open trenches shall be properly marked and/or attended. Trenches shall be closed at the end of each day.

3.07 CONFLICTS

A. Horizontal Separation of Gravity Sewers from Water Mains:

2. When it is impossible to obtain the required horizontal clearance of 3 feet and a vertical clearance of 18 inches between sewers and water mains, the sewers must be constructed of water main materials meeting the requirements of Section (DELETE) ~~5010, 2.01~~ (ADD) 4010, 2.02. However, provide a linear separation of at least 2 feet.

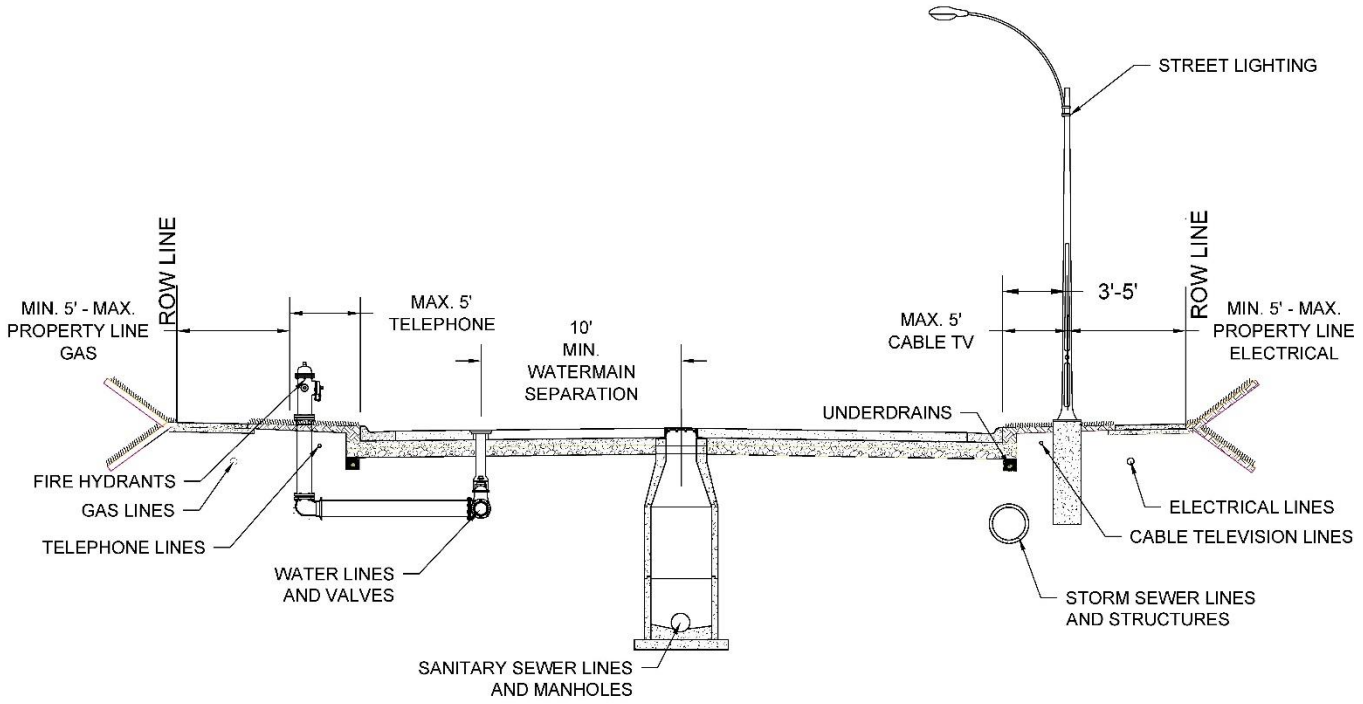
B. Separation of Sewer Force Mains from Water Mains: Separate storm sewer force mains and water mains by a horizontal distance of at least 10 feet unless:

1. The force main is constructed of water main materials meeting a minimum pressure rating of 150 psi and the requirements of (DELETE) ~~5010, 2.01~~ (ADD) 4010, 2.02. and

3.11 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following detail.

1. MR-5 Typical Street Utility Section Detail



TYPICAL STREET UTILITY SECTION DETAIL

NO SCALE

MR-5 TYPICAL STREET UTILITY LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

5 OF 5

SECTION 4030 - PIPE CULVERTS

PART 1 – GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 2 - PRODUCTS

2.01 PIPE CULVERTS

B. Entrance Pipe Culverts: The following pipe culvert types described in Section 4020 may be used within right-of-way as entrance pipe culverts:

5. Corrugated Metal Pipe (CMP). (ADD) Use of this pipe material requires specific approval by the Engineer.
6. Spiral Rib Pipe. (ADD) Use of this pipe material requires specific approval by the Engineer.
7. Coated Corrugated Metal Pipe. (ADD) Use of this pipe material requires specific approval by the Engineer.
8. Corrugated Metal Arch Pipe. (ADD) Use of this pipe material requires specific approval by the Engineer.

C. Structural Plate Culverts: Structural plate culverts may be used in the right-of-way as roadway or entrance pipe culverts.

6. (ADD) Use of this pipe material requires specific approval by the Engineer.

D. Aluminum Structural Plate Culverts: Aluminum structural plate culverts may be used in the right-of-way as roadway or entrance pipe culverts.

9. (ADD) Use of this pipe material requires specific approval by the Engineer.

PART 3 - EXECUTION

3.04 (ADD) IOWA DOT STANDARD ROAD PLANS

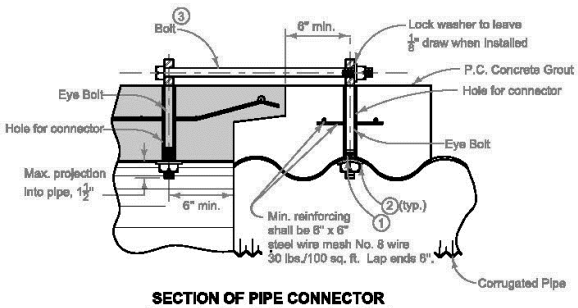
Add the following details:

A. DR-121 Connected Pipe Joints

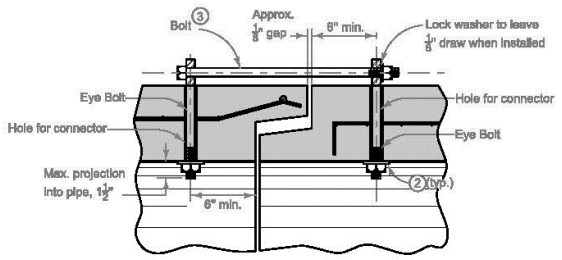
B. DR-203 Metal Pipe Aprons and Beveled Ends

C. DR-211 Metal Safety Slope Apron 6:1 Slope

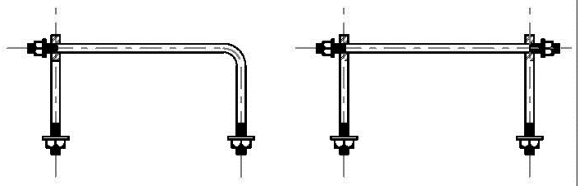
D. DR-212 Beveled Pipe and Guard



SECTION OF PIPE CONNECTOR
(Concrete Pipe to Corrugated Pipe)

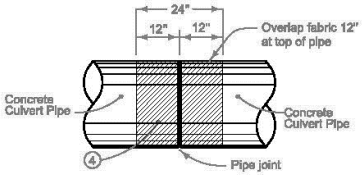


SECTION OF PIPE CONNECTOR
(Concrete Pipe to Concrete Pipe)



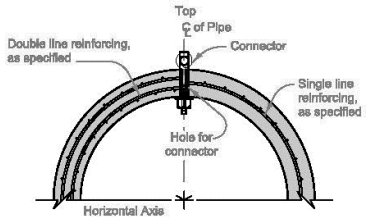
ONE BEND END **THREADED AT BOTH ENDS**

OPTIONAL BOLTS/CONNECTORS

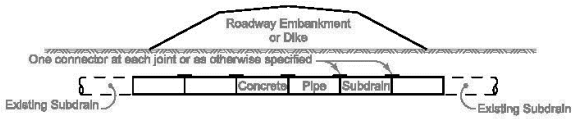


PIPE JOINT WRAPPING

PIPE SIZE (in)	CONNECTOR AND BOLT SIZE (in.)	HOLE FOR CONNECTOR (in.)
12 to 27	5/8	7/8
30 to 60	3/4	1.0
66 to 132	1.0	1 1/4



TYPICAL SECTION
(Non-Sealed Joint)



TYPICAL INSTALLATION

TYPE 1 CONNECTION

Wrap all joints on concrete roadway pipe culverts.

Use Type 3 Connections on all culvert pipes, unless specified otherwise. Refer to Materials I.M. 445.01 for Connector requirements.

Minimum 2 threads showing at all threaded ends.

Connections not required on pipe sections installed by trenchless methods.

For belled concrete pipe joints, connectors may be installed on the inside of the pipe.

TYPE 1

One connector at the top of the pipe section.

TYPE 2 (Sealed Joint)

Two connectors near the top of the pipe section. For details of reinforcement, refer to AASHTO M 170 for the class of pipe required. Refer to Materials I.M. 491.09 for seal requirements.

TYPE 3 (Non - Sealed Joint)

Two connectors near the top of the pipe section. For details of reinforcement, refer to AASHTO M 170 for the class of pipe required.

① If holes are field drilled, place a ribbon of butyl sealant around bolts before placing 3 in. x 3 in. x 1/4 in. plate on bolts through corrugated metal pipe and tightening nuts.

② 1 3/4 inch round x 9/64 inch thick washer or 3 in. x 3 in. x 1/4 in. square plate (shaped to pipe radius).

③ Connectors with One Bend End and Bell End spacers allowed per Materials I.M. 451. Refer to Optional Bolts detail.

④ Engineering fabric for embankment erosion control.

Possible Tabulations:
104-3
104-5B

IOWADOT

REVISION
3 10-17-17

STANDARD ROAD PLAN

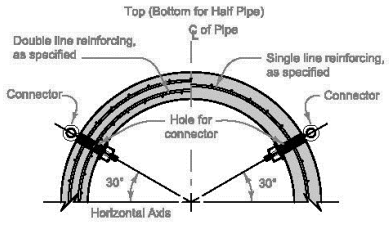
DR-121

SHEET 1 of 2

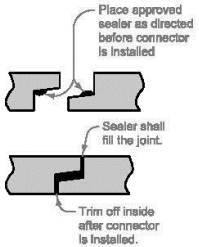
REVISIONS: Added 104-5B to Possible Tabulations. Added Type 3 connection to storm sewer outlet.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

CONNECTED PIPE JOINTS

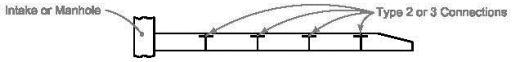


TYPICAL SECTION
TYPE 2 CONNECTION
TYPE 3 CONNECTION

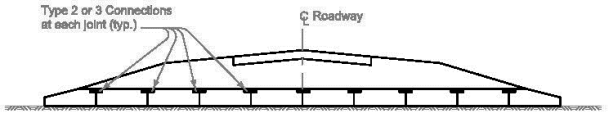


SEALED JOINT
TYPE 2 CONNECTION

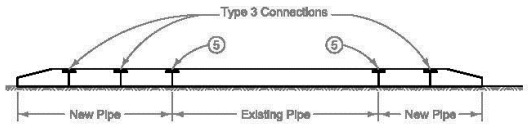
⑤ On culvert extensions, connect all new joints including the joint between the old and new culvert pipe. Holes may need to be drilled into existing pipes.



TYPICAL INSTALLATION
STORM SEWER OUTLET - TYPE 2 OR TYPE 3 CONNECTION



TYPICAL INSTALLATION
NEW CONSTRUCTION - TYPE 2 or 3 CONNECTION



TYPICAL INSTALLATION
PIPE EXTENSION - TYPE 3 CONNECTION

TYPE 2 AND TYPE 3 CONNECTIONS

IOWA DOT

REVISION	
3	10-17-17

STANDARD ROAD PLAN

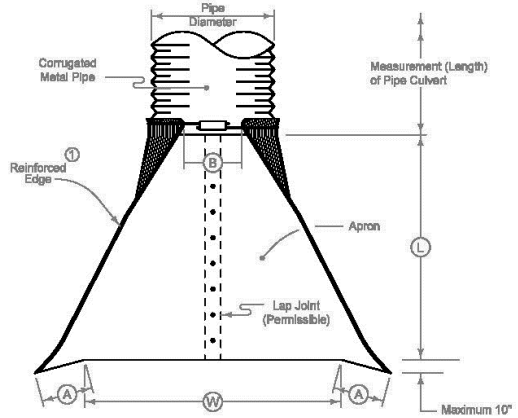
DR-121

SHEET 2 of 2

REVISIONS: Added 104-5B to Possible Tabulations. Added Type 3 connection to storm sewer outlet.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

CONNECTED PIPE JOINTS



PLAN VIEW

DIMENSIONS					
PIPE DIAM.	A (±1")	B MAX.	H (±1")	L (±1½")	W (±2")
6"	4½"	1"	3"	8½"	12"
8"	5½"	3"	4"	14½"	16"
10"	7½"	6"	6"	21"	24"
12"	4½"	6"	6"	21"	24"
15"	6"	6"	6"	26"	30"
18"	7"	9"	6"	31"	36"
21"	8½"	11"	6"	36"	42"
24"	9½"	12"	6"	42"	48"
30"	12"	15"	7½"	52½"	60"
36"	14"	18"	9"	63"	72"
42"	16"	21"	10½"	73½"	84"
48"	18"	27"	12"	84"	90"
54"	18"	30"	12"	84"	102"
60"	18"	33"	12"	87"	114"
66"	18"	36"	12"	87"	120"
72"	18"	39"	12"	87"	126"
78"	18"	42"	12"	87"	132"
84"	18"	45"	12"	87"	138"
90"	24"	37"	11"	87"	144"
96"	25"	35"	12"	87"	150"

Install aprons and hardware fabricated from galvanized steel complying with Section 4141 of the Standard Specifications. Alternate design details may be submitted to the Engineer for approval.

Aprons may be attached to culvert pipe as follows:

A. If normal culvert is of circumferential type, use an approved bolt or clamp to fasten directly to culvert.

B. If normal culvert is of helical corrugation type:
   1. Use an approved sizing ring securely fastened to inside diameter of apron to connect the culvert pipe using special dimple band connector.
   2. "Dimple" bands are not allowed when a positive joint is specified.

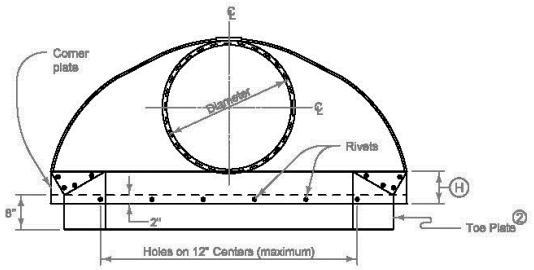
Refer to Materials I.M. 441 for approved coupling devices.

Repair, to the Engineer's satisfaction, breaks or damage to the coating that occur during handling or installation.

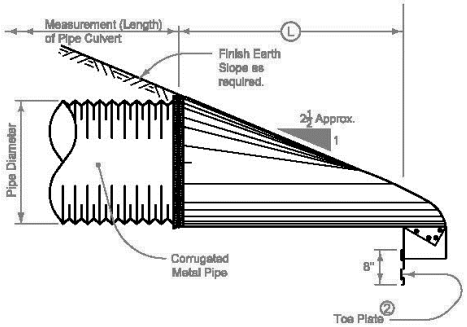
Price bid for "Aprons, Metal" is full compensation for fabrication and installation of the metal apron.

① On sizes 60 inches and larger, the reinforced edge should be supplemental with a galvanized stiffener angle attached with bolts.

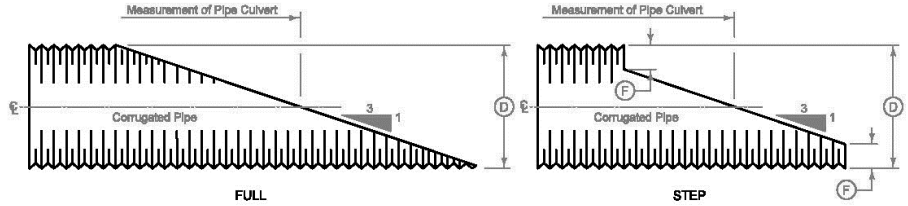
② Install Galvanized Toe Plate (same gage metal as apron) on all aprons 24 inch diameter and larger



END VIEW



SIDE VIEW



FULL STEP

BEVELED ENDS FOR CORRUGATED METAL PIPE

BEVEL 3:1	
Ⓓ	Ⓕ
54"	3"
60"	6"
66"	9"
72"	12"
78"	15"
84"	18"
90"	21"
96"	24"

When specifically required as part of detail project plans, ends of pipe culvert may be provided with beveled ends as shown.

Either Full Bevel or Step Bevel may be used unless one type is specified. The slope of the bevel is 3:1 unless specified otherwise.

Beveled ends, when required, are incidental to the price bid for the culvert.

Possible Contract Item:
Apron, Metal

Possible Tabulations:
104-3
104-5C

IOWA DOT

STANDARD ROAD PLAN

REVISION	
New	04-21-15

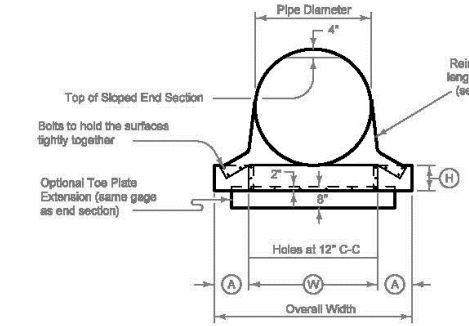
DR-203

SHEET 1 of 1

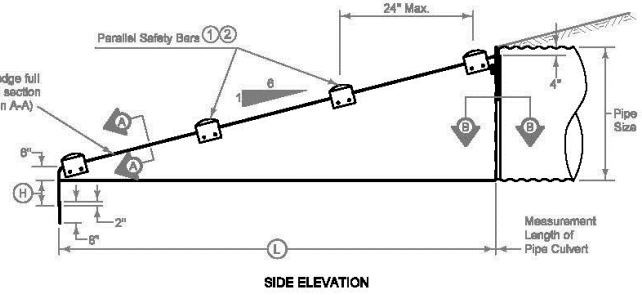
REVISIONS: New. Replaces RF-5.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

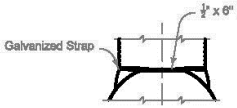
METAL PIPE APRONS AND BEVELED ENDS



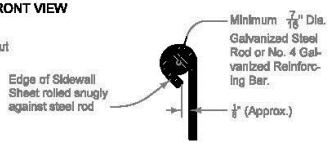
FRONT VIEW



SIDE ELEVATION

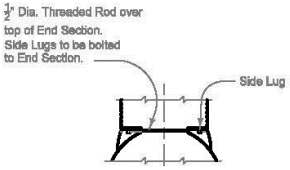


CONNECTOR
(15"-24" Dia.)

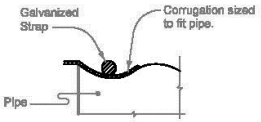


SECTION A-A

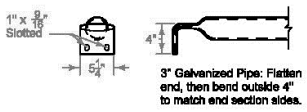
METAL END SECTIONS FOR CIRCULAR PIPES								
Pipe Dia. (In.)	Min. Thick.		Dimensions (Inches)				
	In.	Gage	A	H	W	Overall Width	L
15	.064	16	8	6	21	37	30
18	.064	16	8	6	24	40	48
21	.064	16	8	6	27	43	66
24	.064	16	8	6	30	46	84
30	.109	12	12	9	36	60	120
36	.109	12	12	9	42	66	156
42	.109	12	16	12	48	80	192
48	.109	12	16	12	54	86	228
54	.109	12	16	12	60	92	264
60	.109	12	16	12	66	98	300



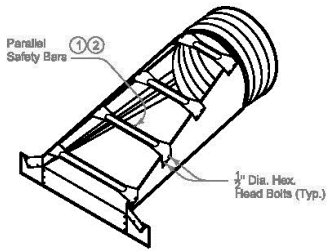
CONNECTOR
(30"-60" Dia.)



SECTION B-B



PARALLEL SAFETY BARS



PERSPECTIVE VIEW
OF APRON

Install aprons and hardware fabricated from galvanized steel complying with Section 4141 of the Standard Specifications. Alternate design details may be submitted to the Engineer for approval.

Apron may be attached to culvert pipe as follows:

A. If normal culvert is of circumferential corrugation type, use an approved bolt or clamp to fasten apron directly to apron.
B. If normal culvert is of helical corrugation type:
   1. Use an approved sizing ring securely fastened to inside diameter to apron to connect to the culvert pipe using special dimple band connector.
   2. "Dimple" bands will not be allowed when a positive joint is specified.

Refer to Materials I.M. 441 for approved coupling devices.

Repair, to the Engineer's satisfaction, breaks or damage to the coating that occur during handling or installation.

Price bid for "Aprons, Safety Slope" is full compensation for fabrication and installation of the apron.

(1) Number of bars required will vary depending on the length of the end section.

(2) Parallel safety bars are required for pipes 30" diameter and larger. For pipe 24" diameter and smaller, parallel safety bars will be required only when specified in the project plans.

Possible Contract Item:
Aprons, Safety Slope

Possible Tabulation:
104-3

IOWADOT

REVISION	
New	04-21-15

STANDARD ROAD PLAN

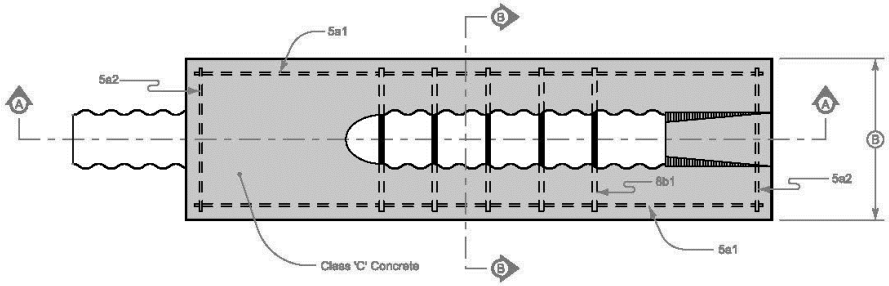
DR-211

SHEET 1 of 1

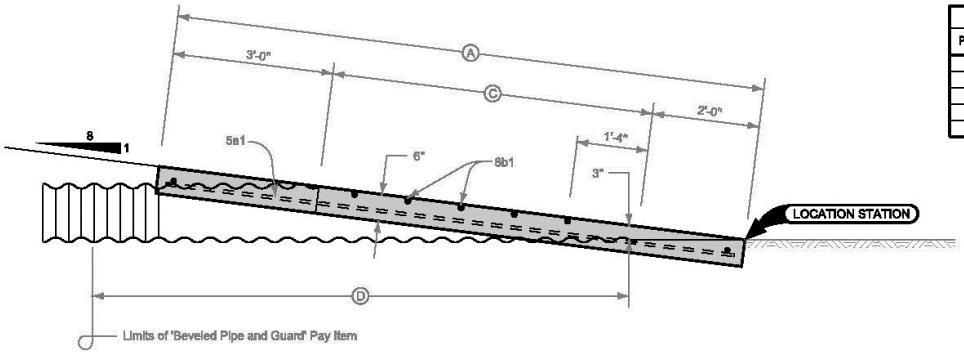
REVISIONS: New. Replaces RF-44

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

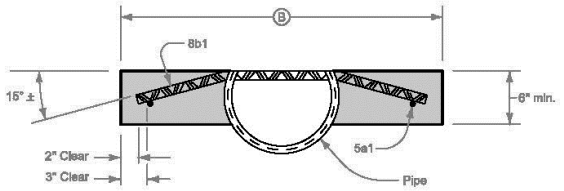
METAL SAFETY SLOPE APRON
6:1 SLOPE



PLAN



SECTION A-A



SECTION B-B

TABLE OF DIMENSIONS				
PIPE SIZE	Ⓐ	Ⓑ	Ⓒ	Ⓓ
12"	11'-0"	3'-0"	6'-0"	10'-0"
15"	13'-2"	3'-3"	8'-2"	12'-0"
18"	15'-4"	3'-6"	10'-4"	14'-0"
21"	17'-6"	3'-9"	12'-6"	16'-0"
24"	19'-8"	4'-0"	14'-8"	18'-0"

REINFORCING BAR LIST									
PIPE SIZE	BAR	LOCATION	SHAPE	COUNT	LENGTH	LIN. FT.	WEIGHT	TOTAL WEIGHT	SPACING
12"	5a1	Base		2	10'-8"	21.4	22.3	85.8	See Detail
	5a2	Base		2	2'-8"	5.4	5.8		See Detail
	8b1	Base		5	2'-10"	14.2	37.9		12"
15"	5a1	Base		2	12'-10"	25.7	26.8	90.7	See Detail
	5a2	Base		2	2'-11"	5.9	6.2		See Detail
	8b1	Base		7	3'-1"	21.6	57.7		12"
18"	5a1	Base		2	15'-0"	30.0	31.3	118.1	See Detail
	5a2	Base		2	3'-2"	6.4	6.7		See Detail
	8b1	Base		9	3'-4"	30.0	80.1		12"
21"	5a1	Base		2	17'-2"	34.4	35.9	148.6	See Detail
	5a2	Base		2	3'-5"	6.9	7.2		See Detail
	8b1	Base		11	3'-7"	39.5	105.5		12"
24"	5a1	Base		2	19'-4"	38.7	40.4	161.3	See Detail
	5a2	Base		2	3'-8"	7.4	7.7		See Detail
	8b1	Base		13	3'-10"	49.9	133.2		12"

For reinforcing steel used in construction of "Beveled Pipe and Guard", use deformed bars meeting the requirements of Article 4151.03 of the Standard Specifications and hot-dip galvanized according to ASTM A123.

Use Class 'C' Concrete in the construction of Beveled Pipe and Guard.

Cut the pipe to fit the foreslope. Cut slots into the pipe for placement of the No. 8 bars. After the foreslope has been placed, fit the No. 8 bars into the slots cut in the pipe so they will be in proper position when the concrete collar is poured.

Price bid for "Beveled Pipe and Guard," each, is full compensation for furnishing all materials and constructing the Beveled Pipe and Guard.

Special Note:

A silt fence ditch check is required immediately upstream from the inlet. Refer to EC-201 for construction details.

Possible Contract Item:
Beveled Pipe and Guard

Possible Tabulations:
104-3
112-8

IOWADOT

STANDARD ROAD PLAN

REVISION	
New	04-21-15

DR-212

SHEET 1 of 1

REVISIONS: New. Replaces RF-27.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

BEVELED PIPE AND GUARD

SECTION 4040 - SUBDRAINS AND FOOTING DRAIN COLLECTORS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 3 - EXECUTION

3.01 SUBDRAINS

A. Install Type 1 or Type 2 subdrain where specified in the contract documents. Comply with Figure 4040.231 (ADD), DR-301, and DR-303.

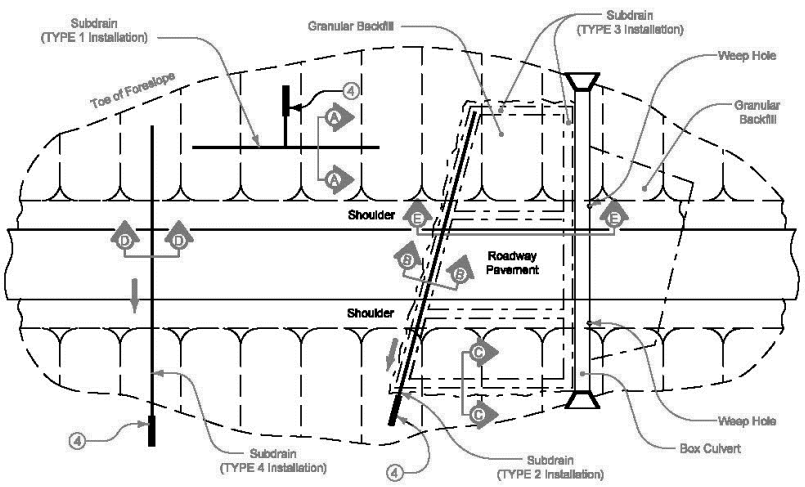
C. Provide outlets where specified in the contract documents.

3. (ADD) Comply with 4040.233 and DR-306 for outlets to grade.

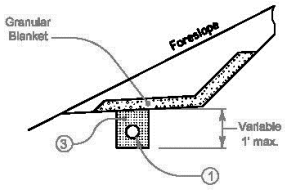
3.04 (ADD) IOWA DOT STANDARD ROAD PLANS

A. Add the following details:

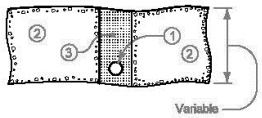
1. DR-301 Subdrains for Fill or Foundation Drainage (Standard)
2. DR-303 Subdrains (Longitudinal)
3. DR-306 Precast Concrete Headwall for Subdrain Outlets.



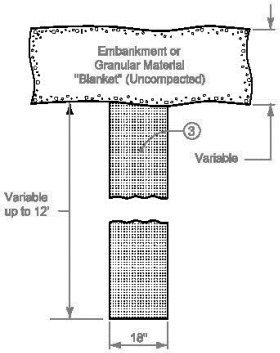
PLAN VIEW OF TYPICAL STANDARD SUBDRAIN INSTALLATIONS



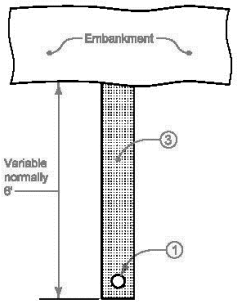
TYPE 1 INSTALLATION
BENCH DRAIN
SECTION A-A



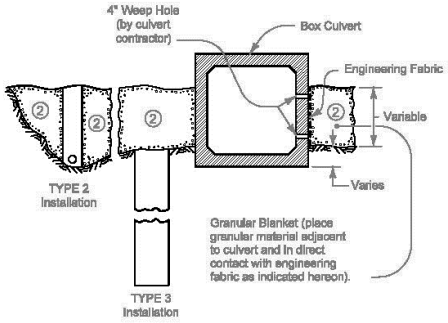
TYPE 2 INSTALLATION
SUBDRAIN
SECTION B-B



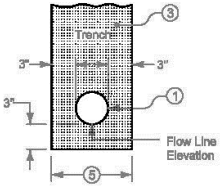
TYPE 3 INSTALLATION
TRENCH DRAIN
SECTION C-C



TYPE 4 INSTALLATION
SUBDRAIN
SECTION D-D



SECTION E-E
SUBSOIL DRAINAGE



TUBING PLACEMENT DETAIL
ALL TYPES

For specific information for individual locations, refer to the detail project plans, soils survey sheets, and tabulations of subdrains.

Dispose of material excavated from trenches for subdrain as directed by the Engineer. No extra compensation will be made for such disposal.

Cap blind ends of subdrains with a metal cap or by other methods approved by the Engineer. Install all perforated pipe with the perforations centered on flowline of the bottom side of the subdrain.

Place Granular Material for Blankets as indicated on the plans.

① Perforated Subdrain (Polyethylene Corrugated Tubing).

② Granular Material for Blanket (Uncompacted).

③ Porous Backfill (Uncompacted).

④ For Subdrain outlet construction details, see DR-305 and DR-306.

⑤ 10 inches for 4 inch subdrain; 12 inches for 6 inch subdrain.

Possible Contract Items:
- Standard Subdrain
- Trench Drain
- Granular Material for Blanket and Subdrain
- Subdrain Outlet (DR-305)
- Subdrain Outlet (DR-306)

Possible Tabulation:
- 104-5C

IOWA DOT

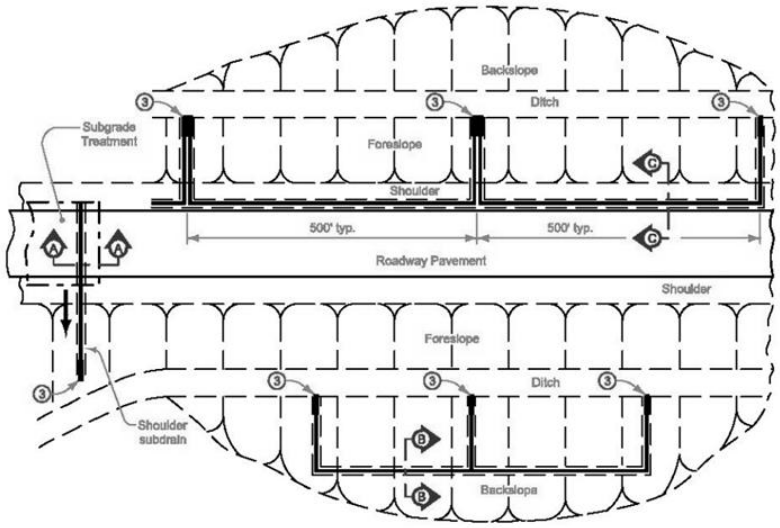
REVISION	
1	10-17-17

STANDARD ROAD PLAN — **DR-301** — SHEET 1 of 1

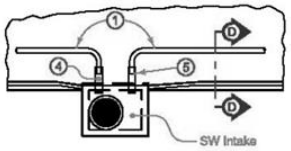
REVISIONS: Reference to the DR-304 have been changed to the DR-306.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

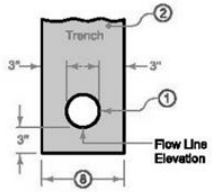
SUBDRAINS FOR FILL OR FOUNDATION DRAINAGE (STANDARD)



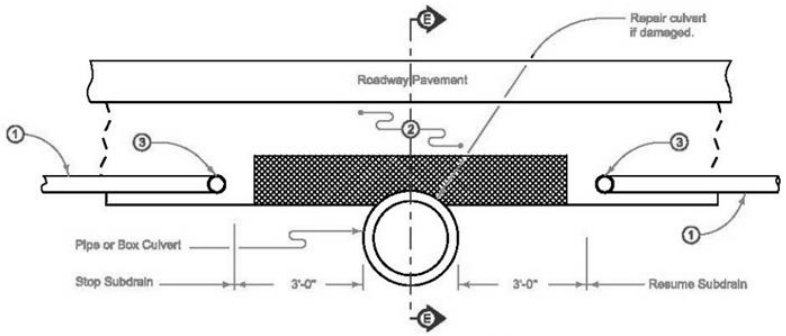
PLAN



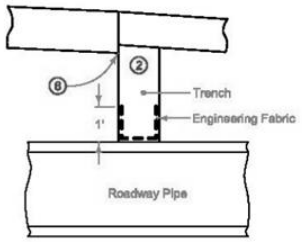
INTAKE OUTLET



TUBING PLACEMENT
ALL TYPES



TRENCH REPAIR AT PIPE CULVERT (7)



SECTION E-E

When culverts which are less than 1 foot below the trench bottom are encountered within a tabulated subdrain, stop the trench 3 feet from the culvert and resume 3 feet beyond the culvert.

On new construction projects, place the subdrain after the special backfill, if required, and prior to granular or paved shoulder material.

Except for backslope installations, if the Contractor's operations result in a trench, place and compact granular shoulder material in the trench to be level with the adjacent surface prior to opening lanes to traffic.

(1) Perforated Subdrain (Corrugated Polyethylene Tubing).

(2) Porous Backfill for Subdrain (compacted).

(3) Subdrain outlets. See DR-306.

(4) 2 foot section of corrugated metal pipe of diameter 2" larger than subdrain or 2 foot section of double-walled PE or PVC pipe of the same diameter as subdrain. Pipe will be paid for as "Subdrain Outlet (DR-303)".

(5) Connect PE or PVC outlet with an appropriate coupler. Connect CMP outlet one of two ways: (1) inside-fit reducer coupler (1 foot minimum fit inside CMP); or (2) insert 1 foot of the 4 inch subdrain into 6 inch CMP and fully seal entire opening with grout.

(6) Place porous backfill in direct contact with a minimum of 2 inches of pavement and continuous to shoulder material as per note 10 or 11.

(7) If the trench is inadvertently carried over the culvert, repair the trench as detailed on this sheet. If obstruction is 1 foot or more below trench bottom, carry subdrain line over in continuous alignment. No payment will be made for trench repair.

(8) 10 inches for 4 inch subdrain. 12 inches for 6 inch subdrain.

Possible Contract Items:
Subdrain, Longitudinal, (Backslope)
Subdrain, Longitudinal, (Shoulder)
Subdrain Outlet (DR-303)
Subdrain Outlet (DR-306)

Possible Tabulation:
104-9

IOWADOT

REVISION	
3	10-17-17

STANDARD ROAD PLAN

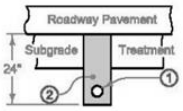
DR-303

SHEET 1 of 2

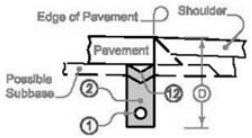
REVISIONS: Reference to the DR-304 have been changed to the DR-306.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

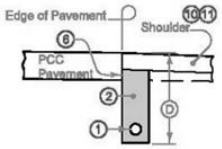
SUBDRAINS
(LONGITUDINAL)



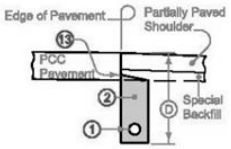
TYPE 5 INSTALLATION
SECTION A-A
Subgrade Treatment Subdrain



TYPE 6 INSTALLATION
SECTION C-C
For Drain Placement Prior to Subbase or Pavement Placement

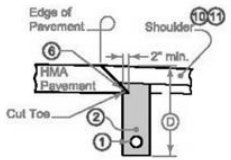


TYPE 7A INSTALLATION
SECTION C-C

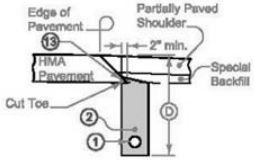


TYPE 7B INSTALLATION
SECTION C-C

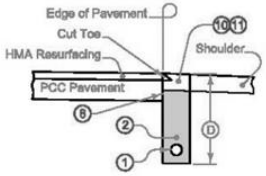
1. Perforated Subdrain (Corrugated Polyethylene Tubing).
2. Porous Backfill for Subdrain (compacted).
6. Place porous backfill in direct contact with a minimum of 2 inches of pavement and continuous to shoulder material as per note 11 or 12.
9. Install subdrain as cut proceeds.
10. On existing Granular or Earth Shoulders, replace with 4 inch minimum depth granular shoulder material.
11. On Paved Shoulders, refer to Section 2502 of the Standard Specifications for finishing shoulder.
12. Cut "V" notch just prior to subbase (if proposed) or pavement placement to assure uncontaminated contact.
13. Place top of subdrain trench at the bottom of pavement. Backfill trench so that a wedge of porous backfill has a minimum vertical contact of 2 inches with the pavement.



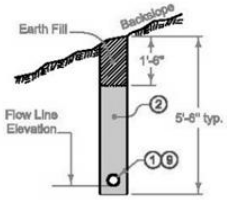
TYPE 8A INSTALLATION
SECTION C-C



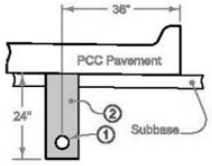
TYPE 8B INSTALLATION
SECTION C-C



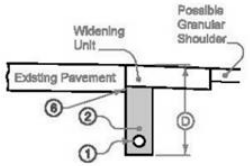
TYPE 9 INSTALLATION
SECTION C-C
Composite Pavement with Existing Shoulder



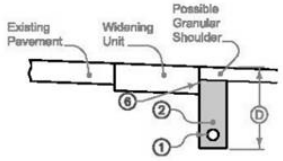
TYPE 11 INSTALLATION
SECTION B-B
Backslope



TYPE 12 INSTALLATION
SECTION D-D



TYPE 13 INSTALLATION
SECTION C-C
For New Widening Unit If Thinner than Existing Pavement



TYPE 14 INSTALLATION
SECTION C-C
For New Widening Unit If Thicker than Existing Pavement

IOWA DOT

REVISION	
3	10-17-17

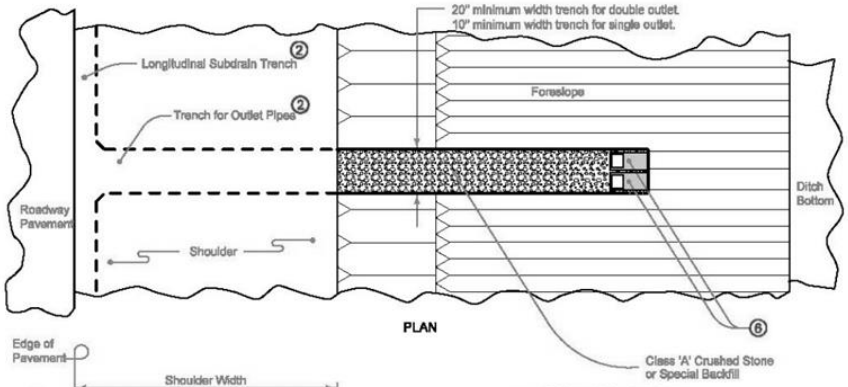
STANDARD ROAD PLAN DR-303

SHEET 2 of 2

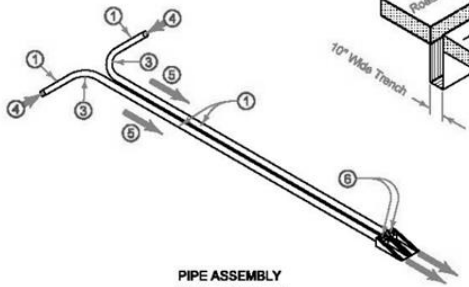
REVISIONS: Reference to the DR-304 have been changed to the DR-306.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

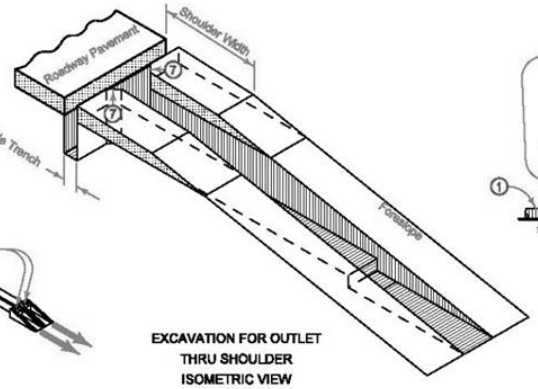
SUBDRAINS (LONGITUDINAL)



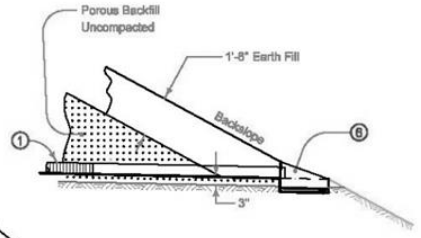
LONGITUDINAL AND TRANSVERSE OUTLETS



PIPE ASSEMBLY
ISOMETRIC VIEW



EXCAVATION FOR OUTLET
THRU SHOULDER
ISOMETRIC VIEW



BACKSLOPE OUTLET
TYPICAL SECTION

Extend subdrain 3 inches minimum (6 inches maximum) into precast subdrain headwall. Connect using one of the following methods:
- -Grouted connection using a non-shrink grout complying with Materials I.M. 491.13.
- -Gasketed connection approved by the Engineer.

Shape adjacent slope to match slope of precast subdrain headwall.

(1) Perforated Subdrain (Polyethylene Corrugated Tubing).

(2) On projects where existing shoulder material is removed, replace the shoulder material according to Article 2502.03, C of the Standard Specifications.

(3) 'Y' or 'T' connection will not be allowed. Place subdrain on 1 foot minimum radius.

(4) Direction of flow.

(5) 6 inch minimum drop in elevation between longitudinal subdrain and outlet. 12 inch minimum drop for projects using recycled PCC subbase.

(6) Precast concrete headwall.

(7) Bevel the trench to provide a minimum of 3 inches of porous backfill surrounding all portions of subdrain pipe.

(8) Place class 'A' crushed stone or Special Backfill over outlet and carefully compact to avoid damaging outlet pipe.

Possible Contract Item:
Subdrain Outlet, DR-306

Possible Tabulation:
104-5C
104-9

IOWA DOT

REVISION	
1	10-16-18

STANDARD ROAD PLAN

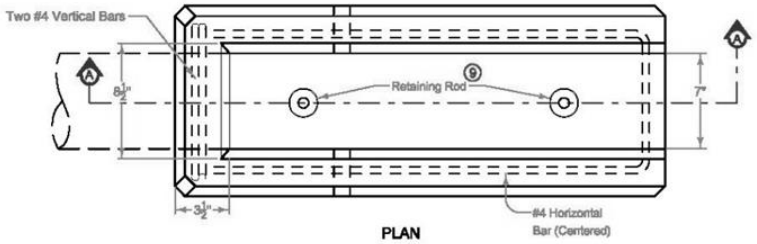
DR-306

SHEET 1 of 2

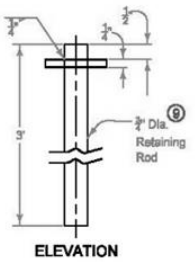
REVISIONS: Modified drawing on sheet 2 to allow one size headwall to be cast. Modified circle note 8 and added circle note 12 on sheet 2.

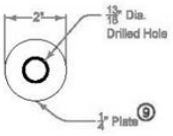
APPROVED BY DESIGN METHODS ENGINEER

PRECAST CONCRETE HEADWALL
FOR SUBDRAIN OUTLETS

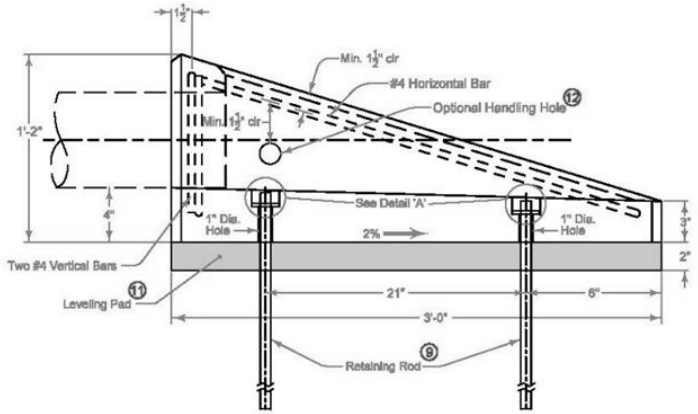


PLAN

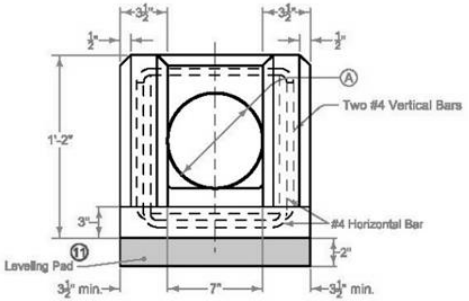




RETAINING ROD

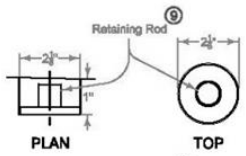


SECTION A-A



END

BENT BAR SHAPES



DETAIL 'A'
(Recess for Retaining Rod)

Comply with Section 2419 of the Standard Specifications.

(9) ASTM A36 Steel galvanized according to ASTM A123 or ASTM F2329 after shop welding is complete.

(10) After installing retaining rod, fill recess with bituminous material complying with ASTM C990 to prevent moisture infiltration.

(11) Granular material complying with Section 4133 of the Standard Specifications.

(12) Maximum diameter 2 inches. Fill hole with soil tight plug after placing headwall and before placing backfill.

DIMENSION	4" DIA PIPE	6" DIA PIPE
(A)	5"	7"

IOWA DOT

STANDARD ROAD PLAN

REVISION	
1	10-16-18

DR-306

SHEET 2 of 2

REVISIONS: Modified drawing on sheet 2 to allow one size headwall to be cast. Modified circle note 9 and added circle note 12 on sheet 2.

APPROVED BY DESIGN METHODS ENGINEER

PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS

SECTION 4050 - PIPE REHABILITATION

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.04 SUBMITTALS

C. Installer Information:

11. Unless otherwise noted, submit two (2) copies of reports to the Engineer 48 hours after test completion.

12. Contractor shall submit a bypass plan.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site and store according to manufacturer's recommendations. Handle materials in a manner to protect from damage during delivery and application.

1.07 SPECIAL REQUIREMENTS

B. ~~Unless otherwise specified, the Jurisdiction will provide water at no cost for cleaning and installation of cured-in-place pipe. Utilize an approved double check backflow assembly or open gap.~~ Unless otherwise specified, the Jurisdiction will provide water at designated locations approved by the Waterworks for cleaning and installation of cured-in-place pipe. All costs associated with water used shall be paid to the Waterworks by the Contractor and shall be considered incidental. Utilize an approved double check backflow assembly or open gap.

1. The Contractor shall obtain a valve, meter and backflow preventer, and work with the City of Marshalltown Waterworks Department to determine locations where the meter can be located. When the temperature drops below 36 degrees, the Waterworks will not allow the use of the meter and hydrants without adequate freeze protection. The Contractor will be responsible for the cost of the water, all associated equipment, and freeze protection.

C. Establish a Public Information and Notification Program for contacting each home or business connected to the affected sanitary sewer, informing them of the

work to be done and when the sewer will be off-line. The following specific steps are part of the Public Information and Notification Program.

1. Provide written notice to be delivered to each affected home or business describing work, schedule, how the work affects them, and a local telephone number of the Contractor they can call to discuss the project or any issues that develop as a result of the work.

    a. The following items shall be included in the written notifications.

        i. Notice of work to be completed with an explanation of the impacts to the property owner.

        ii. Telephone number of the primary contact for the Contractor, Engineer, and the City.

        iii. Expected time frame for when the work will be completed.

        iv. Notifications that will occur if work conditions require service to be delayed longer than anticipated.

D. Contractor shall coordinate traffic control with city, IDOT, residents, and businesses

E. Field quality control and final acceptance testing

1. Field quality control and final acceptance testing and retesting shall be performed by an independent third party company (unless otherwise noted) at the expense of the Contractor. Contractor shall make all appropriate repairs at Contractor's expense.
2. Hydraulic capacity shall be tested by Contractor as directed by the Engineer using a pipe mandrel. Lined pipe with a general round appearance on CCTV will not be mandrel tested – few, if any, segments will require testing. Mandrel testing shall be completed by the Contractor at the option of the Engineer as an incidental item. Mandrel testing shall be documented by recorded CCTV which is also incidental. Mandrel testing will be used to determine areas where the CIPP liner is cured out-of-round or has deflected into pipe because it did not have resin saturation. Contractor should be careful to test and document areas of host pipe out of round prior to the lining process. Contractor shall repair all areas failing a mandrel testing showing the new CIPP liner defecting or out of round.

3. Field samples for CIPP testing shall be prepared by the Contractor. Testing shall be completed once (1) for every 3,500 LF of liner placed with one (1) test minimum for each size used (except for quantities less than 500-ft). Pipe physical properties will be tested by a third party in accordance with ASTM F-1216, Section 8, and ASTM F-2019-20 using either method proposed. The flexural properties must meet or exceed the values listed on page 5 of this specification. Testing is considered incidental.
4. Wall thickness of samples shall be determined by third party in a manner consistent with 8.1.2 of ASTM D5813. Frequency as per 1.4-E. The minimum wall thickness at any point shall not be less than 87.5% of the specified design thickness. Testing is considered incidental.
5. The water-tightness of the liner shall be gauged by the Contractor while the liner is curing under a positive head or through review of recorded CCTV. No infiltration of groundwater should be observed.
6. Contractor shall verify location and quality of cut for each reinstated service connection using a radial view (pan & tilt) TV camera. All active service entrances should be accounted for and be unobstructed.
7. Contractor shall submit liner wet out report as soon as available. Multiple installations may be listed separately on one report.
8. Contractor shall submit water or steam cure log that samples every 15 minutes. Multiple installations may be listed separately on one report.

F. Any damage that occurs to a home, business, or other structure as a result of the work provided by the Contractor, shall be repaired at no cost to the Contracting Authority.

1.08 MEASUREMENT AND PAYMENT

A. Pipe Cleaning and Inspection for Rehabilitation:

1. Pre-Rehabilitation Cleaning and Inspection:

a. Measurement: Measurement will be made for each diameter range of sewer main cleaned and inspected prior to rehabilitation. ~~Diameter ranges: 4 to 12 inch, 15 to 24 inch, and 27 to 30 inch.~~

b. Payment: Payment will be made at the unit price per linear foot for each diameter of pre-lining cleaning and inspection.

c. Includes: Unit price includes, but is not limited to, pre-cleaning CCTV inspection, light sewer cleaning, debris removal and transport, post cleaning CCTV inspection for Engineer review, and identification and logging of active service taps. If specified in the contract documents, unit price also includes disposal and associated costs for all debris removed from sewer.

2. ~~Additional~~ Heavy Sewer Cleaning:

a. Measurement: Measurement will be made on an hourly basis for additional pipe cleaning for each diameter not able to be removed with normal cleaning ~~range~~. Hours will start with the initial cleaning work following the Engineer's approval to proceed and will extend until mechanical cleaning ceases. Time for removal, transporting, and disposal of debris ~~is not included~~ shall be considered incidental. ~~Diameter ranges: 4 to 12 inch, 15 to 24 inch, and 27 to 30 inch.~~

b. Payment: Payment will be made at the unit price per hour for ~~additional~~ heavy pipe cleaning.

c. Includes: Unit price includes, but is not limited to, heavy sewer cleaning not able to be cleaned through normal cleaning;~~; root cutting; deposit cutting;~~ and removing, transporting, disposing, debris removed from sewer, and post cleaning CCTV inspection for Engineer review shall be considered incidental.

PART 2 - PRODUCTS

2.01 CIPP MAIN LINING

C. Structural Requirements:

5. The tube shall consist of one or more layers of absorbent, flexible needled felt or equivalent non-woven material and meet the requirements of ASTM F-1216, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular shaped pipe sections.

6. The wet-out tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the listed minimum thicknesses.

7. The tube shall be manufactured to a size that when installed will tightly fit the internal circumference and length of the original pipe. In the event that under-sized pipe is present, the liner tube shall be manufactured so that overlap folds or wrinkles do not occur. Allowances shall be made for circumferential stretching during inversion.

8. The outside layer of the tube (before wet-out) shall be coated with an impermeable polyurethane, polyethylene, or polypropylene coating. This

coating shall be an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet-out) process. This coating shall form the inner layer of the finished pipe and is required for enhancement of corrosion resistance, flow, and abrasion properties.

9. The tube shall be homogenous across the entire wall thickness containing no intermediate or encapsulated layers of any material. Additionally, no material shall be included in the tube that may cause delamination in the cured liner, and no dry or unsaturated layers shall be evident.

10. The wall color of the interior liner surface after installation shall be a light reflective color so that a clear detailed inspection with closed-circuit television equipment may be conducted. The hue of the color shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and resin lean or dry areas.

11. The outside of the tube shall be marked for distance at regular intervals not to exceed 10 feet. Such markings shall include the Manufacturer's name or identifying symbol.

12. The minimum length shall be that deemed necessary by the Contractor to effectively span the distance between manhole sections of the segment to be lined unless otherwise specified. The Contractor is solely responsible for field verification of all pipe diameters and lengths prior to fabrication, wet-out and installation.

13. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occurs during field sample testing, new samples will be required to be obtained from the installed pipe. Any reoccurrence may cause rejection of the work.

14. The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

Table 4050.02: Minimum Structural Properties for CIPP Main Lining

Cured Liner	Standard	Results
Flexural Stress	ASTM D-790	4,500 psi
Modulus of Elasticity	ASTM D-790	350,000 psi

2.03 CIPP SERVICE REPAIR

E. Structural Requirements:

1. Design the cured-in-place service liner according to ASTM F 1216 utilizing the following assumptions, unless otherwise specified in the contract documents:

Table 4050.03: CIPP Service Design Values

Design Criteria	Value
Factor of safety	2.0
Soil modulus	1,000 psi
Soil density	120 pcf
Live load	H20
Depth of cover	As specified for each location
Groundwater	1/2 depth of cover
Ovality	2%

2.03 CIPP SERVICE REPAIR

E. Structural Requirements:

3. Comply with the following minimum structural properties:

Table 4050.04: Minimum Structural Properties for CIPP Service

Property	Test Method	Minimum Value
Flexural modulus of elasticity	ASTM D 790	250,000 psi
Flexural strength	ASTM D 790	4,500 psi

PART 3 - EXECUTION

3.01 SEWER CLEANING AND INSPECTION FOR REHABILITATION

A. General:

7. Traffic Control - The Contractor is responsible to coordinate disruptions to traffic and traffic control. The Contractor shall give 48-hour notice to residents affected by traffic disruptions and coordinate notifications with the City. Notification shall be via door hangers public notifications, or other approved method. Traffic control is paid as a separate bid item.

8. Sewer Interruptions - The Contractor shall make every effort to maintain sewer service usage throughout the duration of the project. In the event that a connection will be out of service, the longest period of no service shall be 8 hours. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. Coordinating sewer interruptions with the city, residence, and business owners is incidental. The Contractor shall also provide the following:

    a. Written notice to be delivered to each home or business two days prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any potential problems.
    b. Personal contact with each business to ensure the lining can be done and keep the business open.
    c. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

B. Pre-Cleaning Inspection:

4. Line Obstructions - It shall be the responsibility of the Contractor to clear the line of intruding services or collapsed pipe prior to lining. Contractor shall be responsible for lining broken pipes as long as the ovality is less than 15% and the pipe pieces are held in place at the time of lining, or not obstructing the ability to cut a service reinstatement. Verify location of intruding services and structural failures with Engineer prior to proceeding. If pre-installation inspection reveals such an obstruction, the Contractor will be paid to remove obstruction. Work includes 1) protruding

service cut with a cutting tool, and; 2) point repair either by excavation or by a short liner section with trenchless methods. Such work shall be approved in writing by the Engineer prior to the commencement of the work and shall be considered as a separate pay item. Separate pay items have been estimated by the Engineer to provide the owner a unit cost.

5. The Contractor shall be responsible for confirming the locations of all branch service lateral connections before beginning the installation of the CIPP. See drawings for bid item description.

C. Additional Sewer Cleaning:

5. Maintain a log of time spent performing additional pipe cleaning on each line segment.

   a. Provide a list of segments requiring additional cleaning to the Engineer for approval along with the estimate time of additional cleaning to complete the work.

   b. Log shall include start time, end time, footage requiring additional cleaning, and reason for additional cleaning. Additional cleaning log shall be submitted to the engineer weekly during construction.

3.02 BYPASSING SEWAGE

C. Rehabilitation and inspection work may be completed without bypassing in certain situations including low flow conditions, adequate upstream storage, use of a flow-through packer, or other situations approved by the Engineer. If proposed work will be completed without bypassing, have equipment and plan of action available to implement bypass pumping in the event the work is delayed or sewage levels in the upstream line are in danger of causing backups.

Table 4050.05: Maximum Depth of Flow During Inspection, Testing, and Rehabilitation

Main Diameter	CCTV Inspection	Joint Testing/Sealing
6” to 10”	20% of pipe diameter	25% of pipe diameter
12” to 24”	25% of pipe diameter	30% of pipe diameter

27” and up	30% of pipe diameter	35% of pipe diameter

3.03 CIPP MAIN LINING

A. General:

3. Site environmental conditions (time, temperate, humidity, atmospheric conditions, precipitation, etc.) should be noted when installing CIPP liner. Liner should be installed in those environmental conditions deemed acceptable by the manufacturer.

C. Insertion:

1. General:

e. After liner has been fully cured (temperature reaches ground temperature), the end of the liner shall be neatly trimmed to approximately 2” from the end of the host pipe and have no jagged edges and shall be considered incidental.

2. Inverted Heat-Cured Liner:

g. The wet out tube shall be inverted into the pipeline using inversion as defined within relevant ASTM standards previously stipulated. The tube should be inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.

h. The finished lining shall be continuous over the entire length of an insertion run and be free of visual defects such as foreign inclusions, dry spots, pinholes, lifts, major wrinkles, and delamination. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe. If leaks, defects, or deficiencies are found, the Contractor shall make repairs at the Contractor’s expense.

D. Curing:

1. Heat Cured:

c. Monitor and log the temperature from the sensor placed between the impregnated tube and the host pipe. Temperature gauges shall be placed between the tube and the host pipe’s invert position to monitor the temperatures during the cure cycle.

E. CIPP End Seal Installation:

1. **Hydrophilic Gasket Sleeve:** Install sleeve according to ASTM F 3240, sleeve manufacturer's published recommendations, and the following:
   f. Install Greenstreak Hydrotite or approved equal between cut back CIPP liner and host pipe for each segment of CIPP installed. If a watertight seal is not achieved using Hydrotite, seal line with an approved chemical grout and shall be considered incidental.

F. Service Reinstatement:

5. In the event that service reinstatement results in a liner opening greater than 100% of the service connection opening, or damage to the service connection occurs, install a CIPP service repair to cover the over-cut service connection. Any service reinstatements that damage the service or liner shall be repaired with an LMK T-Liner or approved equivalent, at no cost to the Contracting Authority.

7. Complete dye testing as necessary to verify services reinstatements. Unless otherwise directed by the Owner or Engineer, only active sanitary sewer services shall be reinstated.

8. Cut openings shall be brushed leaving no jagged edges.

9. All coupons shall be removed from the line.

10. The Contractor shall have a minimum of two certified cutters and key components on the job site before each CIPP liner installation.

11. Any damage to a home or business as a result of a lack of service reinstatements or an inadequate service reinstatement shall be at no cost to the Contracting Authority.

3.04 CIPP POINT REPAIR

D. Inspection:

3. Line shall be cleaned prior to second recorded CCTV inspection to remove accumulated debris after CIPP liner installation. Work is incidental. Brush each reinstatements to remove all debris and coupons left from the cutting process. Coupons shall be removed from the sewer main after re-instatements are completed and retrieved with a catch basket or Jet-Vac in the downstream

manhole.

4. Post televising shall be done within one week of cleaning. Lines with sags or bellies shall have flow blocked and the line jetted in front of the camera to allow recorded CCTV to observe the full circumference of the newly lined pipe. Each reinstated service shall be filmed by stopping the camera, panning to the service opening, and slowly televising the entire circumference of the reinstatement so that the entire connection is clearly visible to prove that it was correctly reconnected. Work is incidental.

5. Reporting - The unedited digital documentation of the pre-lining and post lining inspections shall be indexed for each pipe segment separately, shall be of high quality, and be provided to the Engineering within ten (10) working days of the liner installation. This documentation will be reviewed by the Engineer to provide the acceptance of the installed liner. Final inspection videos and accompanying reports shall be submitted to the Engineer for review after all repairs are made and shall conform to SUDAS specification 04060. The video format shall be agreed upon with the Engineer.

3.08 CLEANUP AND CLOSEOUT

D. Upon CIPP liner acceptance, the Contractor shall restore the project area affected by CIPP lining operations. Work to repair and/or rehabilitate private facilities will not be reimbursed and shall be considered incidental.

SECTION 4060 - CLEANING, INSPECTION, AND TESTING OF SEWERS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 1 - GENERAL

1.03 SUBMITTALS

Comply with Division 1 - General Provisions and Covenants.

A. Contractor shall provide information to the owner on schedule of proposed work for the project. Community awareness and notifications shall include providing a schedule and map to the city for posting on the city's website and social media, notifications in the local newspaper, and door hangars to local residence that sewer maintenance is scheduled by the Contractor. Contractor shall be responsible for door hangars on local businesses and residence prior to work commencing.

B. At the end of each week of work, submit to the Engineer a complete written record of all work completed during the day, including a copy of the original inspection record and a copy of the video used to record the day's inspection. The submittal shall be provided in electronic formats required and shall include an excel sheet with a summary of the sections included in the data along with a description of the data provided for each segment.

C. Data shall be provided in an excel spreadsheet with all pertinent data with each item as a separate heading for each pipe segment. Data shall be provided for each segment with a classification for deficiencies ranging from 1 to 5 with 5 being the most severe according to NASSCO PACP standards.

D. Contractor shall submit traffic control for each project area at least 2 weeks prior to commencing work.

E. Contractors shall submit data in MS Excel format that includes each segment labeled as according to these specifications. Each segment shall be linked to the corresponding inspection videos and snapshots of the video inspection. Provide a GIS Shapefile of the completed inspection showing the location of the services an deficiencies can be input into the City of Marshalltown's GIS information system.

1.06 SCHEDULING

C. The Contractor shall perform all cleaning operations prior to inspections.

1.07 SPECIAL REQUIREMENTS

~~None.~~Comply with Division 1 - General Provisions and Covenants, as well as the following:

A. Within two (2) weeks of cleaning a sewer the Contractor will inspect the sewer. If contractor does not complete the televising within two (2) weeks of cleaning, the contractor shall complete additional cleaning until the segment is cleaned to allow complete inspection by CCTV. Additional cleaning shall be at no additional cost to the Contracting Authority.

B. Contractor shall respond to residences that approach the Contractor during the sewer cleaning and inspection process. Contractor shall notify Owner of any discussions and/or correspondence with the public throughout the duration of the project. Provide notifications to the Contracting Authority no later than the end of each days work.

C. Exposure of buried manholes and seized manhole lids loosened prior to Contractor mobilization shall be opened by the Contracting Authority as necessary upon 48 hour's notice of the need for access.

D. The Contracting Authority shall provide a person to act as liaison between the Contracting Authority and the Contractor during the duration of the project that may familiarize the Contractor with the location of sewer and manholes.

E. Water for cleaning the sewer is available from the City of Marshalltown water works. See SUDAS Section 4050 for more information on requirements and availability of water for use during the project. The Contractor shall be responsible for all water use costs for the duration of the project.

F. A staging/storage area to accommodate the Contractor's equipment, vehicles and materials shall be provided by the Contracting Authority at the

city's maintenance shop located at the City of Marshalltown Water Pollution Control Plant.

G. Debris, removed from the sewer cleaning operation, can be deposited at the City of Marshalltown Water Pollution Control Plant, 1001 Woodland Street. City staff will provide Contractor specifics on access, hours of operation, and the use of this facility after bid is accepted.

H. Any damages that occur as a result of the Contractors work shall be repaired at the Contractors expense. This shall include, but not be limited to, all sewer service repairs, service connections to main, damage to interior of structures, damage cleanup expenses from water or sewage entering building, temporary relocation expenses incurred by property owners as a result of damage, and any repair and /or replacement of damaged facilities.

I. Contractors shall submit data so that pipe segment services and identified deficiencies can be provided in a shapefile for input into the City of Marshalltown's GIS system.

1.08 MEASUREMENT AND PAYMENT

~~Cleaning, inspecting, and testing sanitary sewers, storm sewers, pipe culverts, and rehabilitated pipes (including video inspection) are incidental to other project costs and will not be paid for separately.~~

B. Pipe Cleaning and Inspection for Rehabilitation:

1. **Pre-Rehabilitation Cleaning and Inspection:**
   a. **Measurement:** Measurement will be made for each diameter of sewer main cleaned and inspected prior to rehabilitation.
   b. **Payment:** Payment will be made at the unit price per linear foot for each diameter of pre-lining cleaning and inspection.
   c. **Includes:** Unit price includes, but is not limited to, pre-cleaning CCTV inspection, light sewer cleaning, debris removal and transport, post cleaning CCTV inspection for Engineer review, and identification and logging of active service taps. If specified in the contract documents, unit price also includes disposal and associated costs for all debris removed from sewer.
2. **Heavy Sewer Cleaning:**
   a. **Measurement:** Measurement will be made on an hourly basis for additional pipe cleaning for each diameter not able to be removed with normal cleaning. Hours will start with the initial cleaning work following the Engineer's approval to proceed and will extend until mechanical cleaning ceases. Time for removal, transporting, and disposal of debris shall be considered

incidental.

b. **Payment:** Payment will be made at the unit price per hour for heavy pipe cleaning.
c. **Includes:** Unit price includes, but is not limited to, heavy sewer cleaning not able to be cleaned through normal cleaning, and removing, transporting, disposing, paying associated costs for all debris removed from sewer, and post cleaning CCTV inspection for Engineer review.

3. **High Pressure Jetting and Robotic Cutting:**
   a. **Measurement:** Measurement will be made on an hourly basis for additional pipe cleaning for each diameter. Hours will start with the initial cleaning work following the Engineer's approval to proceed and will extend until mechanical cleaning ceases. Time for removal, transporting, and disposal of debris shall be considered incidental.
   b. **Payment:** Payment will be made at the unit price per hour for heavy pipe cleaning.
   c. **Includes:** Unit price includes, but is not limited to, jetting with 40,000 psi for concrete removal and include robotic cutting necessary to remove materials in the main or protruding into the main.
4. **Sanitary Sewer Removal of Heavy Roots:**
   a. **Measurement:** Measurement will be made on an hourly basis for additional root cutting not able to be removed with normal cleaning. Hours will start with the initial root cutting work following the Engineer's approval to proceed and will extend until mechanical cutting ceases. Time for removal, transporting between locations, and disposal of debris shall be considered incidental.
   b. **Payment:** Payment will be made at the unit price per hour for heavy root cutting.
   c. **Includes:** Unit price includes, but is not limited to, heavy root cutting necessary to remove roots in the main or protruding into the main.
5. **Sanitary Sewer Heavy Scale Removal:**
   a. **Measurement:** Measurement will be made on an hourly basis for additional scale removal not able to be removed with normal cleaning. Hours will start with the initial scale removal work following the Engineer's approval to proceed and will extend until mechanical scale removal is complete. Time for removal, transporting between locations, and disposal of debris shall be considered incidental.
   b. **Payment:** Payment will be made at the unit price per hour for heavy scale removal.
   c. **Includes:** Unit price includes, but is not limited to, heavy scale removal necessary to remove scale in the main

necessary prior to lining.

C. Pipe Cleaning and Inspection for all other uses other than Rehabilitation:

1. Cleaning and Inspection:

a. Cleaning, inspecting, and testing sanitary sewers, storm sewers, pipe culverts, and rehabilitated pipes (including video inspection) are incidental to other project costs and will not be paid for separately.

PART 2 - PRODUCTS

2.02 (ADD) FORCE MAIN CLEANING PIG

A. The force main cleaning pigs shall be light-density crisscross pigs constructed of a minimum of two (2) pounds per cubic foot density foam and coated with polyurethane elastomer in crisscross pattern.

B. The force main cleaning pigs shall have an open nose design for maximum jetting action and pressure equalization. The pigs shall have the ability to scratch, scrape, plow and jet to assist in cleaning and flushing debris from the force main. The pig units shall be sized to the pipe in accordance with the manufacturer's recommendations and shall have a length two times the diameter. The nose shall be parabolic shaped in order that it may better enter restrictions. The pigs shall have the ability to negotiate mitered and short radius bends, short radius elbows, tees, crosses, and multi-dimensional pipe sizes and valves.

C. All pipeline pig ingredients shall be certified by the manufacturer as having been successfully used in similar applications and comply with these specifications.

PART 3 - EXECUTION

3.01 CLEANING

A. The City of Marshalltown Waterworks is the provider of water. The Contractor shall obtain a valve, meter and backflow preventer from the Waterworks Department, and work with the city Waterworks Department to determine locations where the meter can be placed. When the temperature drops below 36 degrees, the city will not allow the use of the meter and hydrants without adequate freeze protection. The Contractor shall be responsible for the cost of the water, all associated equipment, and freeze protection and shall be considered incidental.

B. Sewers will be cleaned by removing grit, loose solids, and grease leaving no more debris within the pipe than 5% of the pipe diameter. This

does not include the removal of protruding services, heavy roots, or hard deposits such as minerals and cast iron scale. Rootcutting, tap cutting or any other cutting that could cut into a Utility Gas Line Bore Pipe should be televised prior to cutting. Tap cutting shall be done with the proper tool to cut the specific type of pipe, without further damaging the service connection. The Contractor shall fill out a City of Marshalltown Cleaning Report Form for each line segment cleaned and the reports provided to the city weekly for work completed.

C. The cleaning equipment will be truck mounted combination water jet/vacuum unit(s).

D. A water jet performance for normal cleaning of 80 gallons per minute at 2,000 PSI.

E. Unit(s) will be equipped with a minimum of 500 feet of 1-inch internal diameter sewer cleaning hose with working pressure ratings to match the rating of the water pressure

F. Nozzles used in the cleaning process will accommodate the full flow rating of water jet and will be of proper choice for cleaning application, including rotating nozzle for grease removal.

G. Prior to the sewer cleaning operation, the Client and Contractor will agree on a sewer cleaning sequence. In general, the sewer cleaning process will proceed from the upper ends of each sewer basin to the lower ends as indicated in section 3.01.

H. Sufficient number of passes to ensure proper cleaning. Multiple passes with the water jet will be made to flush the debris to the manhole or intake where jet/vac unit is positioned. A minimum of three (3) passes per pipe section.

I. Sewers will be cleaned by introducing the water jet into the sewer line facing against the sewer flow and retrieving the water jet under pressure with the sewer flow.

J. A hand held spray control gun to thoroughly clean manholes from grade level if required.

K. Trap debris at downstream manhole to prevent carrying of debris into lower reaches of sewer section being cleaned. Remove debris and dispose of according to these Specifications. Debris will be removed by vacuum to prevent workers from entering manholes. The Contractor will collect and transport all debris removed during the sewer cleaning operation. Do not discharge soil sediment or debris to drainage

channels, existing storm sewers, or existing sanitary sewers.

L. Vacuum system performance will be at least 4,000 CFM and 16” Hg vacuum pressure to ensure all debris can be efficiently removed from sewer without a worker entering the manhole.

M. Sewer flow by-pass pumping or suction shall be used should sewer flows not allow proper televising or cleaning.

N. Any flow control to remove standing water and debris shall be incidental to inspection. If the sewer line has sags or dips with standing water that limits the TV inspection, the Contractor will be required to use the jet to pull the water out of the sags while televising. This will be an incidental expense in the cost of the TV inspection. The contractor must also consider weather conditions to obtain the best video image of the sewer. This may require the contractor to delay any video work after major storm events until the system can return to lower dry weather flow.

3.02 VIDEO INSPECTION

A. General:

1. At a minimum, provide one (1) certified NASSCO Pipeline Assessment and Certification Program (PACP) technician with previous PACP inspection experience and one (1) operations foreman, each thoroughly experienced in conducting closed circuit internal television (CCTV) inspections of the sewer system. Provide documentation of previous PACP inspection experience for all PACP certified technicians on the project.

2. The Contractor will perform closed circuit video inspection of the sewers using current state-of-the-art technology and trained employees. Provide completely equipped mobile television inspection vehicle along with necessary auxiliary support vehicles.

3. CCTV camera will be high-definition resolution color with adjustable iris focus.

4. CCTV camera will have pan and tilt capabilities that allow up close and right-angled inspections of defects and other significant observations. The camera lens shall be orientated such that there will be no rotation of the lens to observe laterals and defects that are 90 degrees left or right from center. The only need to rotate the lens is when looking at the direct top or bottom of the pipe.

5. A tractor drive is required for transporting the video camera during inspections.

6. Video camera will be equipped with minimum of 1,500 feet of video cable.

7. Lighting on video camera will be suitable to allow full illumination of the entire pipe segment and services with a high-definition video image of the entire periphery of the pipe throughout the inspection.

8. The camera will be operative with a clear video image in 100% humidity conditions.

9. The camera, television monitor, and other components of the video system will produce a high-definition quality video image.
10. The Contractor shall contact the property owners in areas where the sewer is not in the Public Right of Way. Any damage caused by the Contractor will be the Contractor's responsibility to repair.

11. Contractor shall have an underground locating device for locating buried manholes.

12. Contractor shall provide all necessary equipment, including but not limited to generators electrical support equipment, winches, cables, tractor drives, camera supports and other equipment necessary for complete internal television inspection of the sewer.

13. Prior to beginning work, the Contractor shall have a meeting with the sewer department superintendent and a representative of the Contractor. The Contractors representatives shall include the Contractors project manager, superintended, and all personnel that will be completing the work., Expectations and procedures required as part of this specification will be discussed, and any clarifications provided. This meeting will aid the Contractor in providing understanding as to what is expected during the course of the work and it shall be the Contractors responsibility to forward those expectations and procedures onto all of his employees that may be involved in the capturing of the videos that will eventually be submitted to the city as a final inspection.

B. Inspection Procedure:

6. The video camera shall be centered in the pipe during inspection.

7. The recorded video must show the entire circumference of the sewer and services, including all service reinstatements. Contractor shall clearly and slowly pan the entire circumference of the sanitary sewer service to clearly show the entire connection to the sanitary sewer main.

8. Footage distance measured by video system will be accurate within 1% and will be used to determine footages for reporting and payment. The centerline of manholes will be the reference points used to determine footage measurements.

9. Video inspection will not exceed a traverse rate of 30 feet per minute and shall be slowed and stopped to thoroughly inspect the entire perimeter of each pipe where inflow or defects exist, service connection, structural deterioration, pipe size change, infiltration and inflow source, and deposits so that the sewer line can be thoroughly studied by the Client when viewing the inspections.

10. Depending on outside temperatures, the sewers can become fogged over when the outside temperature becomes to cold. The Contractor can perform TV Inspections as long as the fog is cleared before starting to televise and produces a video that fog does not hinder the review of the pipe segment.

11. Video recording shall start at the ground surface and shall then be pointed in the downward direction as the camera enters the manhole with a full view of the manhole as the camera descends to the bottom of the manhole. After the camera is set at the bottom of the manhole, the camera shall be panned around the manhole base, walls, and pointed to the to review the manhole rim prior to entering the pipe and beginning the pipe segment inspection. Upstream and downstream manholes shall be quickly panned and recorded with the camera upon the camera's removal from the pipe segment and upon exiting the pipe segment so the Client can view the structural condition of the manhole when viewing the pipe segment inspection.

12. The Contractor will take a digital photograph of each manhole structure ensuring that the inside of the structure is illuminated enough to indicate pipe invert locations, defects, infiltration locations, etc. All photos shall be taken facing due north.

13. Video all manholes by hand operation of camera and in doing so capture images of defects and a view of the pipe wall of the pipe to be inspected to aid in verification of pipe type.

14. Provide data at the beginning of all video recordings (visible on video recording itself) to document following information:

    a. Name of city and date upon which television inspection was made.

    b. Name of street or easement where work was done.

c. Reach of sewer inspected including identification of upstream and downstream manholes.

d. Direction of viewing operation: such as "upstream" or "downstream".

e. Sewer diameter (field verified, not taken directly off pipe schedules) in inches and material used for sewer construction including cast iron pipe (CAS), ductile iron pipe (DIP), fiberglass reinforced pipe (FRP), polyethylene (PE), polyvinyl chloride pipe (PVC), reinforced concrete pipe (RCP), reinforced plastic pipe – truss pipe (RPM), vitrified clay pipe (VCP), or other materials.

f. Contractor name.

15. Provide data throughout entire video for all video recordings (visible on video recording itself) to document following information:

    a. Date and time.

    b. Reach of sewer inspected including identification of upstream and downstream manholes.

    c. Direction of viewing operation: such as "upstream" or "downstream".

    d. Footage from reference point on continuous basis, accurate to within 1%.

    e. PACP codes shall be visible on the video recording for a short period of time following identification of each defect or feature.

16. Stop camera at all infiltration/inflow sources or other structural defects for a minimum of ten (10) seconds to allow for photographic documentation. If a service connection is flowing a substantial amount, stop camera for a minimum of thirty (30) seconds to allow for photographic documentation of potential infiltration/inflow source.

    a. Stop camera and scan at 90 degrees the following:

    b. All wyes and other connections.

    c. All suspicious defects.

    d. A minimum of one (1) joint for every thirty feet of sewer.

    e. Digital photographs shall be made of all significant sewer defect observations and shall be printed and attached to the report.

17. If necessary, provide proper cross flows of air through pipe or cover manhole openings in order to eliminate “foggy” or “hazy” viewing conditions when there are drastic air temperature differences between above ground and in-pipe conditions.

18. Perform PACP inspection of sewer at the project site. Video recordings with follow-up PACP inspection in the office will not be allowed.

C. Inspection Reporting:

3. Video inspection and reporting software will be NASSCO-PACP approved software with a GIS integration feature. The following packages are pre-approved software:

    - Granite XP
    - WinCan V8
    - IT Pipes

    The contractor may select the package which is preferred. Any suitable alternates must be approved by Engineer prior to bid. No alternates will be accepted without prior approval.

4. The documentation of the work shall consist of PACP CCTV paper reports, MS Excel database with linked video and photos from the inspections, unmodified PACP database, logs, electronic reports, digital photos, etc. noting important features encountered during the inspection. Three (3) copies of all documents are required at final submittal.

5. The City has a manhole numbering system as included in the contract documents. The City has a database that maintains the manholes and line segments. It is very important to always enter the line segment as Upstream MH to Downstream MH. Otherwise the database will not acknowledge. Each segment shall have its own video record and data segment. Any segments that do not meet these requirements will require the contractor to complete the videos to meet these requirements.

6. Every section of sewer (manhole to manhole or cleanout to manhole) shall be identified by alphanumeric on the video display and shall include the following:

    a. Project name
    b. Surveyed By (Operator/Surveyor Name)
    c. Certificate Number (Compliant with PACP)
    d. Pipe Segment Reference (per Pipe Schedule in Plans)
    e. Date of inspection (YYYYMMDD)
    f. Street name (name only, spelled out in full)
    g. Municipality (Marshalltown)
    h. Upstream Manhole/intake numbers (Manhole/Intake Number per Pipe Schedule in Plans)

i. Downstream Manhole/intake numbers (Manhole/Intake Number per Pipe Schedule in Plans)
j. Sewer Use (Sanitary or Storm)
k. Direction of Survey (Upstream or Downstream)
l. Flow Control (compliant with PACP)
m. Height/Diameter (inches)
n. Width/Diameter (inches)
o. Shape (compliant with PACP)
p. Material (compliant with PACP)
q. Lining Method (Cured-In-Place Pipe, if applicable)
r. Total Length (per Pipe Schedule in Plans)
s. Length Surveyed (footage of completed inspection)
t. Media Label (Pipe ID Upstream MH_Downstream MH_MMDDYYYY_#.mpg)
u. Purpose (Routine Assessment)
v. Pre-Cleaning (Jetting or Heavy Cleaning)
w. Date Cleaned (YYYYMMDD)
x. Weather (compliant with PACP)
y. Additional Info (Name of Contractor)
z. City and Engineer's Project Number (SAN21001 / 7034.XXX)

7. The line being televised, from structure to structure, shall remain visible throughout the entire video. Important features shall be identified on PACP logs to include all manholes, active and inactive service connections, structural defects, maintenance problems, grease, roots, infiltration, obvious inflow sources, etc. In addition to the video, pictures of all defects and service connections shall be taken and included in the report. The report shall include a "bird's eye view" of all sanitary lines televised with all deficiencies indicated by the PACP color of severity and labeled. All video must be continuously metered from structure to structure.

8. Each sanitary sewer service shall be ranked on a scale of 1 to 5 on condition with 1 being in good condition and 5 needing repair, per PACP requirements.

9. Audio reporting will be avoided to prevent inconsistent operator subjectivity. All observations will be chosen from a standard table of descriptions incorporated in the video reporting software. The same defect and observation description tables will be used on all future project reports.

10. All observations and defects will be recorded in paper, electronic pdf reports, and MS Excel database with linked videos and snapshots.

11. The Contractor will make a color recording on suitable electronic media of

all sewers inspected and will also provide a paper and pdf report generated by the video inspection software. The video recording will include on-screen observation identifications that label continuous footages, defects, pipe diameter, direction of flow, direction of viewing, manhole and street reference locations. Video inspections recorded on electronic media allow advancing of video files for faster playback viewing by the Client. Video files must be formatted in MPEG1, written to said media devices, and submitted with digital links to the survey. The written report will be a mirror image of all observations and information recorded. A computer, integrated with the video inspection equipment, will be used to eliminate errors from separate processes.

12. All defects and observations will be described with a standard NASSCO PACP table of descriptions so that there is no variation caused by operator subjectivity

13. The Contractor will provide a printed legend of defect classifications that identifies a color-coded rating system for defect observations and their severity. The defect rating system will have prior approval of the Client so those defects are labeled as per the Clients preferences.

14. The legend of defect classifications will be attached to each and every written report for easy evaluation.

15. The severity of each defect or observation must be recorded and rated according to the legend of classification published by the Contractor.

16. Upon Client's request, the Contractor will provide statistical analysis reports generated by the reporting software. The reports will be a condensed summary of various levels of defects as requested by the Client.

17. Printed reports must have color true-to-scale drawings of all sewer defect and observation locations. These drawings will be computer generated with the use of the video inspection reporting system software. In addition, the software must provide GIS data points of all defects to be transferable to the city's GIS system.

18. Digital photographs will be made of all significant sewer defect observations and will be printed and attached to report. These photographs will be computer generated with the use of the inspection reporting system software with reference numbers of photos.

19. All inspection reports and videos will be prepared and delivered to the Client no later than the last date of the performance period.

20. The inspection report will also be recorded on an electronic media device transferable to the City of Marshalltown. This media will have read only software that will facilitate viewing and printing additional copies of the inspection report and digital photographs. This media will also include video clips of all high-level defects that can be replayed. The software will be compatible with Microsoft Windows XP, Windows 7, Windows 8, Windows 10, and Windows 11 and will be delivered to the Client within ten (10) calendar days of the last day of the performance period. The Contractor shall provide a checklist that indicates all pipe sections have been provided within the submittal along with the required reports and videos. Contractor shall verify that all TV video's have a complete segment, with no part of the pipe not included in the video. No partial videos shall be provided as a results of repairs or additional inspections. All videos shall be a complete inspection of the entire pipe segment from start to end. A database of the inspection segments shall be provided in an MS Excel format with each segment identified and each corresponding inspection video and all photos linked to the excel file. In addition, provide all data in GIS shapefile format. All data shall be provided in the following folders:

    a. Date (YYYY MM DD) - City PN/Engineer's PN – Submittal Number - Pre Construction
    b. Date (YYYY MM DD) - City PN/ Engineer's PN - Submittal Number - Post Construction

21. Each pipe segment shall have a folder with corresponding pipe segment listed by Upstream MH to Downstream Manhole (Upstream_Downstream). The folder shall contain the following:

    a. Electronic PDF file of inspection report
    b. Electronic video file of inspection labeled as required.
    c. MS Excel file database of pipe segments with linked inspection videos, photos, and the inspection report.
    d. GIS Shapefile of segments and corresponding inspection data as attribute data within the shapefile.

22. All completed electronic media and reports will become the property of the Owner.

3.07 (ADD) FORCE MAIN CLEANING

A. All lines shall be thoroughly cleaned before acceptance until all traces of construction materials, soil or other foreign matter have been removed.

B. The Contractor shall take all necessary measures to protect adjacent facilities and property. Damages caused by water or water carried material shall be the responsibility of the Contractor.

C. All cleaning shall be completed prior to the initiation of the testing process described in Part 3.06.

D. Force main cleaning shall be accomplished using a hydraulically propelled polyurethane pig, conforming to the requirements of Part 2 above, to remove all construction debris from the force main.

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SUPPLEMENTAL DIVISION 5 – WATER MAINS AND APPURTENANCES

(SEE MARSHALLTOWN WATER WORKS RULES AND REGULATIONS)

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SUPPLEMENTAL DIVISION 6 - STRUCTURES FOR SANITARY AND STORM SEWER

SECTION 6010 - STRUCTURES FOR SANITARY AND STORM SEWERS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.08 MEASUREMENT AND PAYMENT

D. Casting Extension Rings:

1. Measurement: (DELETE) ~~Each casting extension ring will be counted~~ (ADD) None.
2. Payment: (DELETE) ~~Payment will be at the unit price for each casting extension ring~~ (ADD) Incidental to manhole.

1.09 (ADD) ACCEPTANCE CHECKLIST & WARRANTY BOND

Prior to final acceptance of the work, the contractor shall file with the City Clerk of the City of Marshalltown a maintenance bond guaranteeing suitable repairs of any defects or failures due to deficiencies in materials or inadequacies in workmanship for a period of 4 years for all improvements following completion of construction. The bond shall be for a sum equal to the total amount of the project. The contractor shall also file with the City Engineer all other required acceptance checklist items including testing/inspection forms, lateral construction forms, as-built drawings, construction costs and engineering certificate of completion forms. The acceptance checklist and warranty bond form are provided at end of section.

PART 2 - PRODUCTS

2.02 PRECAST

B. (ADD) Pre-cast manholes or parts of pre-cast manholes are preferred in lieu of building on the site.

2.03 CAST-IN-PLACE

C. (ADD) Manholes will be constructed with no lift holes in the manhole sections.

D. (ADD) Manholes shall be provided with gasketed joints conforming to ASTM C-443 for rubber "O" ring joints or be sealed with a double layer of a cold-applied mastic joint sealing compound recommended by the manufacturer for the intended use and approved by the Engineer. Comply with ASTM C 990.

2.09 MANHOLE OR INTAKE ADJUSTMENT RINGS (Grade Rings)

A. Use one of the following materials for grade adjustments of manhole or intake frame and cover assemblies:

1. Reinforced Concrete Adjustment Rings: Comply with ASTM C 478. Provide rings free from cracks, voids, and other defects. (ADD) Concrete adjustment rings will be sealed with a butyl mastic seal between each ring installed and between rings and casting.
2. High Density Polyethylene Adjustment Rings: Comply with ASTM D 1248 for recycled plastic.

    d. Install adjustment rings on clean, flat surfaces according to the manufacturer's recommendations with the proper butyl rubber sealant/adhesive (ADD) between each ring and manhole structure/casting.

3. Expanded Polypropylene Adjustment Rings: Comply with ASTM D 4819 for expanded polypropylene when tested according to ASTM D 2375.

    d. (ADD) EPP adjustment rings shall be sealed with a moisture curing, polyether adhesive/sealant approved by the manufacturer between each ring and manhole structure/casting.

2.10 CASTINGS (Ring, Cover, Grate, and Extensions)

D. Casting Types:

4. (ADD) Manhole castings shall be provided with a minimum 24-inches clear opening.
5. (ADD) Standard sanitary manhole castings shall meet the requirements of MP-7.2, Type A. Manhole covers shall be provided with a rubber gasket to provide a self-sealing water tight lid when installed. Lids will be furnished with concealed pick holes. Floating castings shall be Type B and may be used with paving projects. Pre-Approved Type A castings are Neenah Foundry Company R-1642, R-1796-E, and R-1900-C; Deeter Foundry Inc. 1247; and East Jordan Iron Works 1040. Pre-Approved Type B castings are Neenah Foundry Company R-1673-B; Deeter Foundry Inc. 1185; and East Jordan Iron Works 1795 and Selflevel 1205 and 3025.
6. (ADD) Castings for manholes in waterways and flood plain locations shall meet the requirements of MP-7.2, Type C. Pre-Approved Type C castings are Neenah Foundry Company R-1916-F, Deeter Foundry Inc. 1247-B, and East Jordan Iron Works 1040 bolted.

2.11 ADDITIONAL MATERIALS FOR SANITARY SEWER MANHOLES

A. Infiltration Barrier:

5. (ADD) Manhole castings with EPP and HDPE adjustment rings properly assembled and sealed will not be required to have a separate casting seal. Manhole castings with concrete adjustment rings will require a separate casting seal.

2.13 STEPS

A. (DELETE) ~~Provide steps in all circular, precast manholes unless otherwise specified in the contract documents~~ (ADD) Manhole steps will not be installed

unless specifically called for on the detailed drawings. When called out on the plans, steps shall conform to the requirements shown thereon and as supplemented herein.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS FOR INSTALLATION OF MANHOLES AND INTAKES

F. Joint Sealant:

1. Sanitary Sewer Manholes:

   a. Install rubber O-ring or profile gasket (precast structures) (ADD) or a double layer of a cold-applied mastic joint sealing compound.

3.08 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

1. MP-5 Typical Sanitary Sewer Manhole Detail
2. MP-6 Typical Sanitary Sewer Drop Manhole Detail
3. MP-7.2 Typical Sanitary Sewer Manhole Casting Seal Detail

3.09 (ADD) DELETED SUDAS FIGURES

A. 6010.306 Chimney Seals for Sanitary Sewer Manholes

B. 6010.307 Drop Connection for Sanitary Sewer Manholes

C. 6010.513 Open-sided Area Intake (**Note: May be used with preapproval of Engineer if capacity cannot be matched by another inle**t)

MARSHALLTOWN SPECIAL PROVISIONS
FINAL ACCEPTANCE CHECKLIST

A. Manhole Vacuum testing – for Sanitary Sewers

B. Warranty Bond – Storm Sewers (See Specifications Part I)

C. TV Inspection – For Storm Sewer Pipe.

D. As-Built Drawings – For Storm Sewers

E. Engineering Certificate of Completion in accordance with the Plans and Specifications – Storm Sewers

F. Contractors Cost of Construction Report - This is to meet the financial reporting requirements of the city (GASB 34)

LOW PRESSURE/VACUUM TESTING OF SANITARY MANHOLES

PROJECT NAME: _____

LOCATION: _____

CONTRACTOR: _____

LIST MANHOLE TESTED: DATE _____

_____

Manhole No.: _____ Station: _____
Barrel Size: _____ or Dia.: _____
Depth: _____ (Rim to F/L)
Poured in Place ____ or Precast _____
No. of adjusting rings: _____
Manufacturer of Test Device: _____
Manufacturer's test procedure recommendations

TEST INFORMATION:

Low Pressure Method:
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Sec(s)
CONCLUSION: Complies: Yes _____ No _____

Vacuum Method
Initial Vacuum: _____ Hg
Starting Test Vacuum: _____ Hg
Ending Test Vacuum: _____ Hg
Test Duration: Sec(s)
CONCLUSION: Complies: Yes _____ No _____

LIST MANHOLE TESTED: DATE _____

_____

Manhole No.: _____ Station: _____
Barrel Size: _____ or Dia.: _____
Depth: _____ (Rim to F/L)
Poured in Place ____ or Precast _____
No. of adjusting rings: _____
Manufacturer of Test Device: _____
Manufacturer's test procedure recommendations

TEST INFORMATION:

Low Pressure Method:
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Sec(s)
CONCLUSION: Complies: Yes _____ No _____

Vacuum Method
Initial Vacuum: _____ Hg
Starting Test Vacuum: _____ Hg
Ending Test Vacuum: _____ Hg
Test Duration: Sec(s)
CONCLUSION: Complies: Yes _____ No _____

LIST MANHOLE TESTED: DATE _____

_____

Manhole No.: _____ Station: _____
Barrel Size: _____ or Dia.: _____
Depth: _____ (Rim to F/L)
Poured in Place ____ or Precast _____
No. of adjusting rings: _____
Manufacturer of Test Device: _____
Manufacturer's test procedure recommendations

TEST INFORMATION:

Low Pressure Method:
Initial Pressure: _____ psi
Starting Test Pressure: _____ psi
Ending Test Pressure: _____ psi
Test Duration: _____ Sec(s)
CONCLUSION: Complies: Yes _____ No _____

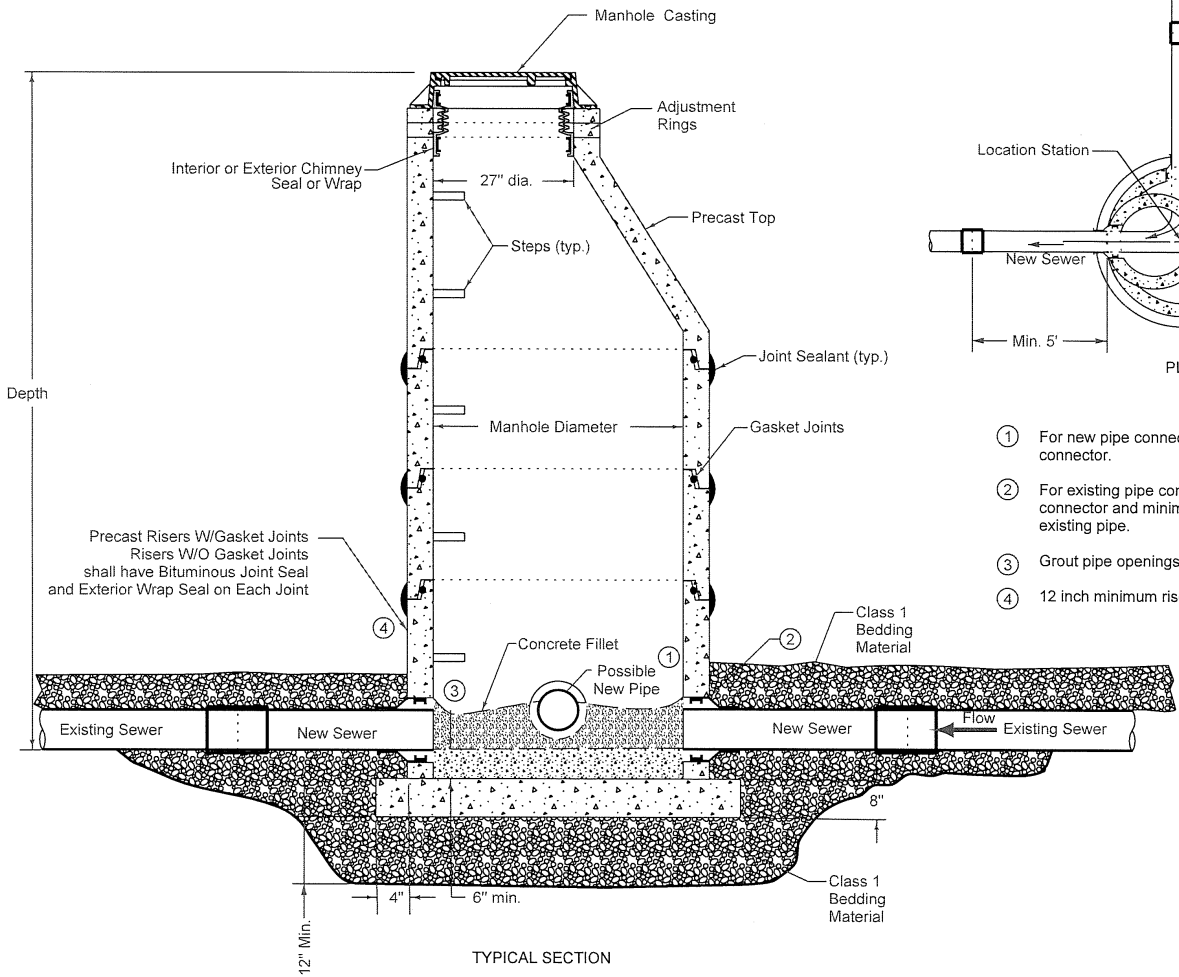
Vacuum Method
Initial Vacuum: _____ Hg
Starting Test Vacuum: _____ Hg
Ending Test Vacuum: _____ Hg
Test Duration: Sec(s)
CONCLUSION: Complies: Yes _____ No _____

Testing procedures observed and Information recorded by:

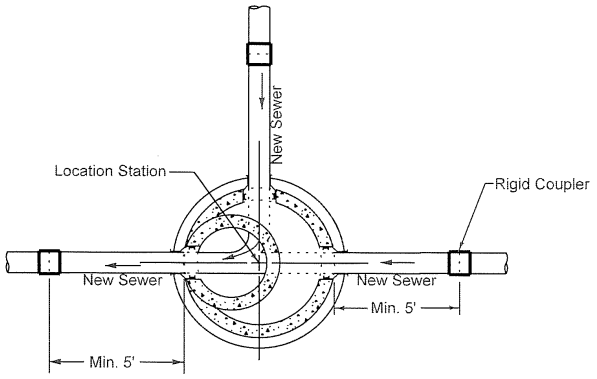
_____
Project Representative

Results reviewed and affirmed by:

_____
Project Engineer
City of Marshalltown, Iowa



TYPICAL SECTION



PLAN

1. For new pipe connections, provide cored opening with flexible pipe connector.
2. For existing pipe connections, provide cored opening with flexible pipe connector and minimum 5-feet of new pipe with rigid coupler to existing pipe.
3. Grout pipe openings to slope into flow line with fillet.
4. 12 inch minimum riser height above all pipe openings.

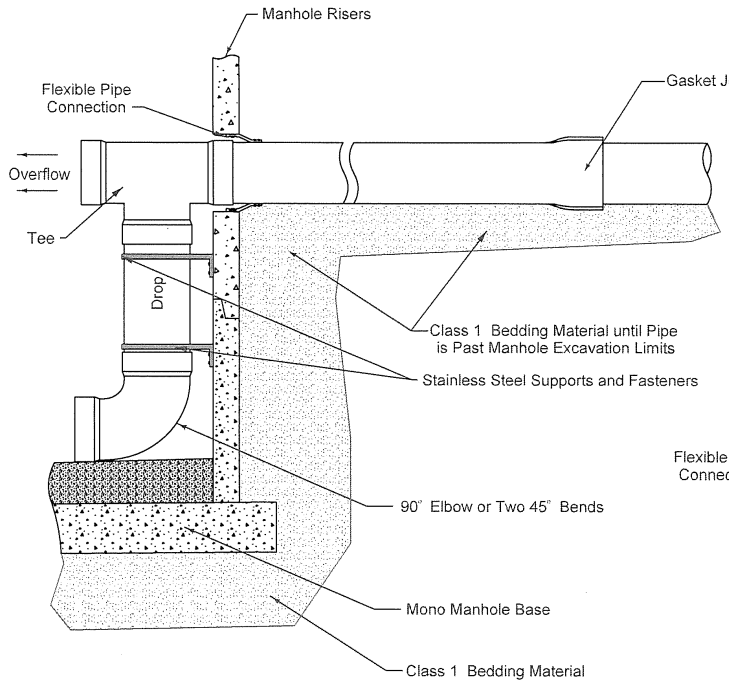
Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes (3)	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER MANHOLE DETAIL

DATE: 07/24/19

MP-5



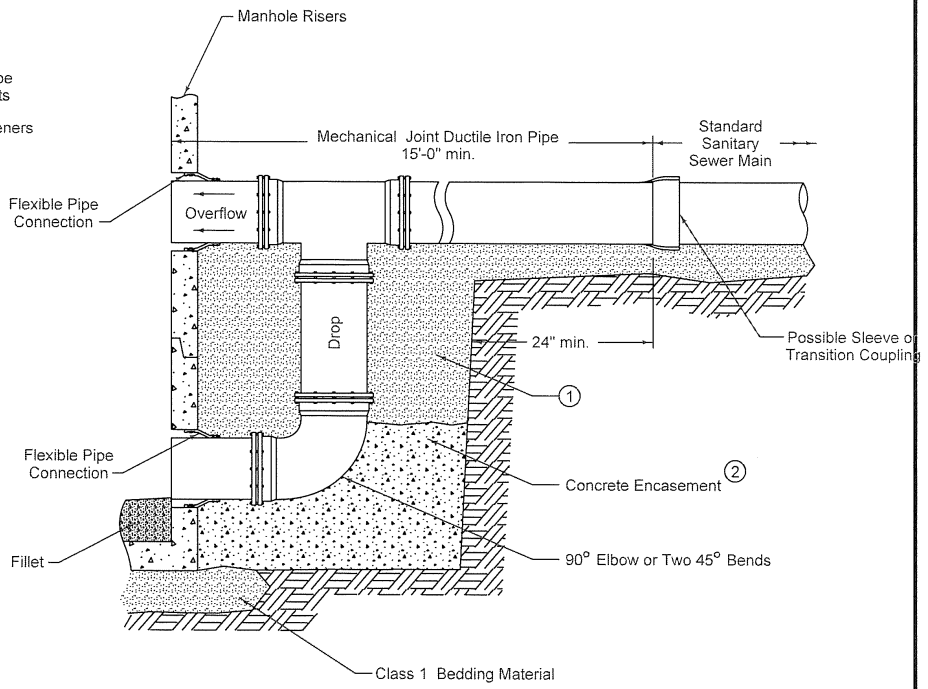
INSIDE DROP

Construct outside drop and overflow from ductile iron pipe of same diameter specified for sewer main. Provide mechanical joints for all ductile iron pipe and fittings.

Construct inside drop and overflow from same material and diameter specified for sewer main. All joints will be gasketed.

(1) Place Class 1 bedding material, CLSM, flowable mortar, or concrete from top of elbow to bottom of sewer main.

(2) Encase elbow in concrete. 12 inches minimum on all sides.



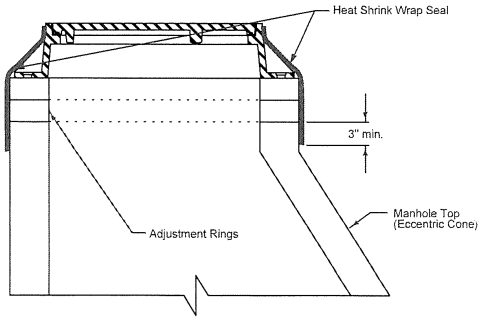
OUTSIDE DROP

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

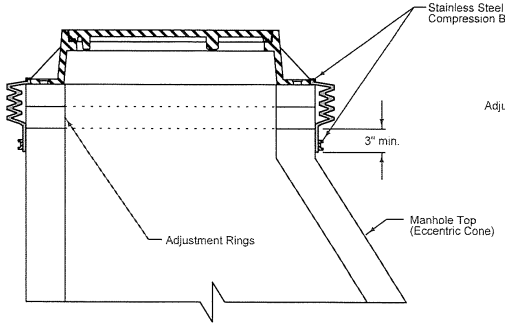
TYPICAL SANITARY SEWER DROP MANHOLE DETAILS

DATE: 07/24/19

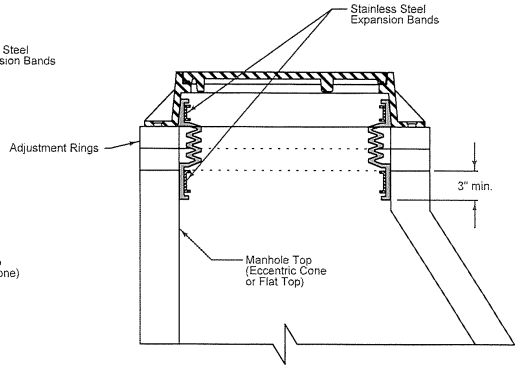
MP-6



EXTERNAL WRAP SEAL

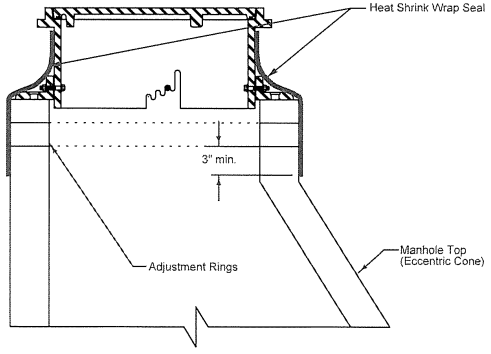


EXTERNAL CHIMNEY SEAL

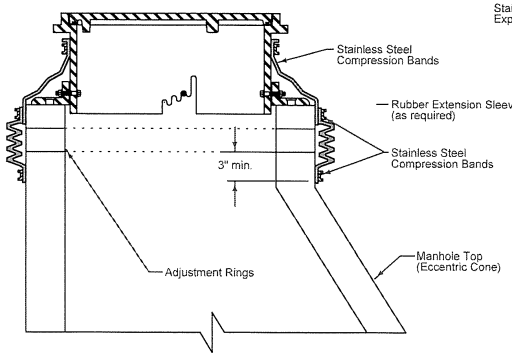


INTERNAL CHIMNEY SEAL

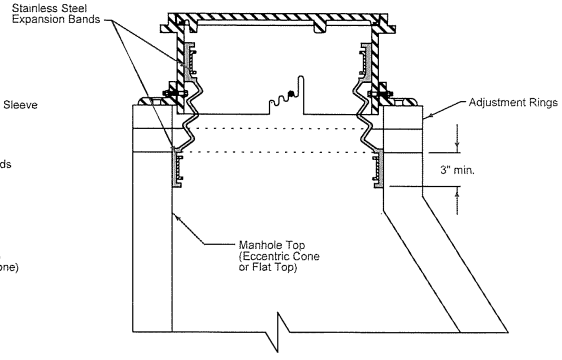
CASTING SEALS FOR 2-PIECE CASTINGS



EXTERNAL WRAP SEAL



EXTERNAL CHIMNEY SEAL



INTERNAL CHIMNEY SEAL

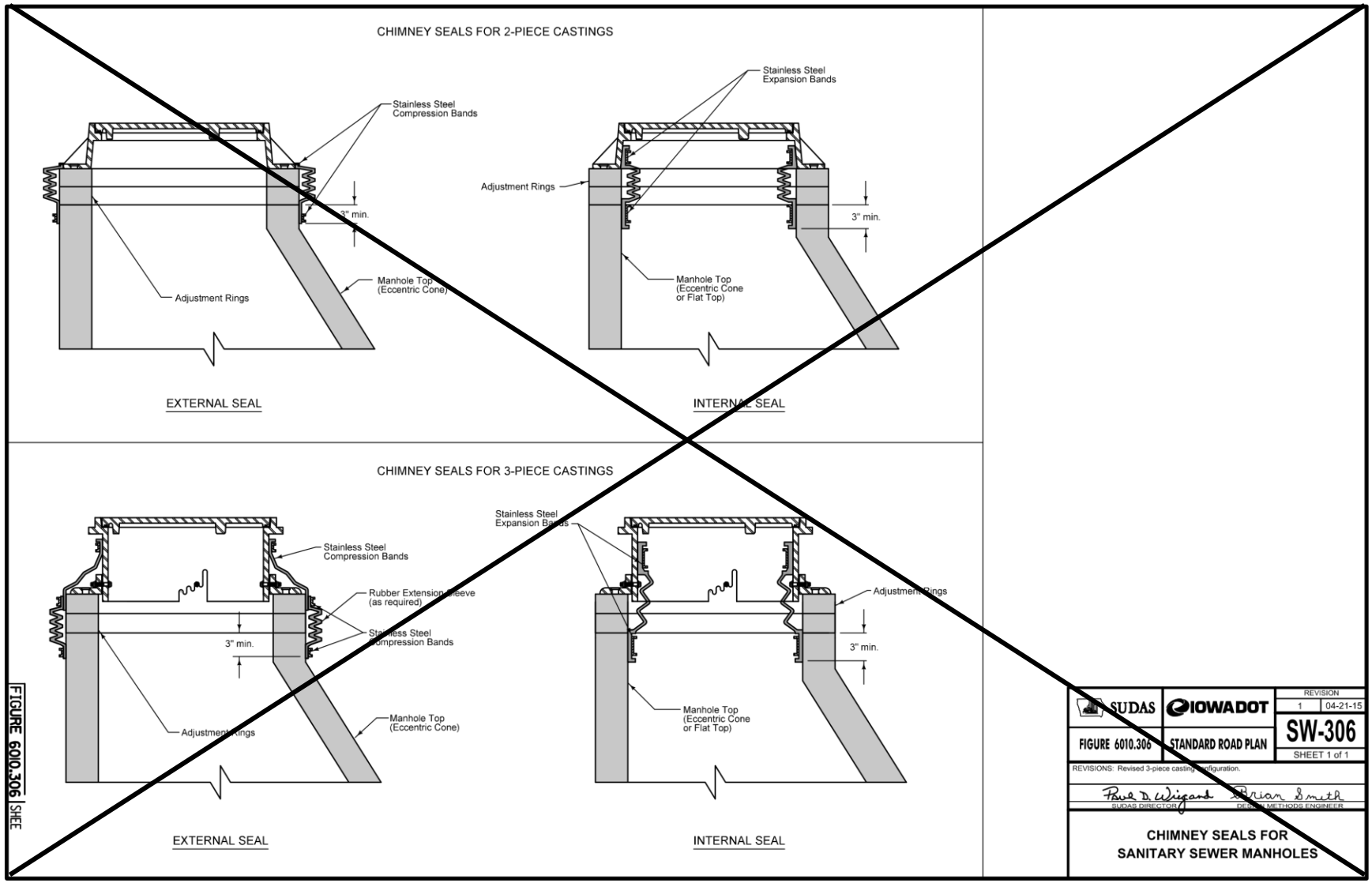
CASTING SEALS FOR 3-PIECE CASTINGS

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TYPICAL SANITARY SEWER MANHOLE CASTING SEAL DETAILS

DATE: 05/20/19

MP-7.2


CHIMNEY SEALS FOR 2-PIECE CASTINGS
Stainless Steel Compression Bands
3" min.
Adjustment Rings
Manhole Top (Eccentric Cone)
EXTERNAL SEAL
Stainless Steel Expansion Bands
Adjustment Rings
3" min.
Manhole Top (Eccentric Cone or Flat Top)
INTERNAL SEAL
CHIMNEY SEALS FOR 3-PIECE CASTINGS
Stainless Steel Compression Bands
Rubber Extension Sleeve (as required)
Stainless Steel Compression Bands
3" min.
Adjustment Rings
Manhole Top (Eccentric Cone)
EXTERNAL SEAL
Stainless Steel Expansion Bands
Adjustment Rings
3" min.
Manhole Top (Eccentric Cone or Flat Top)
INTERNAL SEAL
FIGURE 6010.306 SHEE
SUDAS
IOWA DOT
REVISION
1 04-21-15
FIGURE 6010.306
STANDARD ROAD PLAN
SW-306
SHEET 1 of 1
REVISIONS: Revised 3-piece casting configuration.
SUDAS DIRECTOR
DESIGN METHODS ENGINEER
CHIMNEY SEALS FOR SANITARY SEWER MANHOLES

Construct drop and overflow from ductile iron pipe of same diameter specified for sewer main. Provide mechanical joints for all ductile iron pipe and fittings.

(1) Place Class 1 bedding material, CLSM, flowable mortar, or concrete from top of elbow to bottom of sewer main.

(2) Encase elbow in concrete. 12 inches minimum on all sides.

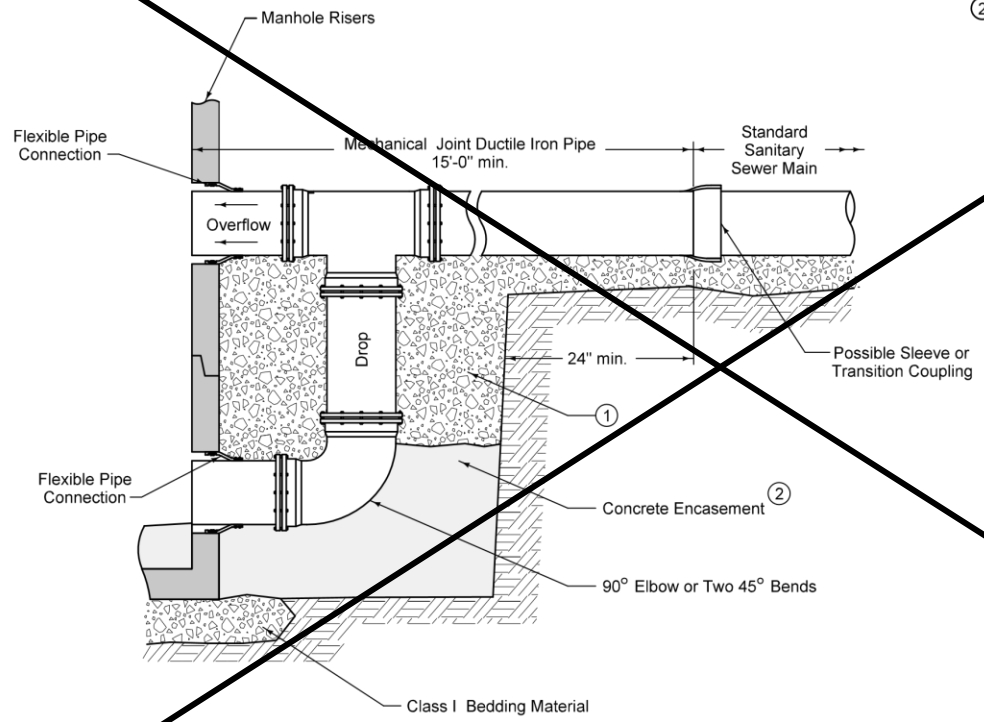


FIGURE 6010.307 SHEET

SUDAS | IOWA DOT

REVISION 1 04-17-18

FIGURE 6010.307 | STANDARD ROAD PLAN | SW-307

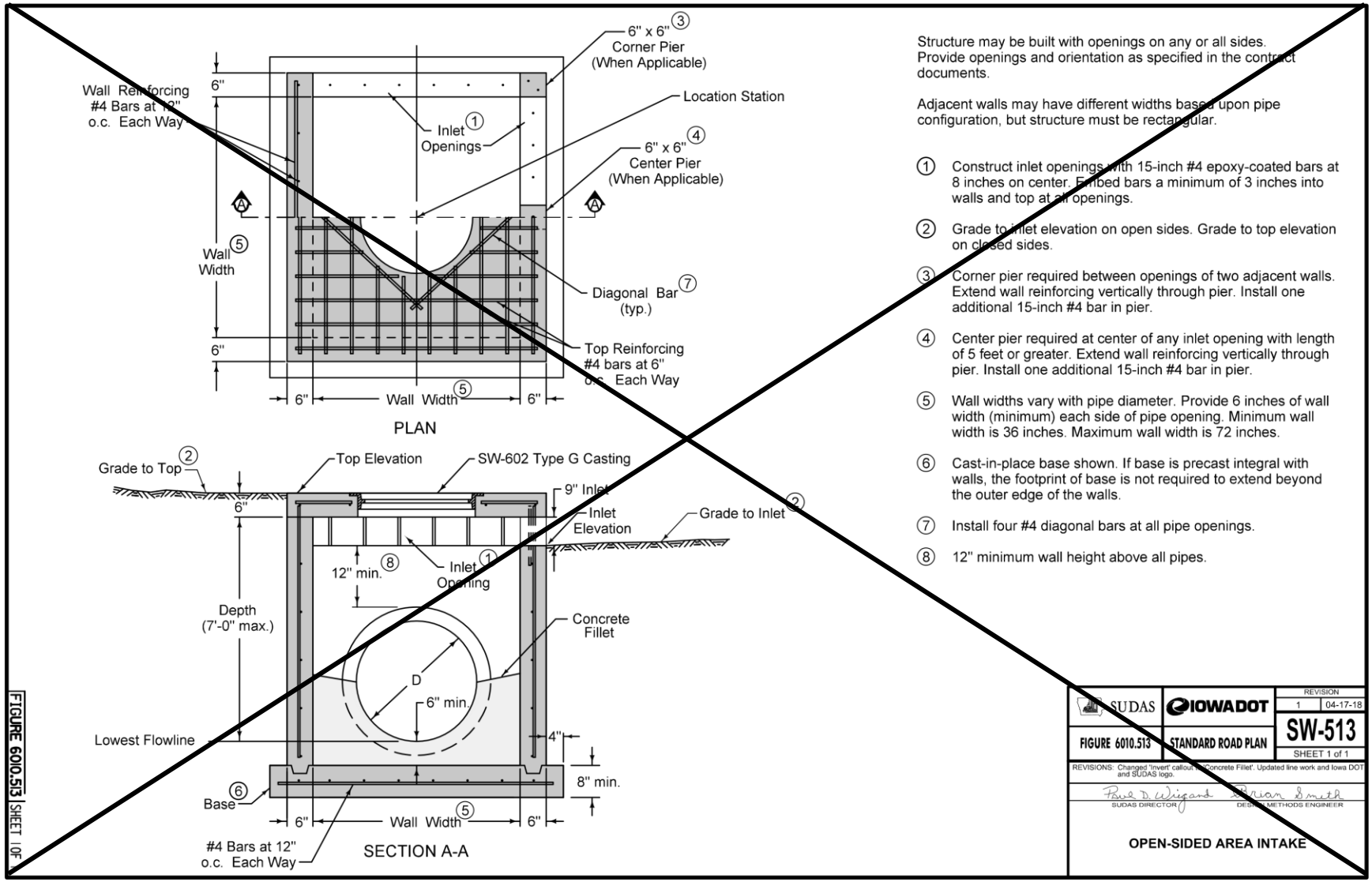
SHEET 1 of 1

REVISIONS: Replaced Iowa DOT and SUDAS logos.

Rud D. Wigant — SUDAS DIRECTOR

Brian Smith — DESIGN METHODS ENGINEER

DROP CONNECTION FOR SANITARY SEWER MANHOLE



Structure may be built with openings on any or all sides. Provide openings and orientation as specified in the contract documents.

Adjacent walls may have different widths based upon pipe configuration, but structure must be rectangular.

① Construct inlet openings with 15-inch #4 epoxy-coated bars at 8 inches on center. Embed bars a minimum of 3 inches into walls and top at all openings.

② Grade to inlet elevation on open sides. Grade to top elevation on closed sides.

③ Corner pier required between openings of two adjacent walls. Extend wall reinforcing vertically through pier. Install one additional 15-inch #4 bar in pier.

④ Center pier required at center of any inlet opening with length of 5 feet or greater. Extend wall reinforcing vertically through pier. Install one additional 15-inch #4 bar in pier.

⑤ Wall widths vary with pipe diameter. Provide 6 inches of wall width (minimum) each side of pipe opening. Minimum wall width is 36 inches. Maximum wall width is 72 inches.

⑥ Cast-in-place base shown. If base is precast integral with walls, the footprint of base is not required to extend beyond the outer edge of the walls.

⑦ Install four #4 diagonal bars at all pipe openings.

⑧ 12" minimum wall height above all pipes.

SUDAS	IOWA DOT	REVISION 1 04-17-18
FIGURE 6010.513	STANDARD ROAD PLAN	SW-513
		SHEET 1 of 1

REVISIONS: Changed 'invert' callout to 'Concrete Fillet'. Updated line work and Iowa DOT and SUDAS logo.

Paul D. Wigant
SUDAS DIRECTOR

Brian Smith
DESIGN METHODS ENGINEER

OPEN-SIDED AREA INTAKE

FIGURE 6010.513 SHEET 1 OF 1

SECTION 6020 - REHABILITATION OF EXISTING MANHOLES

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 6030 - CLEANING, INSPECTION, AND TESTING OF STRUCTURES

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SUPPLEMENTAL DIVISION 7 - STREETS AND RELATED WORK

SECTION 7010 -PORTLAND CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 2 - PRODUCTS

2.01 (ADD) MATERIALS

P. Synthetic Fiber Reinforcement.

1. Material: 100 percent virgin homopolymer polypropylene multifilament fibers, containing no reprocessed olefin materials.
2. Conformance: ASTM C 1116, Type III.
3. Fire Classifications:
   a. UL Report File No. R8534-11.
   b. Southwest Certification Services (SWCS), Omega Point Laboratories No. 8662-1.
4. Fiber Length: Single-cut lengths.
5. Alkali Resistance: Alkali proof.
6. Absorption: Nil.
7. Specific Gravity: 0.91.
8. Melt Point: 324 degrees F (162 degrees C).

PART 3 - EXECUTION

3.02 PAVEMENT CONSTRUCTION

C. Surface Fixture Adjustment:

1. Adjust manhole frames and other fixtures within area to be paved to conform to finished surface. Comply with Section 6010 (DELETE)~~, 3.04~~ (ADD) and 6020 for manhole adjustments (DELETE)~~ and Section 5020, 3.04 for water fixture adjustment~~s.

E. (ADD) Bar and Reinforcement Placement:

5. If noted on the plans, fiber mesh reinforcing shall be used with all concrete sidewalk and pavement. The fiber mesh shall be added at the rate of 1 bag

per cubic yard or as otherwise recommended by the manufacturer. The fiber shall be added directly to the truck at the time of mixing.

I. Finishing:

5. Surface Treatment:

b. **(DELETE)** ~~**Surface Tining:** When surface tining is specified, use a longitudinal tining. Under special circumstances, when specified in the contract documents, transverse tining may be required.~~

~~**1) Longitudinal:**~~

~~a) Complete longitudinal surface tining using a machine with a wire broom or comb. For small or irregular areas, or during equipment breakdown, hand methods may be used. Use a broom or comb with a single row of tines 1/8 inch (+/- 1/64 inch) in width and uniformly spaced at 3/4 inch intervals. The depth of the grooves must be a minimum of 1/8 inch to a maximum of 3/16 inch in the plastic concrete.~~

~~b) Use equipment with horizontal and vertical string line controls to ensure straight grooves.~~

~~c) Conduct this operation at such time and in such manner that the desired surface texture will be achieved while minimizing displacement of the larger aggregate particles and before the surface permanently sets.~~

~~d) At longitudinal joints, leave a 2 to 3 inch wide strip of pavement surface (centered along the joint) that is not grooved for the length of the joint.~~

~~**2) Transverse:**~~

~~a) If transverse surface tining is required or allowed, use a machine with a wire broom or comb. For small or irregular areas, or during equipment breakdown, hand methods may be used. Use a broom or comb with a single row of tines 1/8 inch (+/- 1/64 inch) in width and randomly spaced from 3/8 inch to 1 5/8 inch with no more than 50% of the spacing exceeding 1 inch. The depth of the grooves must be a minimum of 1/8 inch to a maximum of approximately 3/16 inch in the plastic concrete.~~

~~b) Conduct this operation at such time and in such manner that the desired surface texture will be achieved while minimizing displacement of the larger aggregate particles and before the surface permanently sets.~~

~~c) Where abutting pavement is to be placed, the tining should extend as close to the edge as possible without damaging the edge.~~

~~d) If abutting pavement is not to be placed, do not tine the 6 inch area nearest the edge or 1 foot from the face of the curb.~~

3.03 CURB AND GUTTER CONSTRUCTION (DELETE) (~~See Figure 7010.102~~ (ADD) MD-2 Curb and Gutter Details.)

B. Use a paving machine for curb and gutter. For curb and gutter sections less than 250 feet, hand finish methods may be used (ADD) if approved by the City Engineer.

3.04 PAVEMENT PROTECTION

A. Weather Conditions: Do not place concrete when stormy or inclement weather or temperature prevents good workmanship. Temperature restrictions and protection requirements may be modified by the Engineer under unusual conditions.

1. Cold Weather:

2) Stop mixing and placing when the air temperature is 38ºF or less and falling or if the temperature stops rising and does not reach 38ºF.

a) (ADD) When air temperature falls below 38°F, paving may continue if Contractor follows the requirements set forth in ACI 306 for cold weather concrete.

b) (ADD) ACI 306 will require specific temperatures of the concrete mixture for placement and curing. If these minimum temperatures cannot be maintained, concrete placement will not be allowed to continue.

c) (ADD) For reference, the temperature requirements are provided in the following table from ACI 306R-10:

(ADD) Table 5.1—Recommended Concrete Temperatures

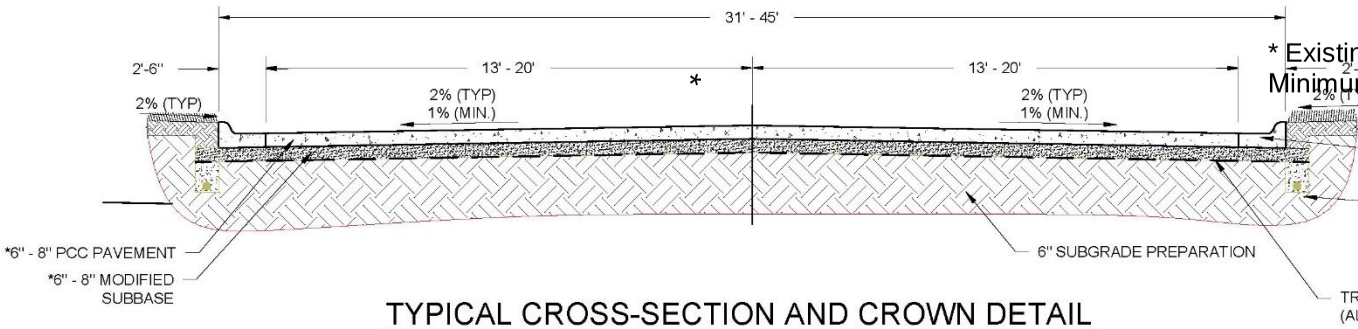
		Section size, minimum dimension			
		< 12 in. (300 mm)	12 to 36 in. (300 to 900 mm)	36 to 72 in. (900 to 1800 mm)	> 72 in. (1800 mm)
Line	**Air Temperature**	**Minimum concrete temperature as placed and maintained**			
1		55°F (13°C)	50°F (10°C)	45°F (7°C)	40°F (5°C)
		Minimum concrete temperature as mixed for indicated air temperature *			
2	Above 30°F (-1°C)	60°F (16°C)	55°F (13°C)	50°F (10°C)	45°F (7°C)
3	0 to 30°F (-18 to -1°C)	65°F (18°C)	60°F (16°C)	55°F (13°C)	50°F (10°C)
4	Below 0°F (-18°C)	70°F (21°C)	65°F (18°C)	60°F (16°C)	55°F (13°C)
5		**Maximum allowable gradual temperature drop in first 24 hours after end of protection**			
		50°F (28°C)	40° (22°C)	30°F (17°C)	20°F (11°C)

* For colder weather, a greater margin in temperature is provided between concrete as mixed and required minimum temperature of fresh concrete in place.

3.08 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

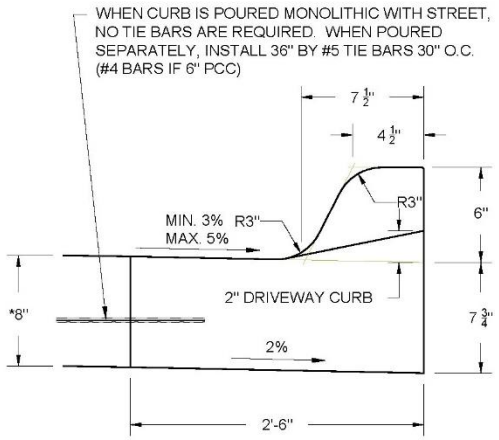
1. MR-1 PCC Pavement Typical Cross Sections
2. MR-3 Typical Residential Street Layout
3. MR-4 Typical Arterial/Collector Street Layout
4. MD-2 Typical Curb and Gutter Details
5. MR-5 Typical Street Utility Section Detail
6. MR-6 Typical Street Intersection Detail



* Existing Streets Shall Be Minimum 31' In Width.

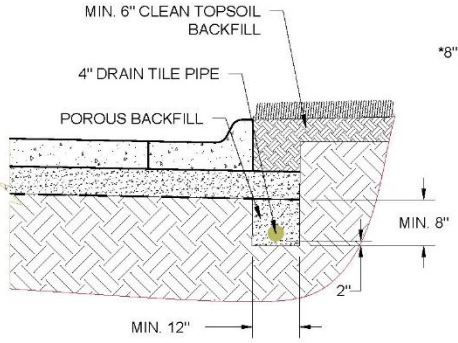
TYPICAL CROSS-SECTION AND CROWN DETAIL

NO SCALE



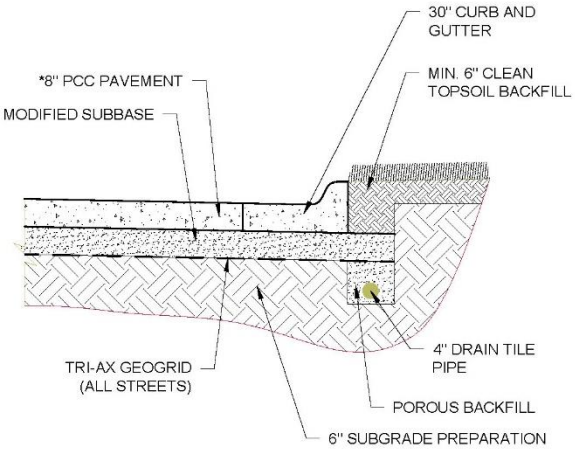
30" CURB AND GUTTER DETAIL

NO SCALE



SUBDRAIN DETAIL

NO SCALE



SUB-BASE AND SUBDRAIN DETAIL

NO SCALE

* RESIDENTIAL STREETS <1500 AADT 6" FIBER REINFORCED PCC & 6" SUBBASE

* ARTERIAL/COLLECTOR STREETS >1500 AADT 8" PCC & 8" SUBBASE.

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No. | Revisions | By | App. | Date

the City of Marshalltown

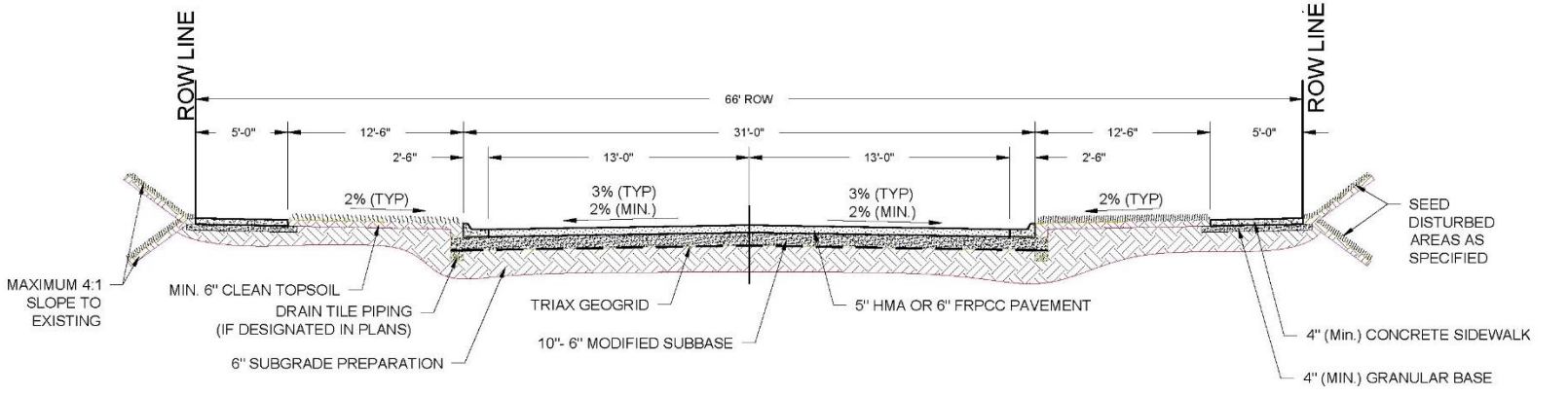
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCE | Scale: NONE | Proj. No: 103 | Dwg. No: 2015SS2007 MR-1 | Date: 2/5/03

MR-1 PCC PAVEMENT TYPICAL CROSS SECTIONS

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

1 OF 4



TYPICAL RESIDENTIAL STREET AND TERRACE CROSS SECTIONAL DETAIL

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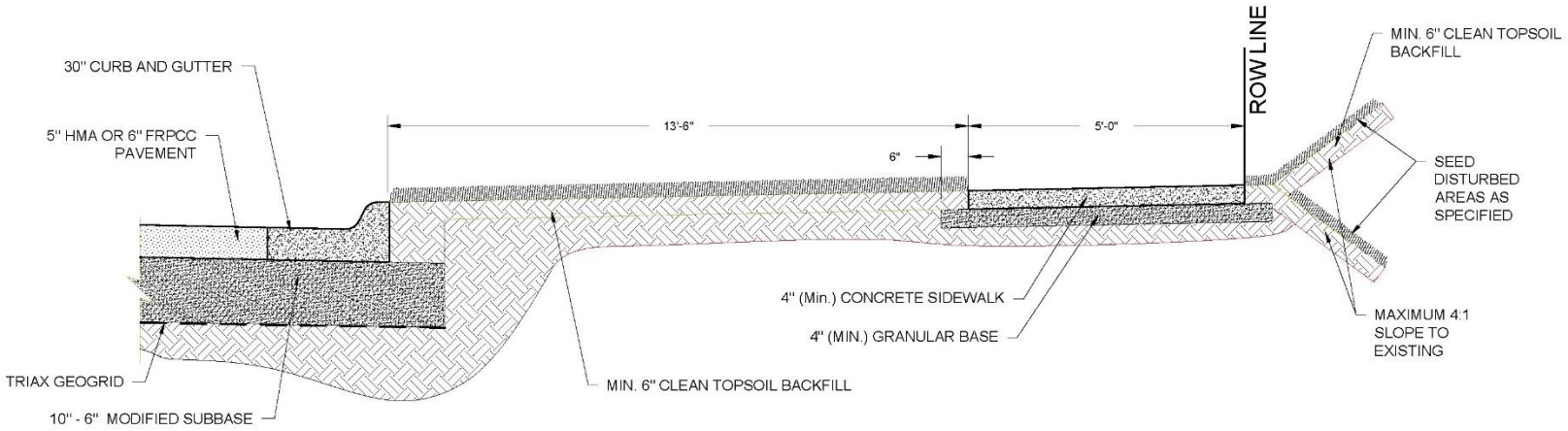


TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No. | Revisions | By | Appr. | Date

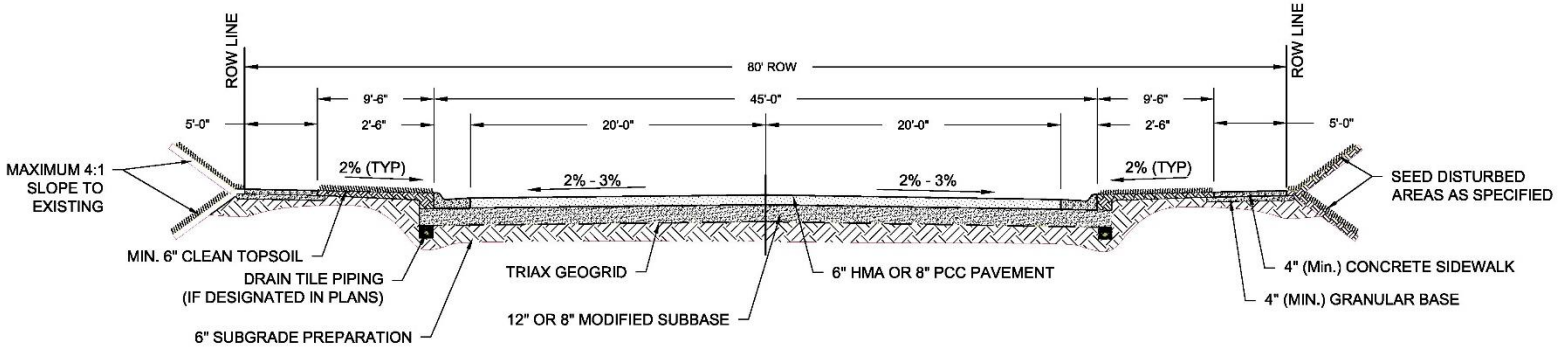
The City of Marshalltown
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCE | Scale: NONE | Proj. No.: 103 | Dwg. No.: MR-3 | VP. No.: | Date: 2/24/21

MR-3 TYPICAL RESIDENTIAL STREET LAYOUT

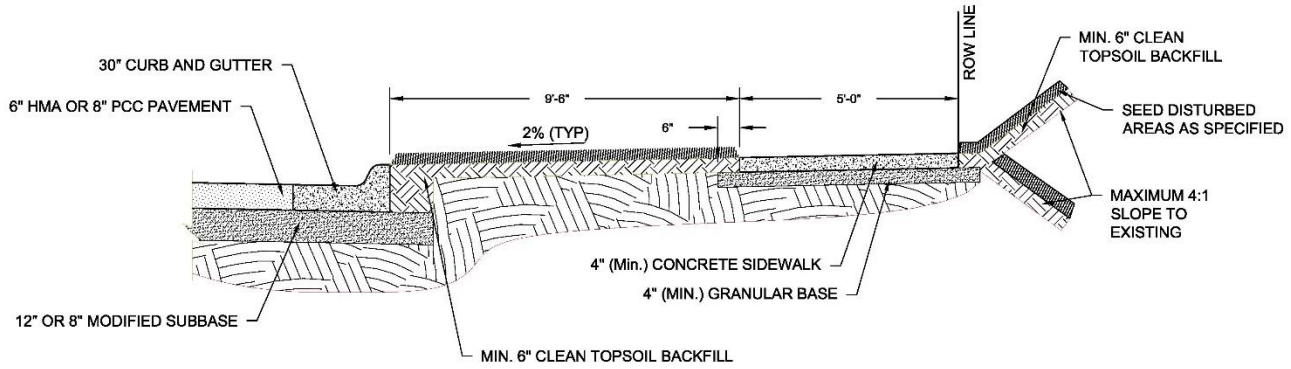
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

3 OF 4



TYPICAL ARTERIAL/COLLECTOR STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of Iowa.

Registration No.

No.	Revisions	By	App.	Date

The City of Marshalltown

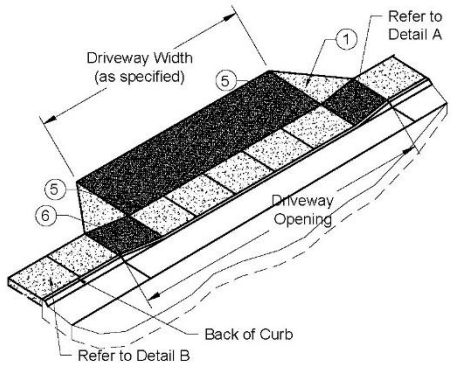
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1900
Dwg. No: MR-4
Ver. No: 1
Date: 2/9/21

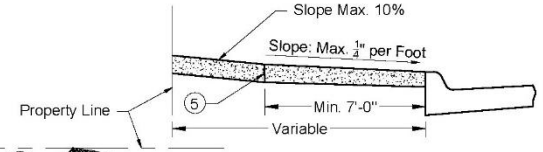
MR-4 TYPICAL ARTERIAL/ COLLECTOR STREET LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

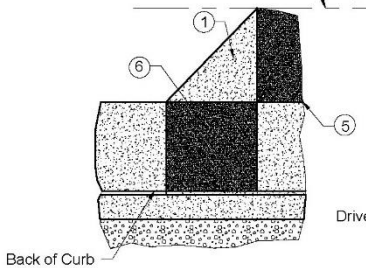
4 OF 4



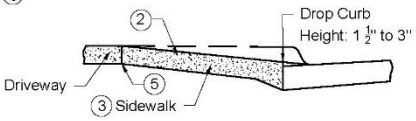
1. Flared back to driveway at property line. Match driveway thickness.
2. Driveway Thickness: Residential - 6 Inches Minimum
   Commercial/Industrial - 8 Inches Minimum
3. Sidewalk thickness through driveway to match thickness of the driveway
4. Match thickness of adjacent roadway, 8 inches minimum
5. 1/2 inch Pre Molded Expansion
6. Slope up at ~6.5% slope. Sloped section of the sidewalk/driveway will be min. 6 inches thick for residential areas and 8 inches for commercial areas.



DETAIL B - TYPICAL SECTION

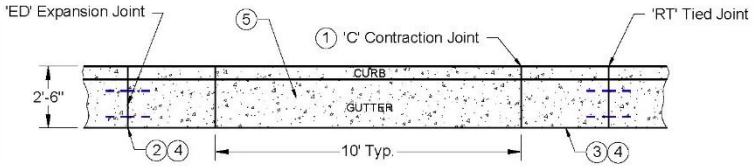


DETAIL A

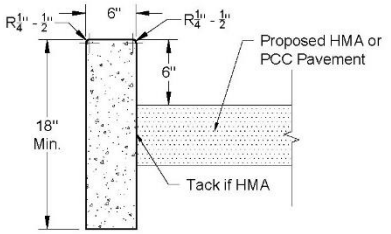


DETAIL C - DRIVEWAY SECTION

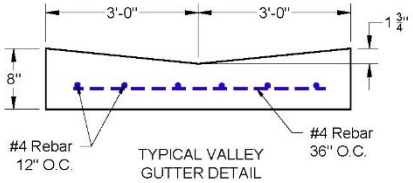
MD-1 DRIVEWAY WITH SIDEWALK ADJACENT TO CURB LAYOUT



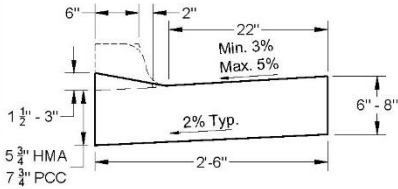
1. Type 'C' Contraction Joints to be at intervals of 10'.
2. Expansion Joints to be constructed at points of tangency of all curves
3. 'BT-5' , 'KT-1', or 'L' joint if Proposed Pavement is PCC. 'B' joint if Proposed Pavement is HMA.
4. If proposed pavement is PCC, match joint spacing for proposed pavement.
5. New driveways shall require the removal of curb and guttter and replacement with driveway curb and gutter as shown below. Grinding curb for driveway is not be allowed. Removal of curb back for driveway is not allowed.



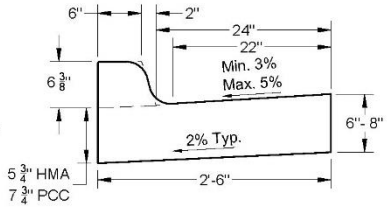
TYPICAL BEAM CURB DETAIL



TYPICAL VALLEY GUTTER DETAIL



DRIVEWAY DROP CURB



TYPICAL CURB SECTION

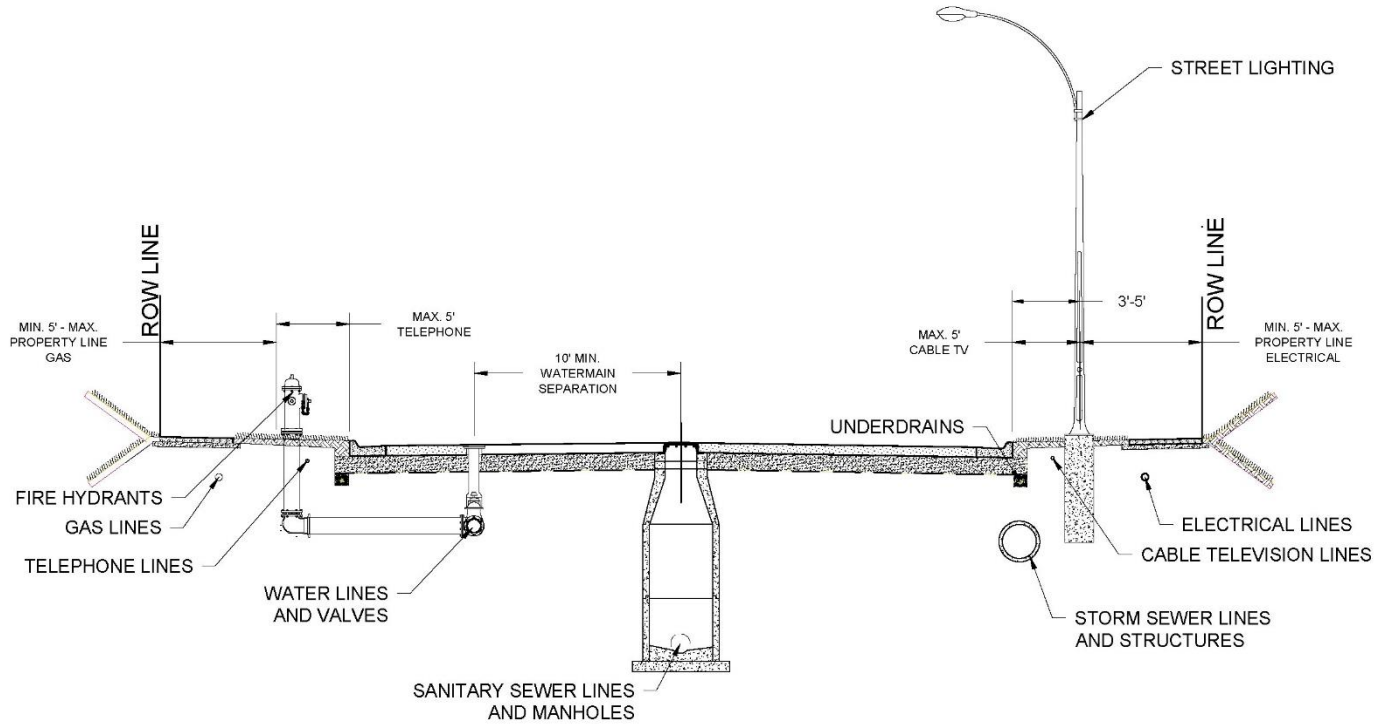
MD-2 CURB & GUTTER DETAILS

The City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No.:
Dwg. No.: MD-1 & MD-2
Typ. No.:
Date: 2/24/21

MD-1 & MD-2 STANDARD CITY DETAILS

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA



TYPICAL STREET UTILITY SECTION DETAIL

NO SCALE

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

the City of Marshalltown

PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1030
Dwg. No: [illegible]
VP. No: MR-3
Date: 2/24/21

MR-5 TYPICAL STREET UTILITY LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

3 OF 4

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA
MR-6 TYPICAL STREET
INTERSECTION LAYOUT
3 OF 4
Drawn By: JCR
Scale: NONE
Proj. No: 1000
Dwg. No: MR-3
Date: 2/2021
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734
ROW LINE
R12.5' MIN.
6' WIDE VALLEY
GUTTERS (IF NEEDED)
REINFORCED CONCRETE
FILLET SECTIONS
STORM SEWER
STRUCTURES
5' SIDEWALK
15'
MIN.
10' MIN.
WATERMAIN
SEPARATION
SANITARY SEWER
MANHOLES
WATER LINES
AND VALVES
STORM SEWER
PIPING
CAST-IRON
DETECTABLE
WARNING PANELS
SANITARY
SEWER PIPING
30" CURB
AND GUTTER

SECTION 7011 - PORTLAND CEMENT CONCRETE OVERLAYS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 7020 - HOT MIX ASPHALT PAVEMENT

PART 1 - GENERAL

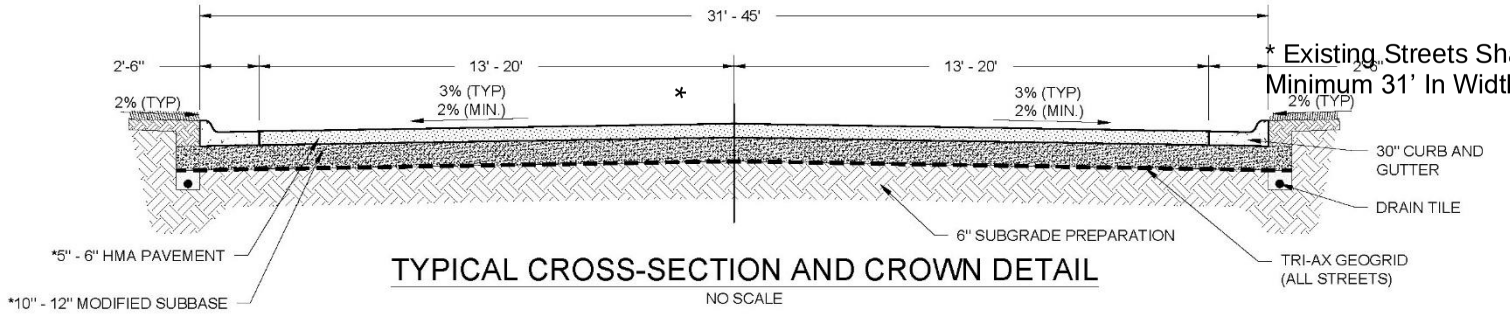
1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 3 - EXECUTION

3.09 (ADD) MARSHALLTOWN STANDARD DETAILS

A. Added the following details:

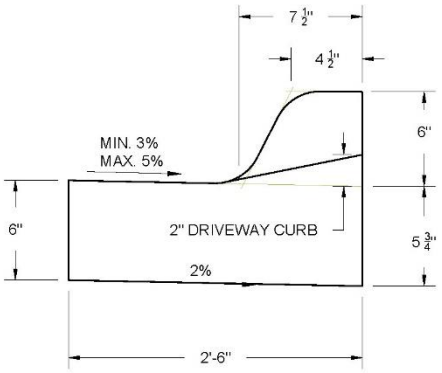
1. MR-2 HMA Pavement Typical Cross Sections
2. MR-3 Typical Residential Street Layout
3. MR-4 Typical Arterial/CollectorStreet Layout
4. MR-6 Typical Street Intersection Detail



* Existing Streets Shall Be Minimum 31' In Width.

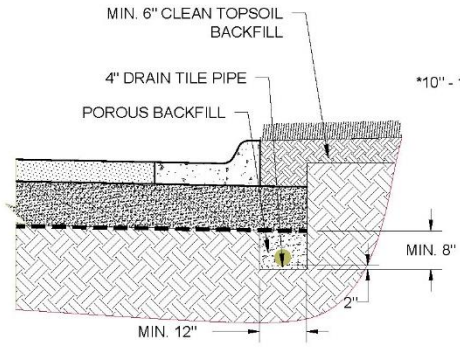
TYPICAL CROSS-SECTION AND CROWN DETAIL

NO SCALE



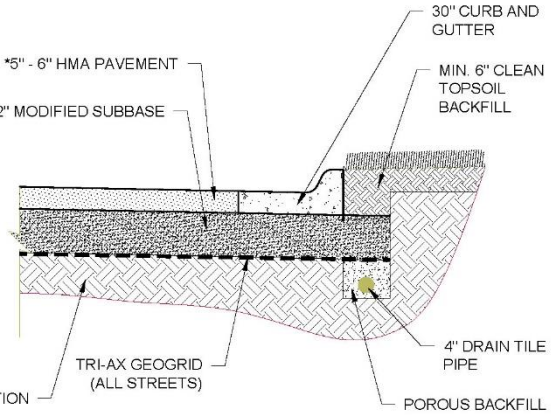
30" CURB AND GUTTER DETAIL

NO SCALE



SUBDRAIN DETAIL

NO SCALE



SUB-BASE AND SUBDRAIN DETAIL

NO SCALE

*RESIDENTIAL STREETS <1500 AADT 5" HMA & 10" SUBBASE

*ARTERIAL/COLLECTOR STREETS >1500 AADT 6" HMA & 12" SUBBASE.

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No. | By | Appr. | Date | Revisions

The City of Marshalltown

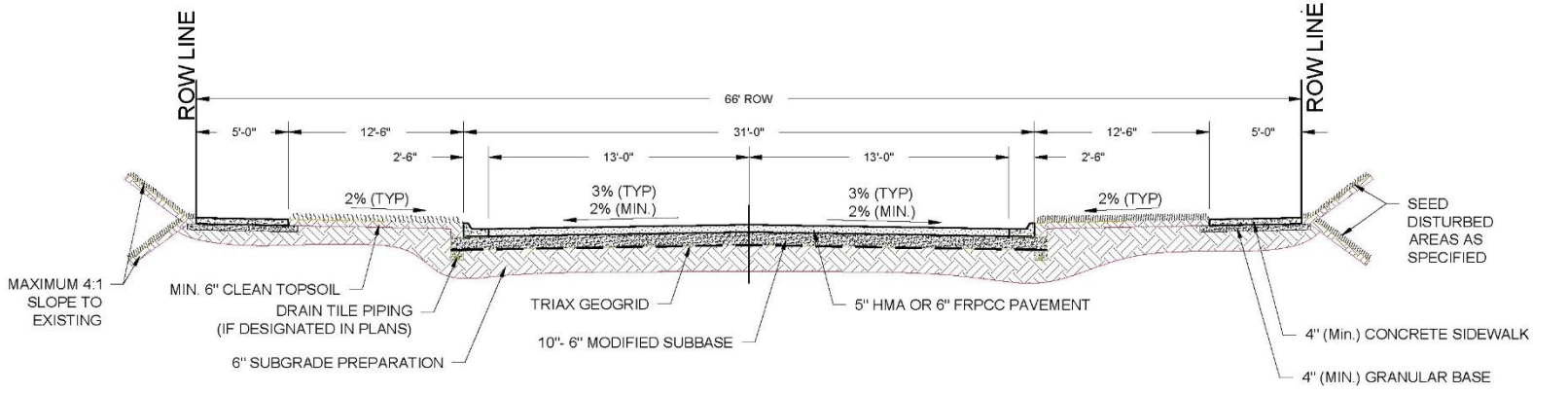
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK | Scale: NONE | Proj. No: 103 | Dwg. No: MR-2 | VP. No: | Date: 2/2/21

MR-2 HMA PAVEMENT
TYPICAL CROSS SECTIONS

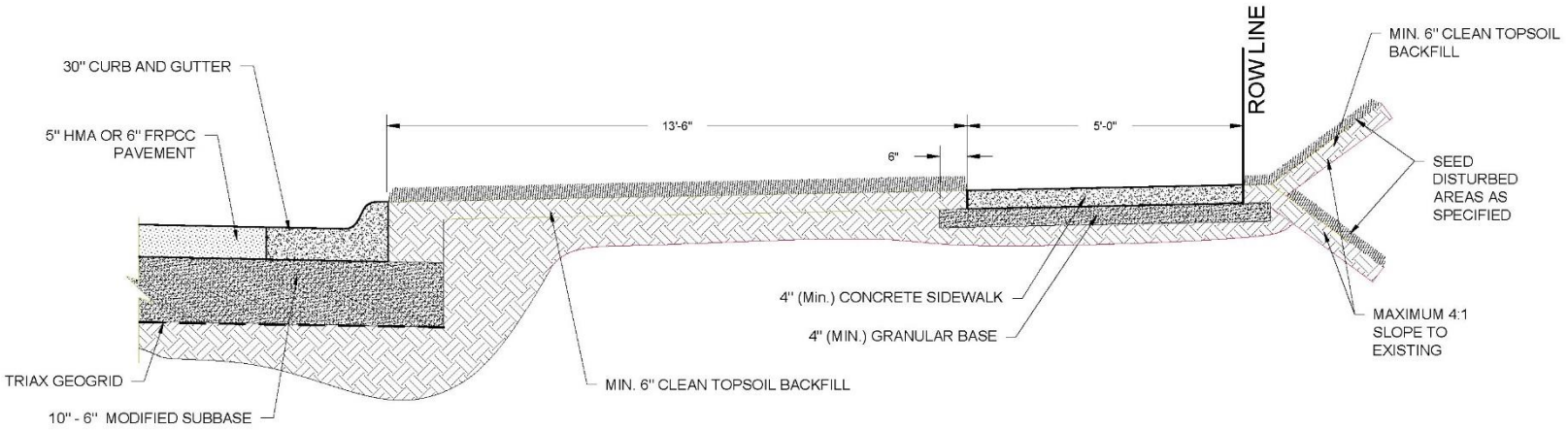
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

2 OF 4



TYPICAL RESIDENTIAL STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

The City of Marshalltown

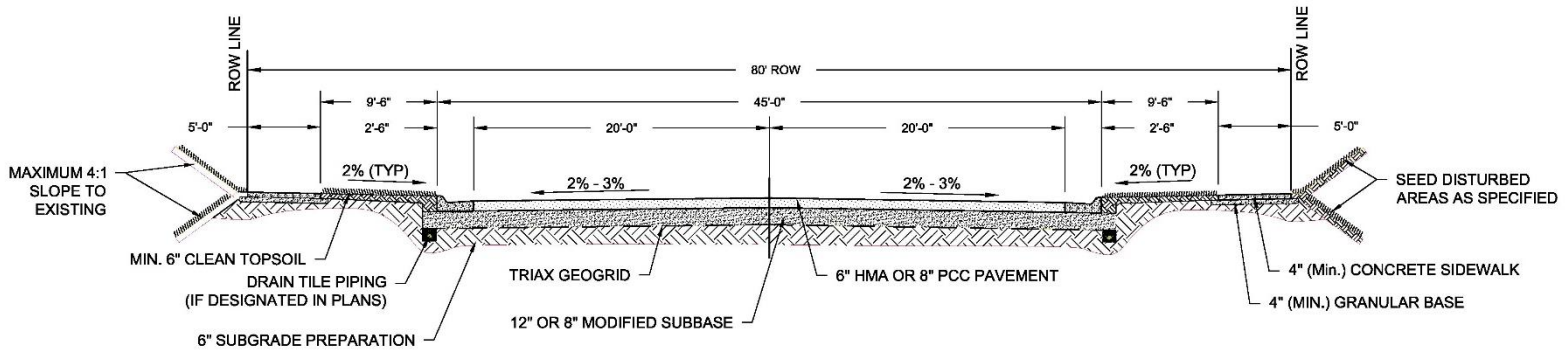
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1039
Dwg. No: MR-3
Date: 2/24/20

MR-3 TYPICAL RESIDENTIAL STREET LAYOUT

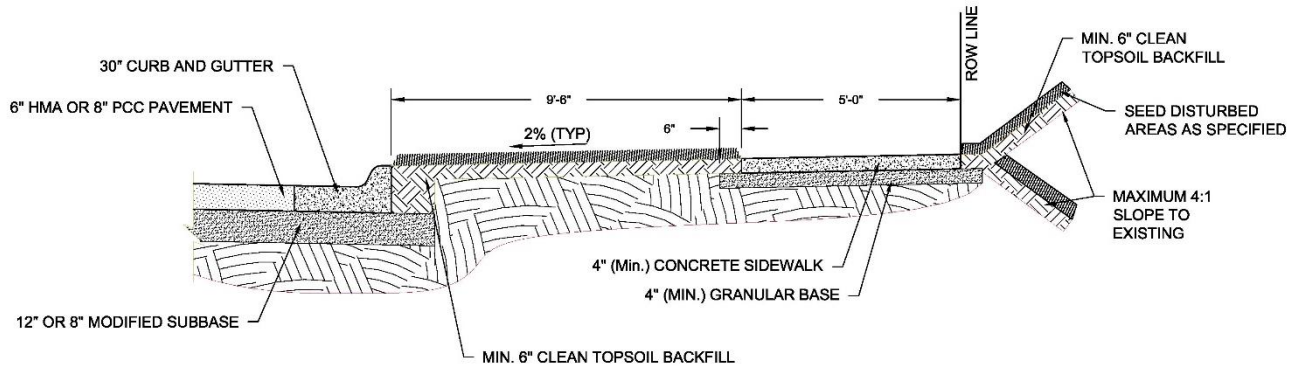
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

3 OF 4



TYPICAL ARTERIAL/COLLECTOR STREET AND TERRACE CROSS SECTIONAL DETAIL

NO SCALE



TYPICAL TERRACE CONSTRUCTION DETAIL

NO SCALE

No.	Revisions	By	App.	Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of Iowa.

Registration No.

the City of Marshalltown

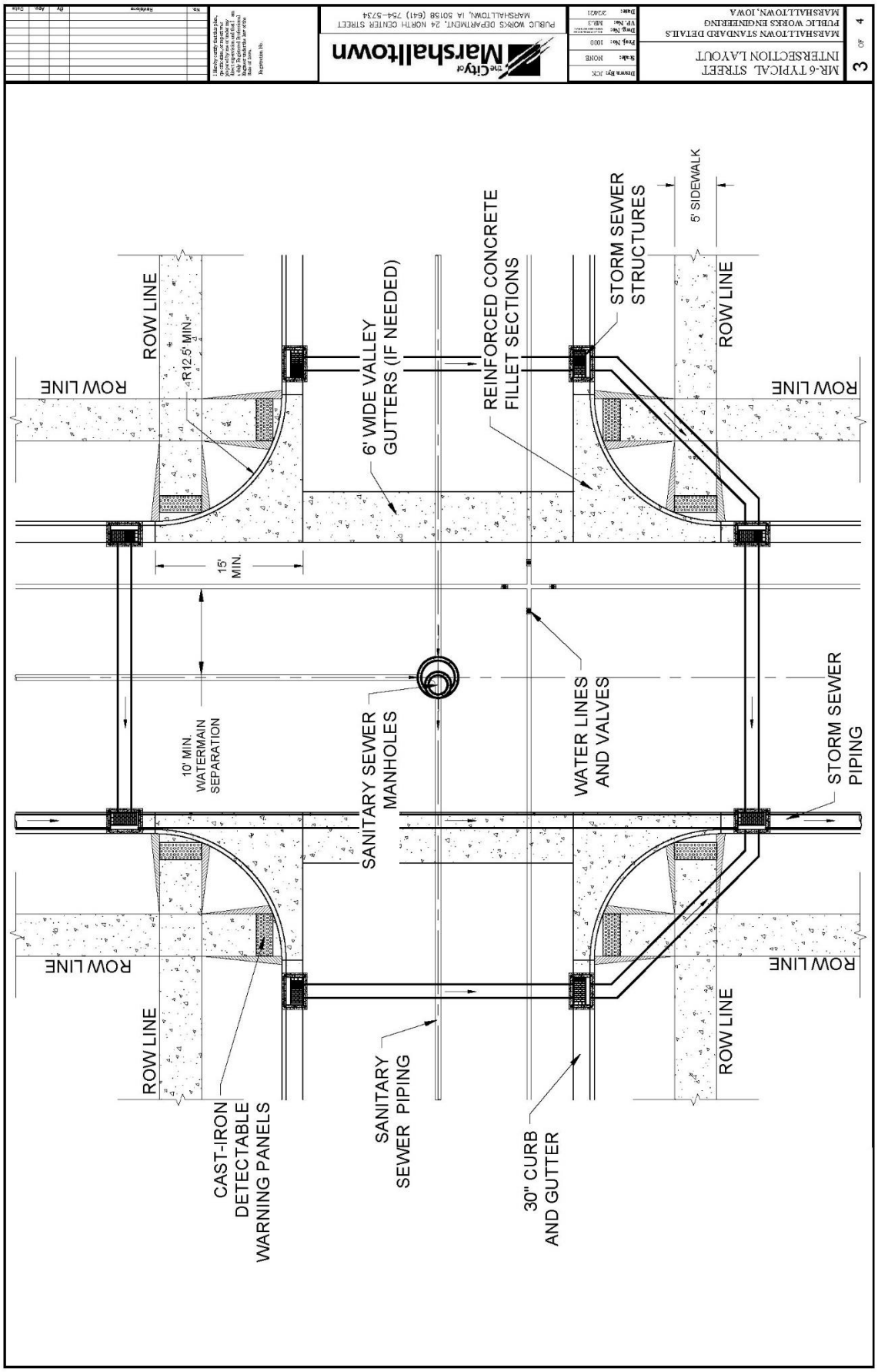
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734

Drawn By: JCK
Scale: NONE
Proj. No: 1000
Dwg. No: [illegible]
VP. No: MR-4
Date: 2/24/21

MR-4 TYPICAL ARTERIAL/ COLLECTOR STREET LAYOUT

MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

4 OF 4


MR-6 TYPICAL STREET
INTERSECTION LAYOUT
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA
3 OF 4
PUBLIC WORKS DEPARTMENT, 24 NORTH CENTER STREET
MARSHALLTOWN, IA 50158 (641) 754-5734
the City of Marshalltown
ROW LINE
R12.5' MIN.
6' WIDE VALLEY GUTTERS (IF NEEDED)
REINFORCED CONCRETE FILLET SECTIONS
STORM SEWER STRUCTURES
5' SIDEWALK
15' MIN.
10' MIN. WATERMAIN SEPARATION
SANITARY SEWER MANHOLES
WATER LINES AND VALVES
STORM SEWER PIPING
CAST-IRON DETECTABLE WARNING PANELS
SANITARY SEWER PIPING
30" CURB AND GUTTER

SECTION 7021 - HOT MIX ASPHALT OVERLAYS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 7030 - SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 2 -PRODUCTS

2.01 PORTLAND CEMENT CONCRETE

A. Class (DELETE) ~~B or~~ C concrete with materials complying with Section 7010. Use coarse aggregate of Class 2 durability or better.

Table 7030.01: PCC Mixes

Type of Concrete	Machine Finish Class (DELETE) ~~B or~~ C	Hand Finish Class(DELETE) ~~B or~~ C
Slump Minimum	1/2 in.	1/2 in.
Slump Maximum	2 1/2 in.	4 in.
Percent Air Content		
• Target	7%	7%
• Minimum	6%	6%
• Maximum	8 1/2%	8 1/2%

2.07 DETECTABLE WARNINGS

A. (DELETE) ~~Use manufactured detectable warning panels with a non-slip surface and raised truncated domes. Comply with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (also known as PROWAG) for contrast and dimension requirements. Also comply with Iowa DOT Materials I.M. 411.~~

A. (ADD) Detectable warning surfaces are a requirement of the Americans with Disabilities Act (ADA) and required when construction and altering curb ramps and street pavement. The Truncated domes are the only detectable warnings allowed by ADA.

B. (ADD) Detectable warnings shall consist of cast-iron or steel panels with a minimum width of 24-inches and lengths of 24-inches and/or 30-inches. The panels shall be slip resistant and extend the full width of the curb ramp.

C. (ADD) Panels shall be provided with anchors for casting into concrete surfacing.

D. (ADD) Per ADA guidelines, the truncated domes shall be aligned in a square pattern and have a maximum 1.4-inch base diameter and a height of 0.2-inch. They shall be spaced 2.4-inches apart from one another and have a base-to-base spacing of at least 0.65-inch.

E. (ADD) The visual contrast between adjoining surfaces shall be satisfied with a natural patina.

2.10 (ADD) CONCRETE CURING COMPOUND

A. General:

1. Comply with ASTM C 309. White pigmented compounds are typically used for most construction. However, clear compounds may be used adjacent to businesses and homes to reduce tracking problems.

B. Sprayability:

1. Use compounds of a consistency that they can be readily applied by spraying to a uniform coating at a material temperature above 40°F.

2. Moisture Retention:

3. White pigmented liquid curing compounds, when tested in accordance with ASTM C156 using an application rate of 200 square feet per gallon shall restrict the loss of water to not more than 0.20 kg/m2 in 24 hours or 0.40 kg/m2 in 72 hours.

C. Drying Time:

1. Use liquid curing compounds that:

a. Dry to the touch in no more than 4 hours, and

b. Do not track off the concrete when walked upon after 12 hours.

D. White Pigmented Compounds.

1. Use compounds consisting of finely ground white pigment and vehicle, ready mixed for use without alteration.

2. Ensure the pigment does not settle excessively or cake in the container, and thicken in storage to cause a change in consistency which may result in a non-uniform spray.

3. Use a compound that after being sprayed on a test slab and drying has an apparent daylight reflectance no less than 60% relative to magnesium oxide.

4. Agitate the compound just prior to it being removed from the container. Agitate it continuously during application.

E. Clear Compounds:

1. Apply the following in lieu of other requirements of this section:
2. Use clear liquid membrane curing compounds complying with the requirements of ASTM C309, Type 1-D, Class A. Use only one type of compound on a structure. Do not use different compounds on the same structure.
3. Agitate the compound just prior to it being removed from the container. Agitate it continuously during application.

2.11 (ADD) GRANULAR SUBBASE MATERIAL

A. Aggregate of the following types:

1. Crushed stone,
2. Gravels of which 30% or more of the particles retained on the 3/8-inch sieve have at least one fractured face as specified in Iowa DOT Materials I.M. 305,
3. Crushed PCC pavement meeting the requirements specified in Iowa DOT Materials I.M. 210, or
4. Uniformly blended combinations of these materials.

B. Gradation:

1. Crushed material: Meet the requirements for Gradation No. 12a of the Aggregate Gradation Table, specified in Iowa DOT Article 4109.02.
2. Gravel: Meet the requirements for Gradation No. 12b of the Aggregate Gradation Table, specified in Iowa DOT Article 4109.02.

C. Quality:

1. The requirements of the following table apply to the individual virgin aggregates before combining:

(ADD) Coarse Aggregate Quality (Virgin Material)

Coarse Aggregate Quality	Maximum Percent Allowed	Test Method
Abrasion	50	AASHTO T 96
Alumina[(a)]	1.5	Office of Materials Test Method No. Iowa 222
A Freeze	25	Office of Materials Test Method No. Iowa 211, Method A
(a) If the Alumina value fails, determine the A Freeze value for specification compliance. Office of Materials Test Method No. Iowa 222 does not apply to gravel.		

PART 3 - EXECUTION

3.04 PCC SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

A. Form Setting: Comply with Section 7010 with the following additional requirements and exceptions.

2. Wood forms are allowed. (ADD) Wood forms shall be full height of concrete depth, i.e., wood forms for 4-inches depth sidewalk shall not be a standard industry 1x4 or 2x4.

5. Measure or stake as required to construct project elements. If either of the following is met and construction survey is not a bid item, the Contracting Authority will verify that form work complies with the design requirements:

c. (ADD) The design cross slope of the sidewalk, turning space, or shared use path shall not exceed 2.0% or be less than 1.0%.

d. (ADD) The design cross slope of any driveway crossing a sidewalk or shared use path shall not exceed 2.0% or be less than 1.0%.

e. (ADD) The design cross slope of driveways located between the street and the sidewalk shall not be more than 10% nor less than 1.0%.

B. Concrete Pavement Placement:

3. Driveways: Comply with Figures (ADD) MD-1, MD-2, 7030.101 and 7030.102 and Section 7010. The use of a paving machine is not required.

E. Form Removal: Comply with Section 7010 (ADD) and.

1. (ADD) Timing:

a. Remove forms after the initial set of the concrete has taken place.

b. Remove stakes and forms with care to prevent cracking, spalling, or over stressing concrete. If damage does occur, repairs will be made as required by the Engineer.

2. (ADD) Honeycomb Repair:

a. When the forms are removed, fill honeycombs with mortar composed of one (1) part cement and two (2) parts fine aggregate by weight.

b. If the honeycombing is to the degree and nature that it is considered by the Engineer as defective work, remove and replace at no additional cost to the City.

3. (ADD) Remove all excess concrete from areas along forms and/or backfill area. No excess concrete shall be allowed along edges of sidewalks, trails or curbing.

4. (ADD) In the area adjacent to the new concrete, immediately place backfill after the forms are removed. Construct dams or other protection to ensure that no saturation or erosion of the subgrade under or near the surfacing occurs. This may include check dams, pumping, etc.

5. (ADD) Material used for backfilling shall be free from spongy or vegetative substances, rocks, asphalt, broken concrete, frozen material or any other debris. The top six (6) inches shall be a soil suitable for growing grass.

F. Jointing:

2. Transverse Contraction Joints:

a. Shared Use Paths (ADD) and Sidewalks:

1) Space transverse joints equal to the width of the shared use path, or as specified in the contract documents.

~~2)~~ (DELETE) ~~Saw contraction joints according to Section 7010.~~

2) Saw contraction joints within 12-hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness.

3) Use a straightedge if joints are sawed with a hand-held saw.

b. (DELETE) ~~Sidewalks and~~ Driveways:

1) (DELETE) ~~Space sidewalk contraction joints equal to the width of the sidewalk~~. (ADD) Space driveway contraction joints to match sidewalk joints whenever possible. Joints shall be spaced to form rectangular panels where the long dimension does not exceed 1-½ times the short dimension. In no case will the panel length exceed 9-feet for 6-inches of concrete or 12-feet for 8-inches of concrete.

2) (DELETE) ~~Space driveway contraction joints so panel length does not exceed 12 feet.~~ (ADD) Contraction joints shall be sawn within 12-hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness.

3) (DELETE) ~~Form transverse contraction joints to a depth of 1 1/4 inches with a pointed trowel or jointing tool. In lieu of forming, joints may be sawed within 12 hours of placement with a 1/8 inch blade saw to a depth of 1/3 the pavement thickness.~~ (ADD) Use a straightedge if joints are sawn with a hand-held saw.

3. Longitudinal Contraction Joints:

a. Shared Use Paths and Sidewalks: Saw joint to 1/8 inch wide and to a depth of 1/3 the pavement thickness.

1) (ADD) Longitudinal contraction joints will be placed when the width of the path/sidewalk exceeds 6-feet for 4-inches concrete or 9-feet for 6-inches concrete.

2) (ADD) Contraction joints shall be sawn within 12-hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawn with a hand-held saw.

b. Driveways:

1) (DELETE) ~~Space longitudinal contraction joints so panel width does not exceed 12 feet.~~ (ADD) Space longitudinal contraction joints so panel length or width does not exceed 9-feet for 6-inches of concrete or 12-feet for 8-inches of concrete.

2) (DELETE) ~~Form longitudinal contraction joints to a depth of 1 1/4 inches with a pointed trowel or jointing tool. In lieu of forming, joints may be sawed with a 1/8 inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawed with a hand-held saw~~. (ADD) Contraction joints shall be sawn within 12 hours of placement with a 1/8-inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawn with a hand-held saw.

G. (ADD) Granular Base:

1. (ADD) Shared Use Paths and Sidewalks will be placed on a minimum of 4-inches of compacted granular base.
2. (ADD) Driveways shall be placed on a minimum of 6-inches of compacted granular base.
3. (ADD) Granular Base shall be compacted to a minimum 98% Standard proctor density at a moisture content of ±3% of optimum moisture as determined by ASTM D698.

3.13 (ADD) SIDEWALK GRADES

A. All staking for sidewalk grades, grading subgrade preparation and form installation will be the full responsibility of the contractor. The City Engineers office will inspect the forms and subgrade preparation prior to concrete placement.

B. When a new sidewalk is being constructed and the grade is different than the present adjoining sidewalks, the following shall apply:

C. Beginning at the property line the slope of the sidewalk shall be a maximum 8.3% from the adjoining sidewalk to the grade of the new sidewalk. When the existing sidewalk cross slope does not meet requirements, a transition segment shall be installed to match existing slope. See SUDAS Figures 7030.204, 7030.206, 7030.207, 7030.208 and 7030.209.

3.14 (ADD) SIDEWALK ALIGNMENT:

A. Unless otherwise approved by the City Engineer the back of the sidewalk shall match the adjoining property line.

B. All private sidewalks joining the City Sidewalk will be built to the new sidewalk grade. Driveway sidewalks may remain at the present grade unless they are being replaced, and if they are being replaced they will be built to the proper grade.

C. The Standard City Sidewalk grade is a quarter (¼) inch per foot maximum across the sidewalk and half (½) inch per foot across the terrace to the street. Deviations from this standard grade will be allowed only with the approval of the City Engineer and only in areas where existing walks are at a nonstandard grade or where a standard grade will cause a severe hardship to the adjacent property owners.

3.15 (ADD) INSPECTIONS

When the Contractor is ready to pour the sidewalk, an inspection shall be requested from the City Engineer's office. Enough advance notice shall be given to provide ample time for the inspector to get to the job site and inspect the work so the contractor can make any changes required, before the concrete arrives.

3.16 (ADD) CURB CUTS

A. It shall be unlawful for any person, firm, or corporation to cut or remove any curbing for any purpose without first securing a written permit from the City Engineer.

B. Grinding of curbs for driveway entrances are not allowed. Removal of back of curb and extending driveway to gutter pan is not allowed.

C. All curb cuts shall be made by removal of existing curb (if required) and replacement with either driveway curb (and gutter) or handicap curb (and gutter) as provided in the City of Marshalltown MD-1, MD-2 Details and SUDAS Figures 730.101R, 7030.102R, 7030.204, 7030.205, 7030.206, 7030.207, 7030.208 and 7030.209.

3.17 (ADD) CURB AND GUTTER CONSTRUCTION

Comply with Section 7010, 3.03 and MD-2.

3.18 (ADD) MARSHALLTOWN STANDARD DETAILS

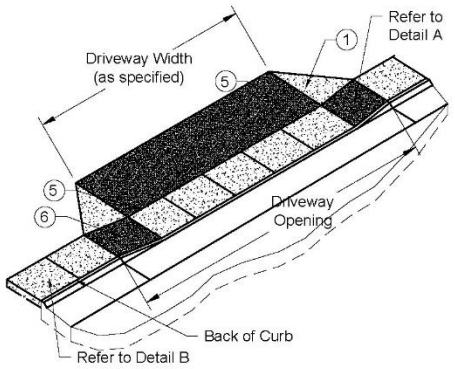
A. Added the following details:

1. MD-1 Driveway with Sidewalk Adjacent to Curb Detailsl
2. MD-2 Curb & Gutter Details
3. MD-3 Sidewalk over Utility Trench Detail
4. MD-5 Sidewalk Trench Drain with Cover Plate

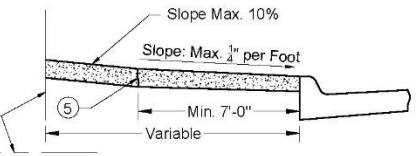
B. See modifications to SUDAS Standard Details as listed on each detail and provided below:

1. Figure 7030.101 – Revised sidewalk adjacent to driveway to add section for transition. Added curb replacement for new driveways.
2. Figure 7030.102 - Revised sidewalk adjacent to driveway to add section for transition. Added curb replacement for new driveways.
3. Figure 7030.103 – Revision to sidewalk location and property line. Added target slope to sidewalk.

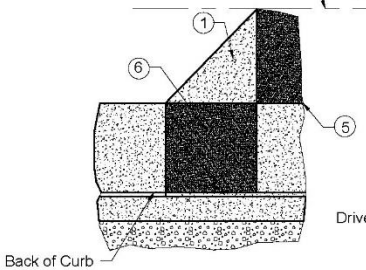
4. Figure 7030.201 – Revised Class A sidewalk layout and added premolded expansion material.
5. Figure 7030.202 – Removed Detail 1 and Revised Detail 2.
6. Figure 7030.206 – Change sidewalk/ramp width to 5’-0” min. Changed curb side sidewalk to min. 7’-0” width.
7. Figure 7030.207 – Added detail for preformed expansion joints.
8. Figure 7030.2.08 - Added detail for preformed expansion joints.
9. Figure 7030.209 – Changed minimum ramp and turning width to 5’-0”.



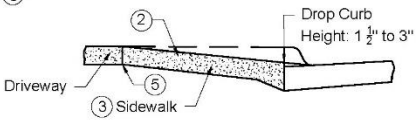
1. Flared back to driveway at property line. Match driveway thickness.
2. Driveway Thickness: Residential - 6 Inches Minimum
   Commercial/Industrial - 8 Inches Minimum
3. Sidewalk thickness through driveway to match thickness of the driveway
4. Match thickness of adjacent roadway, 8 inches minimum
5. 1/2 inch Pre Molded Expansion
6. Slope up at ~6.5% slope. Sloped section of the sidewalk/driveway will be min. 6 inches thick for residential areas and 8 inches for commercial areas.



DETAIL B - TYPICAL SECTION

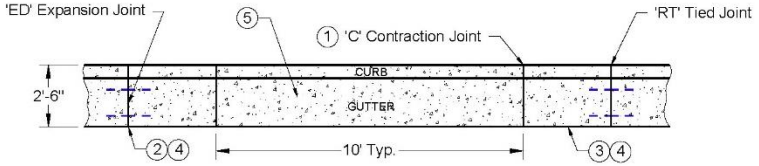


DETAIL A

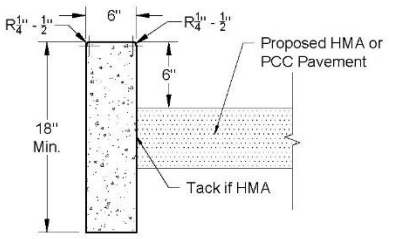


DETAIL C - DRIVEWAY SECTION

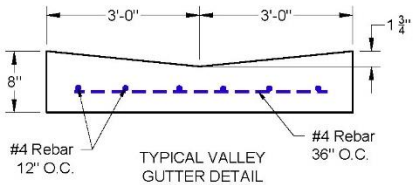
MD-1 DRIVEWAY WITH SIDEWALK ADJACENT TO CURB LAYOUT



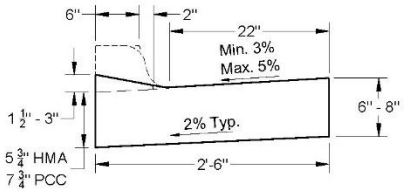
1. Type 'C' Contraction Joints to be at intervals of 10'.
2. Expansion Joints to be constructed at points of tangency of all curves
3. 'BT-5', 'KT-1', or 'L' joint if Proposed Pavement is PCC. 'B' joint if Proposed Pavement is HMA.
4. If proposed pavement is PCC, match joint spacing for proposed pavement.
5. New driveways shall require the removal of curb and guttter and replacement with driveway curb and gutter as shown below. Grinding curb for driveway is not be allowed. Removal of curb back for driveway is not allowed.



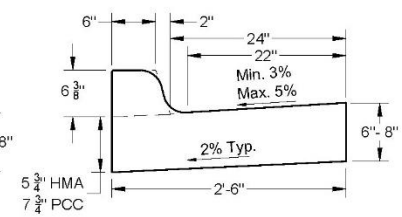
TYPICAL BEAM CURB DETAIL



TYPICAL VALLEY GUTTER DETAIL



DRIVEWAY DROP CURB



TYPICAL CURB SECTION

MD-2 CURB & GUTTER DETAILS

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Hawaii.

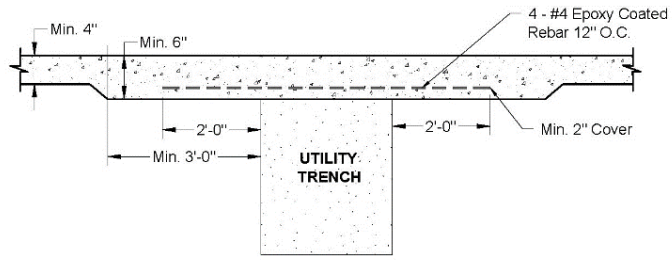
Registration No.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

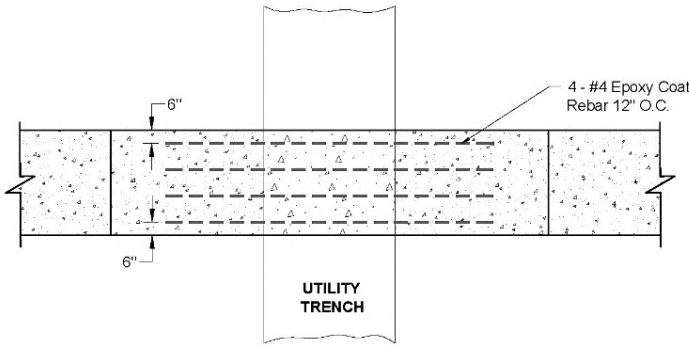
Drawn By: JCK
Scale: NONE
Proj. No.: 1001
Dwg. No.: SIDEWALK
VP. No.: 2/24/21
Date: 2/24/21

MD-1 & MD-2 STANDARD CITY DETAILS
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

1 OF 2



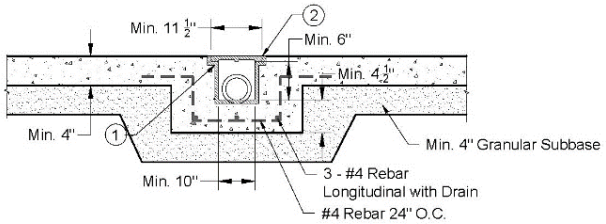
SIDE VIEW

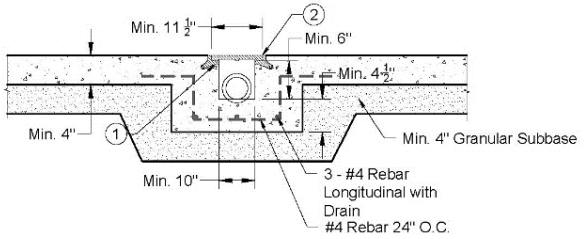


TOP VIEW

NOTE:
All sidewalk over utility trenches shall be reinforced with #4 bars at 12 inch centers starting 6 inches from the edge of the sidewalk and extending across the utility trench and 2 feet into the abutting sections.

MD-3 SIDEWALK OVER UTILITY TRENCH





NOTES:
1.) Trench casting shall be a Neenah R-4995-B1, R-4999-DX or an Engineer approved equal.

2.) Trench cover shall be Nenah Type D solid lid or Type E vented lid. Trench cover shall be anchored/bolted to prevent displacement during snow removal operations.

MD-4 SIDEWALK TRENCH DRAIN WITH COVER PLATE

No.	Revisions	By	Appr.	Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Hawaii.

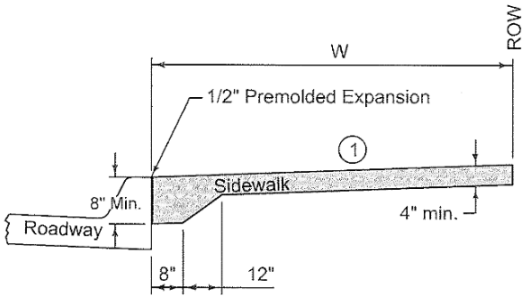
Registration No.

the City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

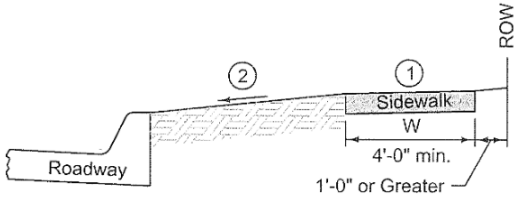
Drawn By: JCK
Scale: NONE
Proj. No: 1000
Dwg. No: MD-4
VP. No: MD3/4 & 4
Date: 5/24/15

MD - 3 & MD-4 STANDARD CITY DETAILS
MARSHALLTOWN STANDARD DETAILS
PUBLIC WORKS ENGINEERING
MARSHALLTOWN, IOWA

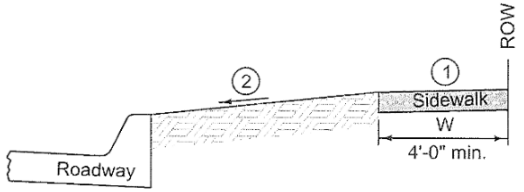
2 OF 2



CLASS A SIDEWALK
(Sidewalk extends from back of curb to ROW)



CLASS B SIDEWALK



CLASS C SIDEWALK

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0% (including sidewalk through driveway).

(2) Parking Slopes:
If parking width is less than 10 feet wide, slope at ¼ inch per foot.

If parking width is 10 feet wide and greater, slope at ½ inch per foot.

Special grade may be specified in the contract documents.

W = Sidewalk width as specified in the contract documents.

FIGURE 7030.201R	STANDARD ROAD PLAN	REVISION 2 10-20-15 7030.201 SHEET 1 of 1

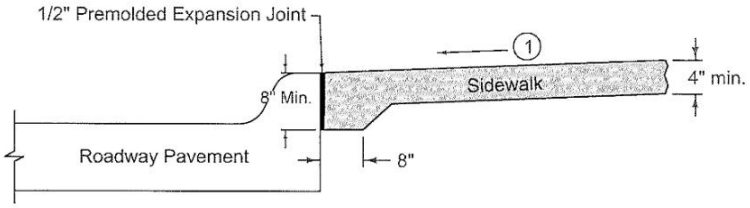
REVISIONS: Revised Class A sidewalk layout and added premolded expansion material. (City of Marshalltown)

CLASSES OF SIDEWALKS

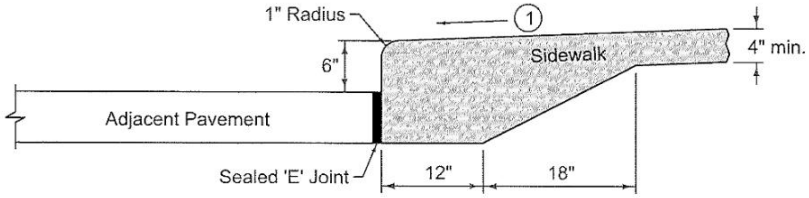
FIGURE 7030.201 SHEET 1 OF 1

For new sidewalk with new curb and gutter, comply with Detail 2. Comply with Detail 3 for new sidewalk adjacent to existing pavement or when specified in the contract documents.

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0%.



DETAIL 2



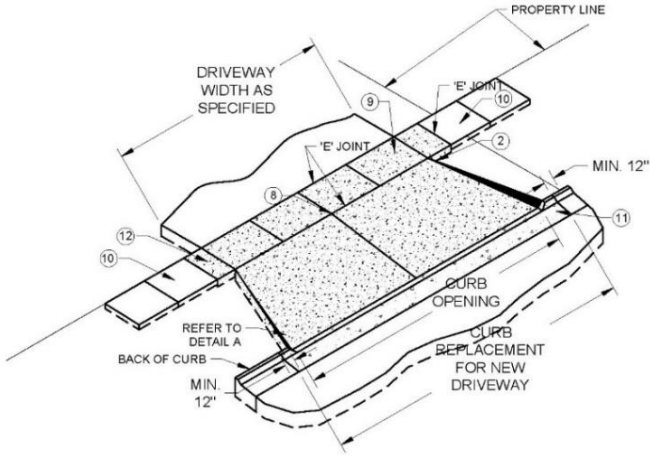
DETAIL 3

		REVISION
FIGURE 7030.202R	STANDARD ROAD PLAN	3 10-20-15
		7030.202
		SHEET 1 of 1

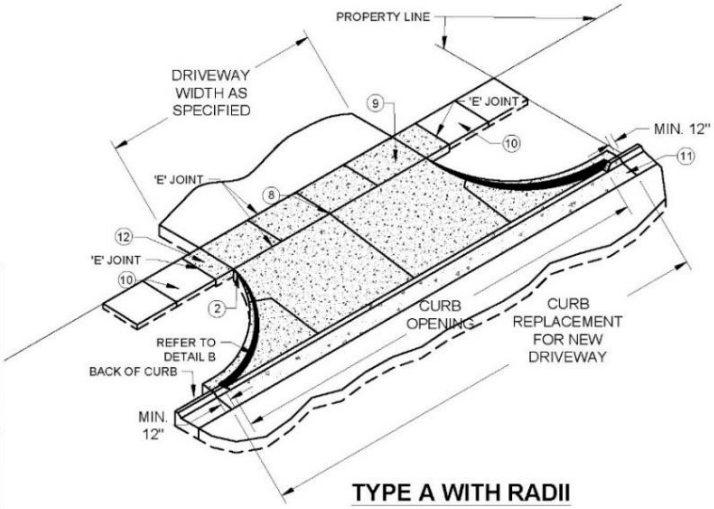
REVISIONS: Removed Detail 1. Revised Detail 2. (City of Marshalltown)

CURB DETAILS FOR CLASS A SIDEWALK

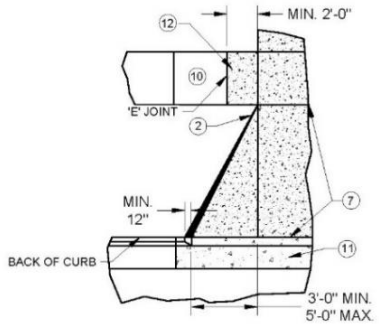
FIGURE 7030.202 | SHEET 1 OF 1



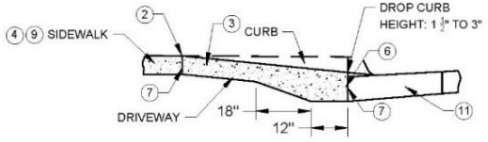
TYPE A WITH FLARES



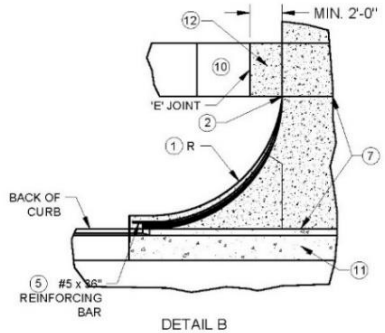
TYPE A WITH RADII



DETAIL A



TYPICAL SECTION



DETAIL B

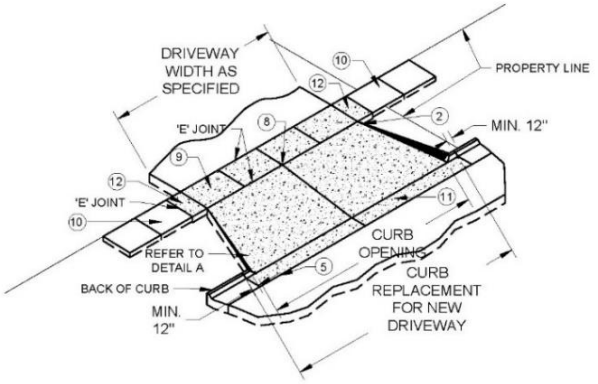
1. Driveway radius (R).
   Residential: 10 foot minimum,15 foot maximum.
   Commercial and industrial: As specified in the contract documents.
2. Transition the curb height to 0 inches at end of taper/radius or at the front edge of sidewalk. Do not extend raised curb across sidewalk.
3. Pavement thickness.
   Residential: 6 inches minimum.
   Commercial and industrial: 8 inches minimum.
4. Sidewalk thickness through driveway to match thickness of driveway.
5. Center reinforcing bar vertically in the pavement.
6. Match thickness of adjacent roadway, 8 inches minimum.
7. Provide 'E' joint at sidewalk. Provide 'B' joint at back of curb unless 'E' joint is specified.
8. For alleys, invert the pavement crown 2% toward center of alley.
9. Target cross slope of 1.5% with a maximum cross slope of 2.0%. If specified in the contract documents, construct the sidewalk through the driveway 5 feet wide to serve as a passing space.
10. If cross slope of adjacent sidewalk panel exceeds 2.0%,remove and replace to transition from existing sidewalk to sidewalk through driveway. If elevation change requires a curb ramp, comply with Figure 7030.205; verify need for detectable warning panel with Engineer.
11. Replace curb & gutter with drop curb for new driveways or expansion of existing driveways. Grinding of curb or removal of curb back is not allowed.
12. Extend driveway sidewalk a minimum of 2' past driveway edge.

FIGURE 7030.101R	STANDARD ROAD PLAN	REVISION 2 10-20-15
		7030.101
		SHEET 1 of 1

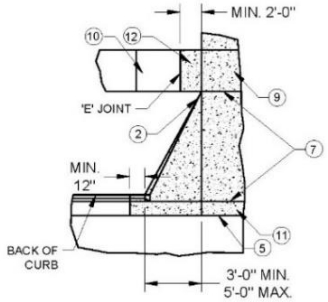
REVISIONS: Revised sidewalk adjacent to driveway to add section for transition. Added curb replacement for new driveways. (City of Marshalltown)

CONCRETE DRIVEWAY, TYPE A

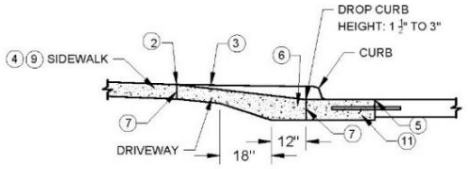
FIGURE 7030.101 | SHEET 1 OF 1



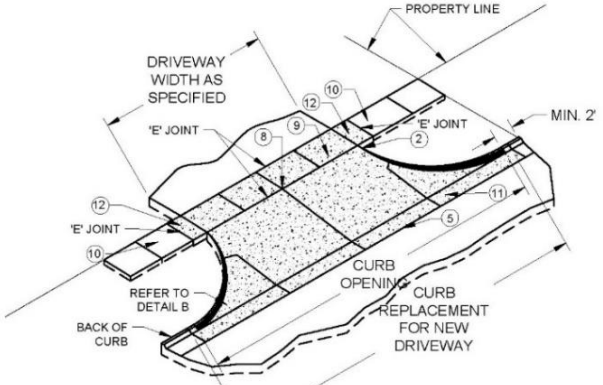
TYPE A WITH FLARES



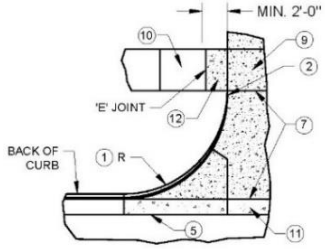
DETAIL A



TYPICAL SECTION



TYPE A WITH RADII



DETAIL B

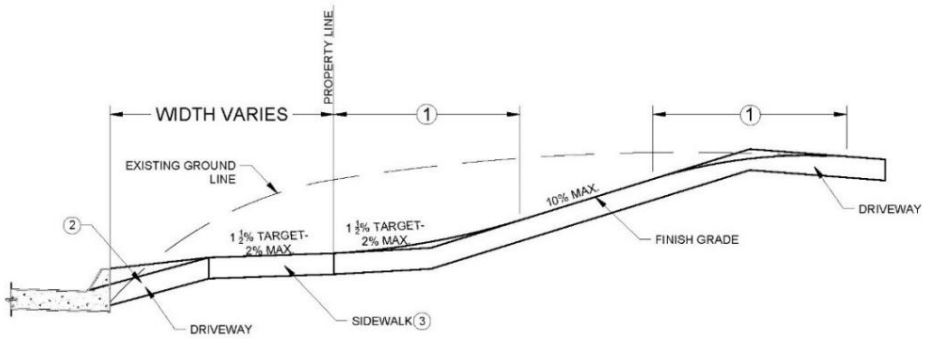
1. Driveway radius (R).
   Residential: 10 foot minimum,15 foot maximum.
   Commercial and industrial: As specified in the contract documents.
2. Transition the curb height to 0 inches at end of taper/radius or at the front edge of sidewalk. Do not extend raised curb cross sidewalk.
3. Pavement thickness.
   Residential: 6 inches minimum.
   Commercial and industrial: 8 inches minimum.
4. Sidewalk thickness through driveway to match thickness of driveway.
5. If longitudinal joint is located 48 inches or less from the back of curb, extend curb and gutter to joint line. Full depth saw cut is still required.
6. Match thickness of adjacent roadway, 8 inches minimum.
7. Provide 'E' joint at sidewalk. Provide 'B' joint at back of curb unless 'E' joint is specified.
8. For alleys, invert the pavement crown 2% toward the center of the alley.
9. Target cross slope of 1.5% with a maximum cross slope of 2.0%. If specified in the contract documents, construct the sidewalk through the driveway 5 feet wide to serve as a passing space.
10. If cross slope of adjacent sidewalk panel exceeds 2.0%, remove and replace to transition from existing sidewalk to sidewalk through driveway. If the elevation change requires a curb ramp, comply with Figure 7030.205; verify need for detectable warning panel with Engineer.
11. Replace curb & gutter with drop curb for new driveways or expansion of existing driveways. Grinding of curb or removal of curb back is not allowed.
12. Extend driveway sidewalk a minimum of 2' past driveway edge.

FIGURE 7030.102R	STANDARD ROAD PLAN	REVISION 2 10-20-15
		7030.102
		SHEET 1 of 1

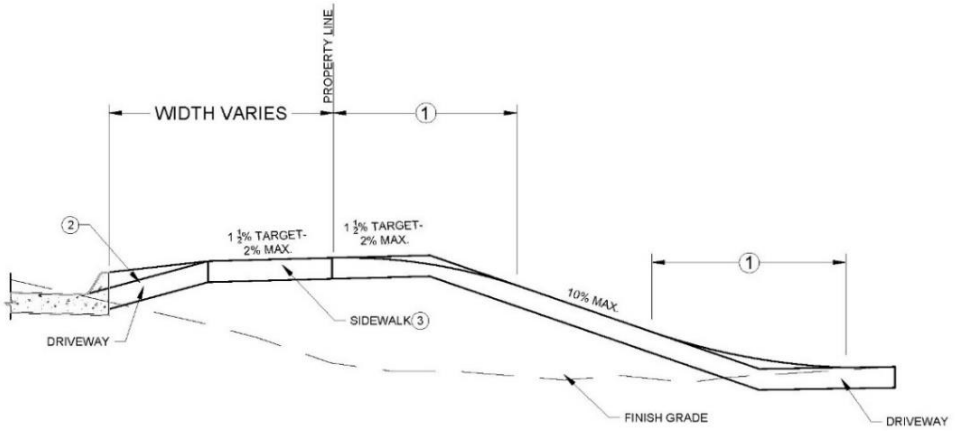
REVISIONS: Revised sidewalk adjacent to driveway to add section for transition. Added curb and gutter removal and repalcement. (City of Marshalltown)

CONCRETE DRIVEWAY, TYPE B

FIGURE 7030.102 | SHEET 1 OF 1



TYPICAL CUT SECTION



TYPICAL FILL SECTION

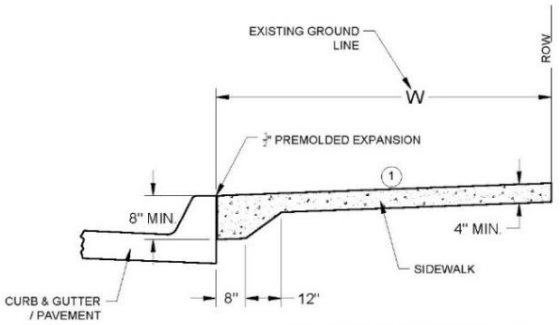
1. 10 foot vertical curve required for 5% or greater change in grade.
2. Slope varies. See contract documents.
3. Target cross slope of 1.5% with a maximum cross slope of 2.0%.

FIGURE 7030.103R	STANDARD ROAD PLAN	REVISION 2 10-20-15
		7030.103
		SHEET 1 of 1

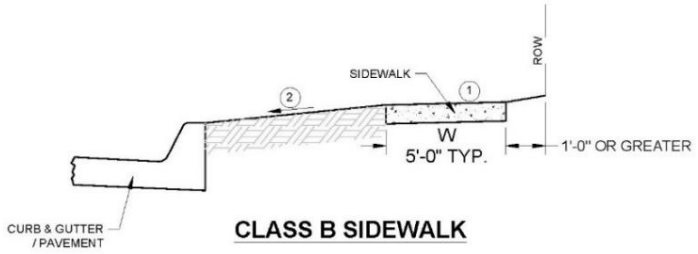
REVISIONS: Revision to sidewalk location and property line. Added target slope to sidewalk. (City of Marshalltown)

DRIVEWAY GRADING

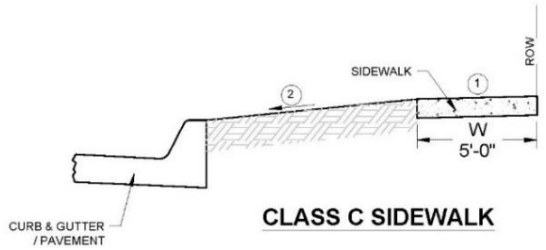
FIGURE 7030.103 | SHEET 1 OF 1



CLASS A SIDEWALK
(Sidewalk extends from back of curb to ROW)



CLASS B SIDEWALK



CLASS C SIDEWALK

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0% (including sidewalk through driveway).

(2) Parking Slopes:
If parking width is less than 10 feet wide, slope at ¼ inch per foot.

If parking width is 10 feet wide and greater, slope at ½ inch per foot.

Special grade may be specified in the contract documents.

W = Sidewalk width as specified In the contract documents.

FIGURE 7030.201R	STANDARD ROAD PLAN	REVISION 1 10-20-15
		7030.201
		SHEET 1 of 1

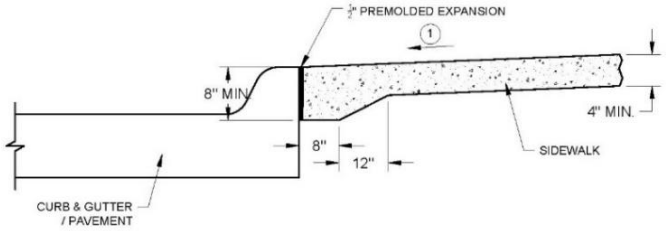
REVISIONS: Revised Class A sidewalk layout and added premolded expansion material. (City of Marshalltown)

CLASSES OF SIDEWALKS

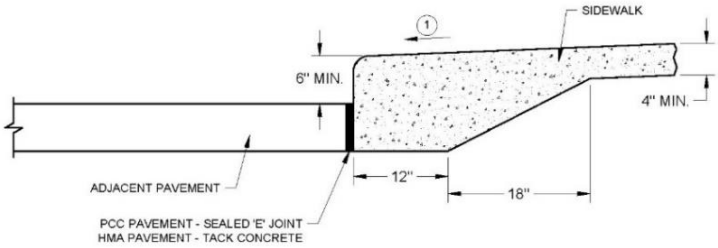
FIGURE 7030.201 | SHEET 1 OF 1

For new sidewalk with new curb and gutter, comply with Detail 2. Comply with Detail 3 for new sidewalk adjacent to existing pavement or when specified in the contract documents.

(1) Target cross slope of 1.5% with a maximum cross slope of 2.0%.



DETAIL 2



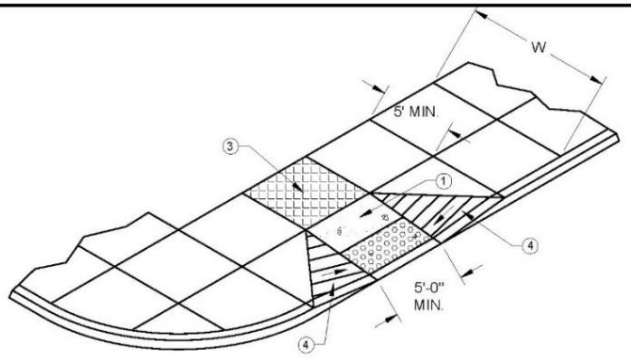
DETAIL 3

FIGURE 7030.202R	STANDARD ROAD PLAN	REVISION 3 10-20-15 7030.202 SHEET 1 of 1

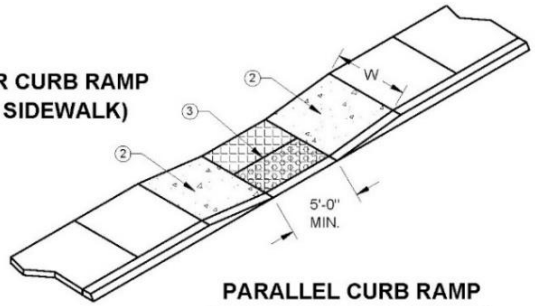
REVISIONS: Removed Detail 1. Revised Detail 2. (City of Marshalltown)

CURB DETAILS FOR CLASS A SIDEWALK

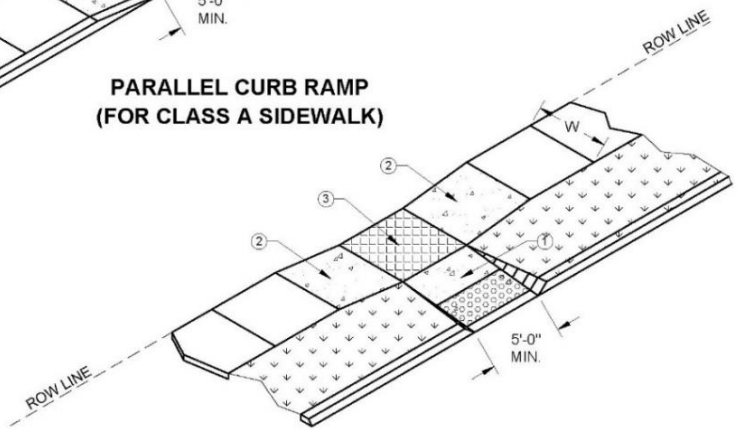
FIGURE 7030.203 | SHEET 1 OF 1



PERPENDICULAR CURB RAMP
(FOR CLASS A SIDEWALK)



PARALLEL CURB RAMP
(FOR CLASS A SIDEWALK)



PERPENDICULAR AND
PARALLEL CURB RAMP
(FOR CLASS B OR C SIDEWALK)

KEY

- CURB RAMP
- TURNING SPACE
- DETECTABLE WARNING
- GRASS

(1) PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%. MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE AT BACK OF CURB. AT MID-BLOCK CROSSINGS, CROSS SLOPE MAY EXCEED 2.0% TO MATCH ROADWAY GRADE.

(2) PARALLEL CURB RAMP: TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

(3) TURNING SPACE: TARGET SLOPE OF 1.5%, WITH A MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. AT MID-BLOCK CROSSINGS, CROSS SLOPE OF LANDING MAY EXCEED 2.0% TO MATCH ROADWAY GRADE. MINIMUM 4 FEET BY 4 FEET.

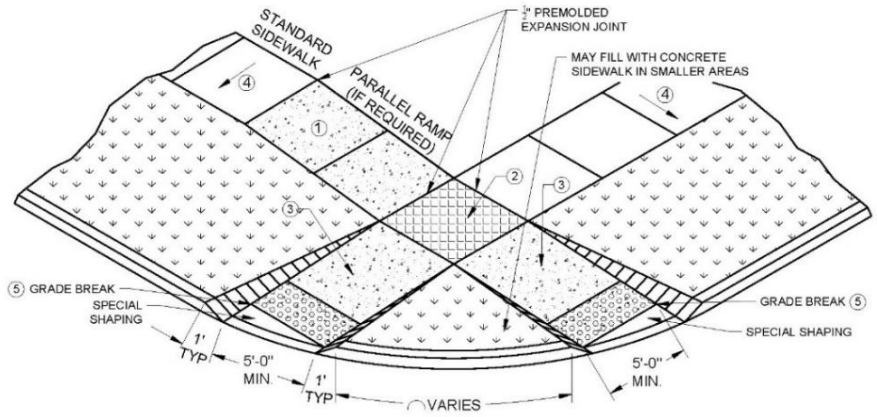
(4) FLARE (10:1 MAX.) REQUIRED IF RAMP IS CONTIGUOUS WITH SIDEWALK.

FIGURE 7030.206R	STANDARD ROAD PLAN	REVISION: NEW 10-16-12
		7030.206
		SHEET 1 of 1

REVISIONS. Change sidewalk/ramp width to 5'-0" min. Change curb side sidewalk to min. 7'-0" width. (City of Marshalltown)

CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

FIGURE 7030.206 | SHEET 1 OF 1



1. PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE LANDING AND THE STANDARD SIDEWALK.

   THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

2. TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. MINIMUM 4 FEET BY 4 FEET.

3. PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.

4. TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.

5. MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE OR FLATTER.

KEY

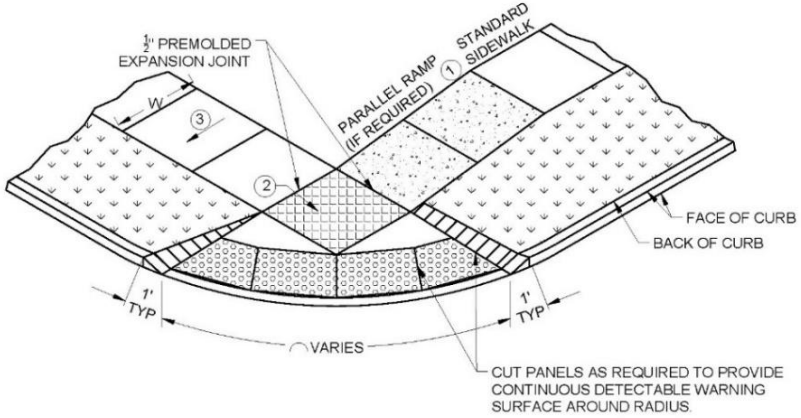
- CURB RAMP
- TURNING SPACE
- DETECTABLE WARNING
- GRASS

FIGURE 7030.207R	STANDARD ROAD PLAN	REVISION: NEW 10-16-12
		7030.207
		SHEET 1 of 1

REVISIONS. Added detail for preformed expansion joints. (City of Marshalltown)

CURB RAMP FOR CLASS B OR C SIDEWALK

FIGURE 7030.207 | SHEET 1 OF 1



(1) PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE LANDING AND THE STANDARD SIDEWALK.

THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

(2) TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE DIRECTION OF TRAVEL OF 2.0%. MINIMUM 5 FEET BY 5 FEET.

(3) TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.

KEY

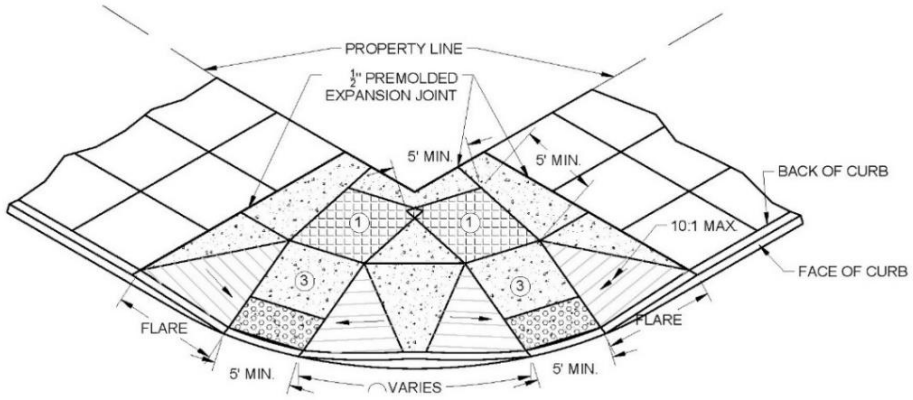
- CURB RAMP
- TURNING SPACE
- DETECTABLE WARNING
- GRASS

FIGURE 7030.208R	STANDARD ROAD PLAN	REVISION NEW 10-16-12
		7030.208
		SHEET 1 of 1

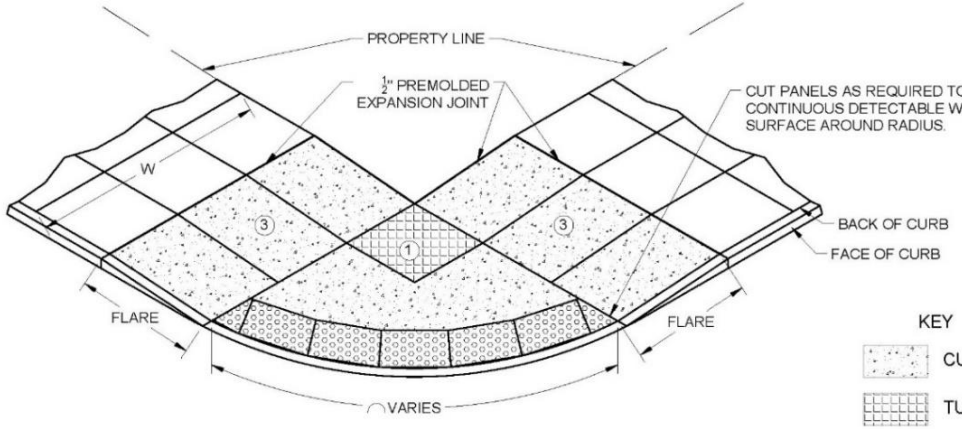
REVISIONS. Added detail for preformed expansion joints. (City of Marshalltown)

ALTERNATIVE CURB RAMP FOR CLASS B OR C SIDEWALK

FIGURE 7030.208 | SHEET 1 OF 1



CLASS A SIDEWALK CURB RAMP



CLASS A SIDEWALK CURB RAMP ALTERNATIVE

KEY

CURB RAMP

TURNING SPACE

DETECTABLE WARNING

(1) TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTION OF 2.0%. MINIMUM 5 FEET BY 5 FEET (TURNING SPACES MAY OVERLAP).

(2) PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.

(3) PARALLEL CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% FOR PARALLEL RAMPS SHORTER THAN 15 FEET.

FIGURE 7030.209R	STANDARD ROAD PLAN	REVISION NEW 10-16-12
		7030.209
		SHEET 1 of 1

REVISIONS. Changed minimum ramp and turning width to 5'. (City of Marshalltown)

CURB RAMPS FOR CLASS A SIDEWALK

FIGURE 7030.209 | SHEET 1 OF 1

SECTION 7040 - PAVEMENT REHABILITATION

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.08 MEASUREMENT AND PAYMENT

B. **Subbase Over-excavation:**

1. **Measurement:** Measurement will be in tons of subbase material placed for authorized over-excavation. (ADD) Measurement for geogrid shall be per 2010.1.08.H.
2. **Payment:** Payment will be made at the unit price per ton of subbase material. (ADD) Payment for geogrid shall be per 2010.1.08.H.

PART 2 - PRODUCTS

2.01 MATERIALS

A. PCC:

2. High Early Strength Patching: Use Class M mix complying with Section 7010. Do not use calcium chloride unless (DELETE) ~~otherwise specified in the contract documents~~ (ADD) approved by the City Engineer.

G. Subbase Material: Unless otherwise specified in the contract documents (DELETE) ~~, use modified subbase complying with Section 2010~~. (ADD) See MS-4 Pavement Restoration for Subbase requirements.

PART 3 – EXECUTION

3.02 FULL DEPTH PATCHING

B. Restoring Subgrade or Subbase:

1. Excavate (DELETE) ~~2~~ (ADD) 12 to 18 inches below the bottom of the existing pavement. (DELETE) ~~If more than 2 inches is excavated,~~ (ADD) Install geogrid on subgrade and place and compact new subbase material as required to bring the subbase to (DELETE) ~~a level 2 inches below~~ the bottom of the existing pavement. Correct unauthorized over excavation at no additional cost to the Contracting Authority.
5. Place and compact new subbase material as required to bring the subbase to (DELETE) ~~a level 2 inches belo~~w the bottom of the existing pavement.

C. Placing PCC Patches:

2. **Tie Bars and Dowel Bars:** Comply with Section 7010 (ADD), Figures MS-1 and MS-2 in this section, and the figures in Sections 7010 and 7040.

3.11 (ADD) MARSHALLTOWN STANDARD DETAILS

Added the following details:

A. MS-1 & MS-2 Pavement Restoration Joint Layout

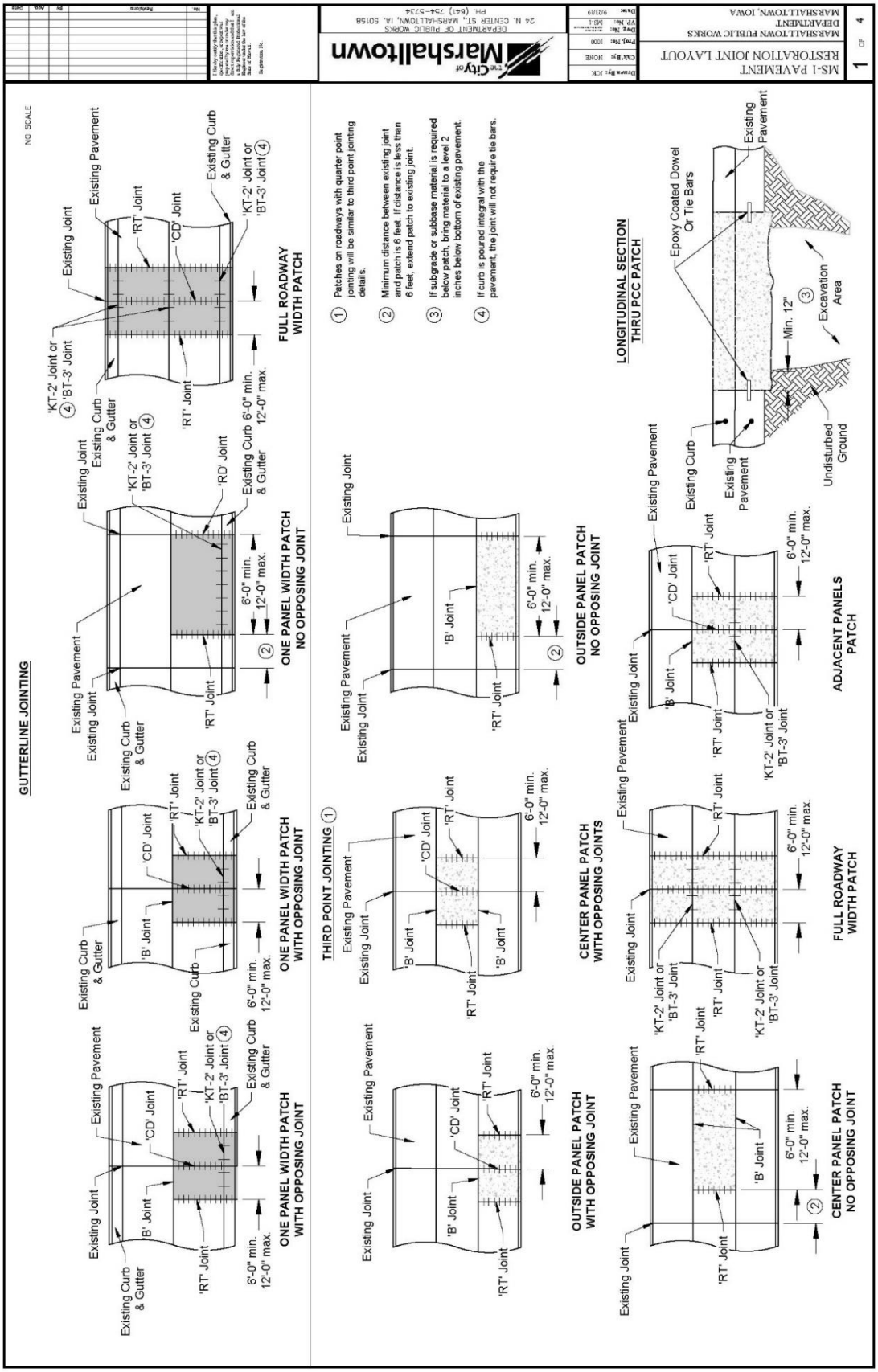
B. MS-3 Manhole Boxout Details

C. MS-4 Pavement Restoration Details

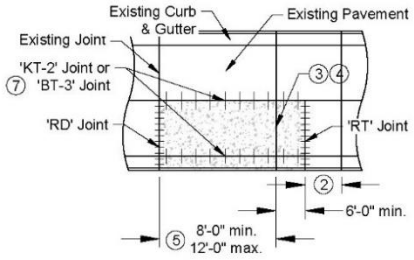
3.12 (ADD) DELETED SUDAS STANDARD DETAILS

A. 7040.101 Full Depth PCC Patches Less Than or Equal to 15’ Long

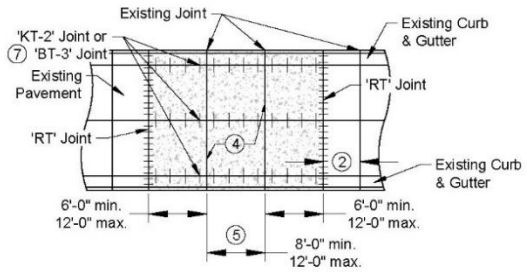
B. 7040.102 Full Depth PCC Patches Greater Than 15’ Long


GUTTERLINE JOINTING
NO SCALE
ONE PANEL WIDTH PATCH WITH OPPOSING JOINT
ONE PANEL WIDTH PATCH NO OPPOSING JOINT
FULL ROADWAY WIDTH PATCH
THIRD POINT JOINTING
OUTSIDE PANEL PATCH WITH OPPOSING JOINT
CENTER PANEL PATCH WITH OPPOSING JOINTS
OUTSIDE PANEL PATCH NO OPPOSING JOINT
CENTER PANEL PATCH NO OPPOSING JOINT
FULL ROADWAY WIDTH PATCH
ADJACENT PANELS PATCH
LONGITUDINAL SECTION THRU PCC PATCH
Existing Pavement
Existing Joint
Existing Curb & Gutter
'RT' Joint
'B' Joint
'CD' Joint
'KT-2' Joint or 'BT-3' Joint
'RD' Joint
6'-0" min. 12'-0" max.
Epoxy Coated Dowel Or Tie Bars
Min. 12"
Excavation Area
Undisturbed Ground
1 Patches on roadways with quarter point jointing will be similar to third point jointing details.
2 Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
3 If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
4 If curb is poured integral with the pavement, the joint will not require tie bars.
The City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734
MS-1 PAVEMENT RESTORATION JOINT LAYOUT
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA
1 OF 4

GUTTERLINE JOINTING

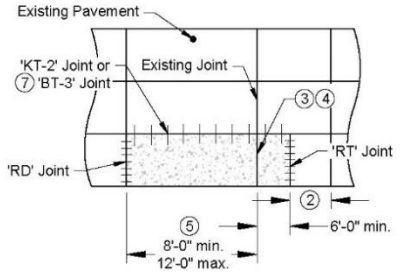


ONE PANEL WIDTH PATCH

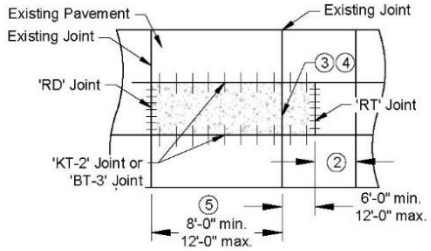


FULL ROADWAY WIDTH PATCH

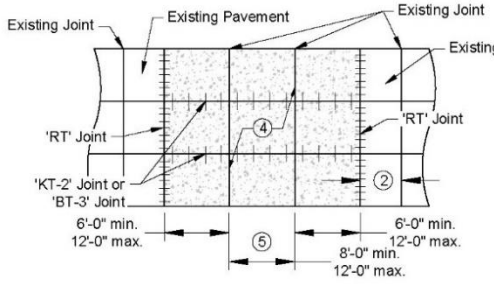
THIRD POINT JOINTING ①



OUTSIDE PANEL PATCH



CENTER PANEL PATCH



FULL ROADWAY WIDTH PATCH

NO SCALE

① Patches on roadways with quarter point jointing will be similar to third point jointing details.

② Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint and install a RD Joint.

③ Match existing joint type and locations.

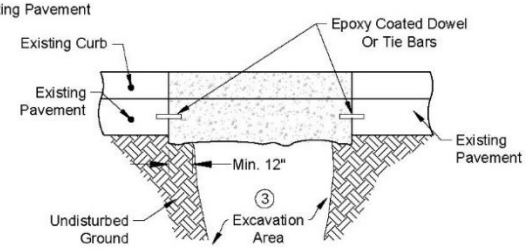
④ 'CD' joint is required.

⑤ If existing joint spacing is greater than 12 feet, add a 'CT' joint at mid-panel.

⑥ If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.

⑦ If curb is pour integral with the pavement panel, tie bars will not be required.

LONGITUDINAL SECTION THRU PCC PATCH



No.	Revisions	By	Appr.	Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

The City of Marshalltown

DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH: (641) 754-5734

Drawn By: JCK
Scale: 3/4"=1'-0"
Proj. No: 1000
Dwg. No: MS-2
V.P. No:
Date: 9/2019

MS-2 PAVEMENT RESTORATION JOINT LAYOUT

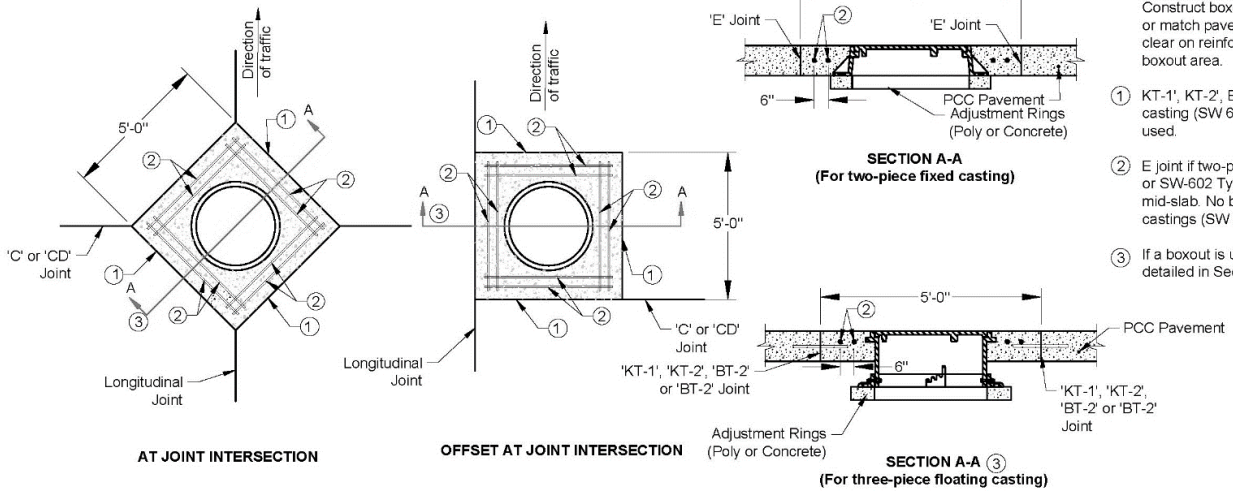
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

2 OF 4

GUTTERLINE JOINTING

THIRD POINT JOINTING (1)

NO SCALE

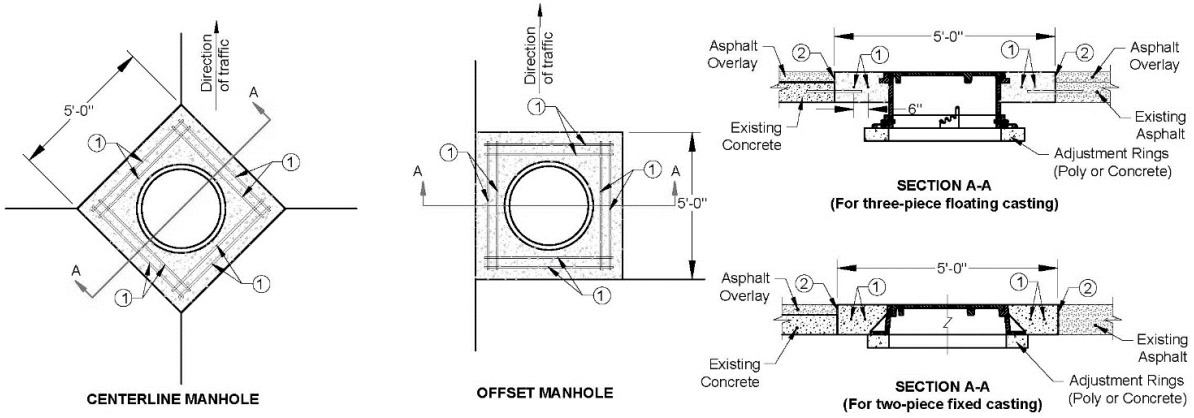


Construct boxout with 8" PCC, Class M or C concrete or match pavement class. Minimum 2-inches clear on reinforcement. Center casting within boxout area.

(1) KT-1', KT-2', BT-1', or BT-2' joint if three-piece floating casting (SW 601 Type B and D or SW-602 Type F) is used.

(2) E joint if two-piece fixed casting (SW 601 Type A and C or SW-602 Type E) is used. 4'-8" (typ.) #4 bar. Place at mid-slab. No boxout is required for three-piece floating castings (SW 601 Type B and D or SW-602 Type F).

(3) If a boxout is used with a three-piece casting, construct as detailed in Section A-A for three-piece floating casting.



Construct boxout with 8" PCC, Class M or C concrete. Minimum 2-inches clear on reinforcement. Center casting within boxout area.

(1) 4'-8" (typ.) #4 bar. Place at mid-slab.

(2) Apply tack coat.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

No.	Revisions	By	App.	Date

The City of Marshalltown

DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

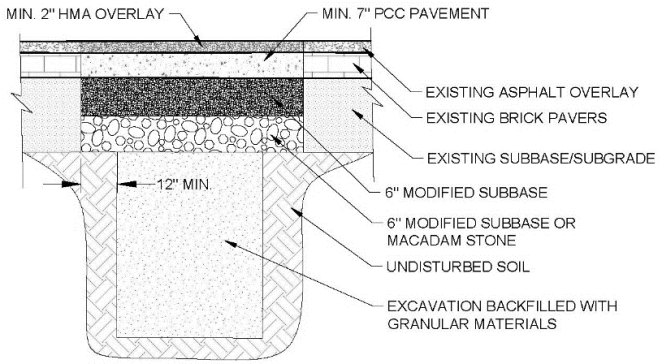
Drawn By:	JCE
Scale:	NONE
Proj. No:	1100
Dwg. No:	MS-3
Dwg. Date:	2022/08/xx
Upt. Dte:	MS-3
Date:	9/23/13

MS-3 MANHOLE BOXOUT DETAILS

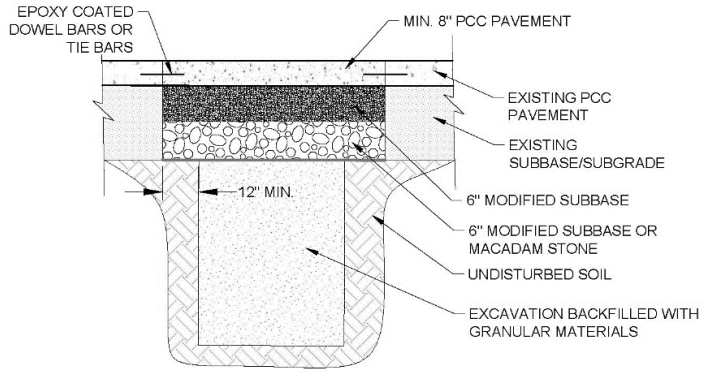
MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

3 OF 4

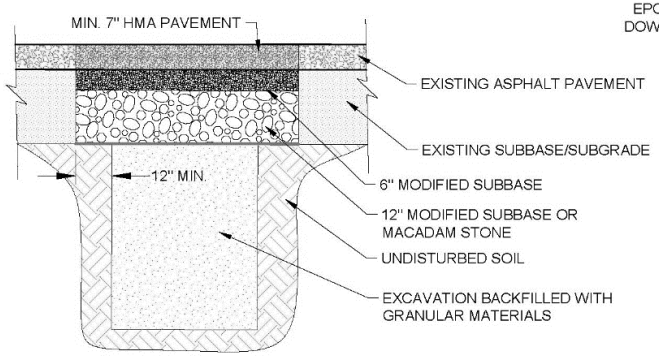
NO SCALE



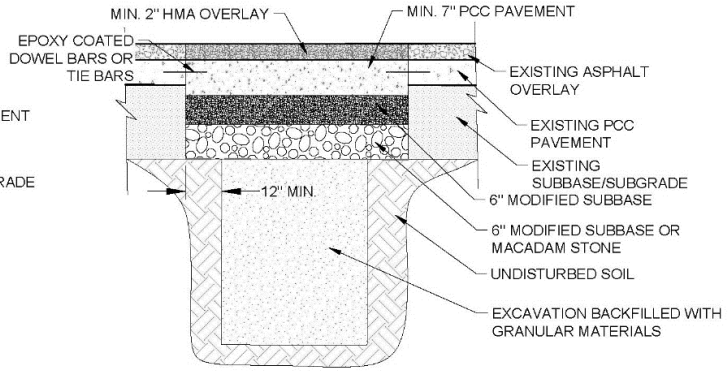
TYPICAL BRICK PAVER STREET REPAIR



TYPICAL CONCRETE STREET REPAIR



TYPICAL ASPHALT STREET REPAIR



TYPICAL ASPHALT OVERLAY ON CONCRETE STREET REPAIR

No. | Revisions | By | App. | Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Registration No.

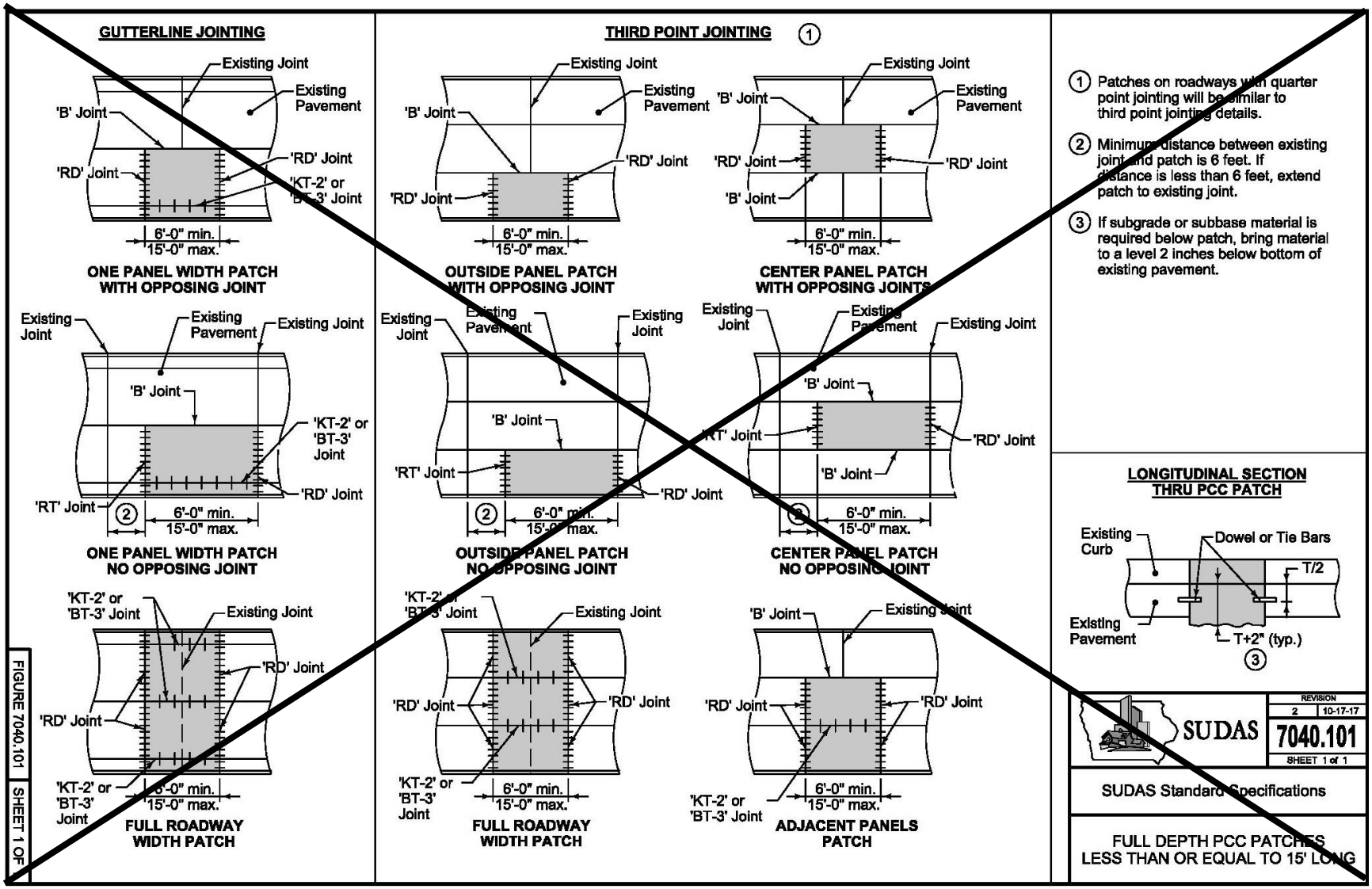
The City of Marshalltown
DEPARTMENT OF PUBLIC WORKS
24 N. CENTER ST., MARSHALLTOWN, IA. 50158
PH. (641) 754-5734

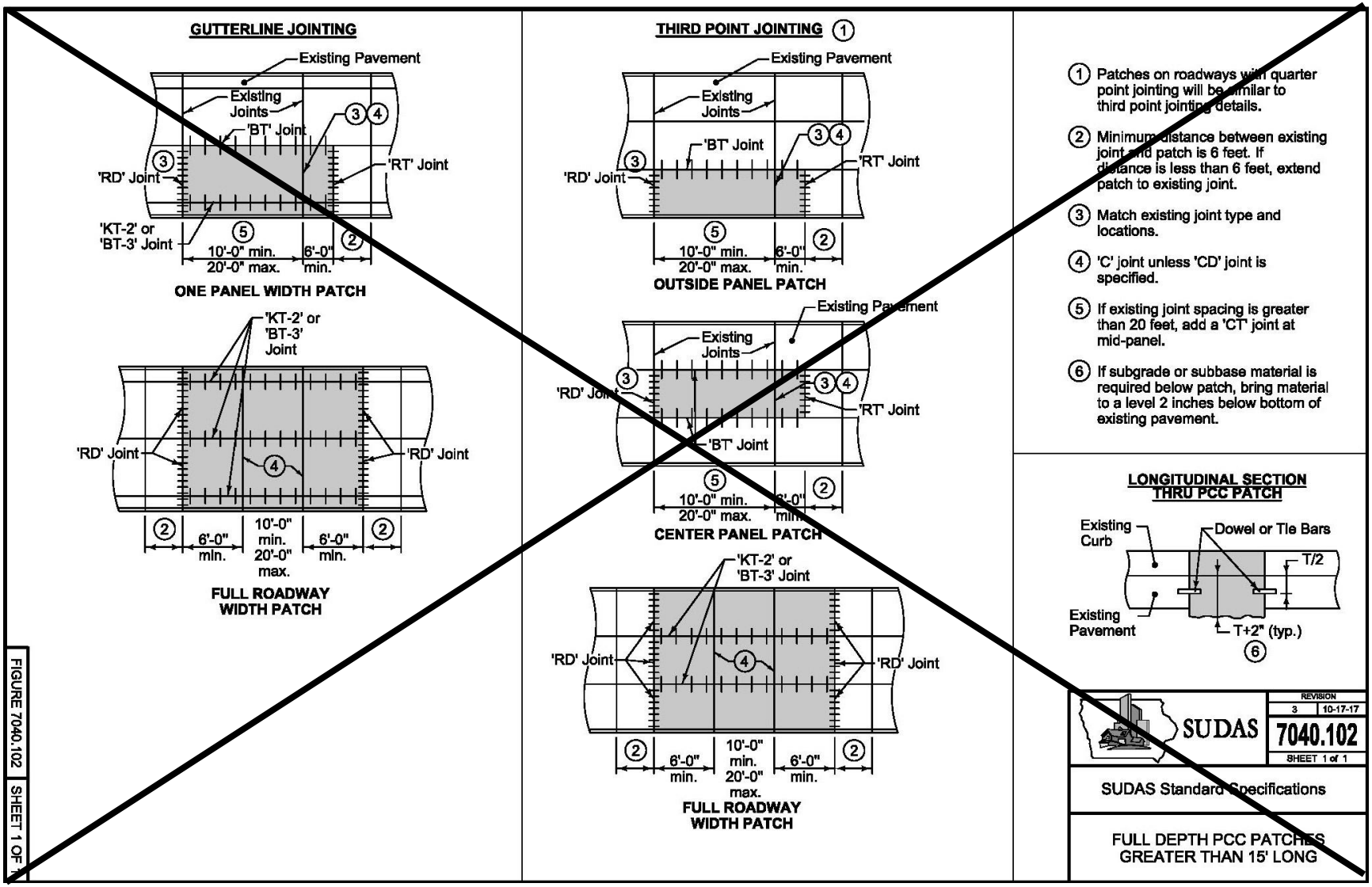
Drawn By: JCE | Dsgn. No: 1103 | Dwg. No: 2022000-----MS-4 | Date: 9/2019
Scale: NONE

MS-4 PAVEMENT RESTORATION DETAILS

MARSHALLTOWN PUBLIC WORKS DEPARTMENT
MARSHALLTOWN, IOWA

4 OF 4


GUTTERLINE JOINTING
Existing Joint
Existing Pavement
'B' Joint
'RD' Joint
'RD' Joint
'KT-2' or 'BT-3' Joint
6'-0" min.
15'-0" max.
ONE PANEL WIDTH PATCH WITH OPPOSING JOINT
THIRD POINT JOINTING (1)
OUTSIDE PANEL PATCH WITH OPPOSING JOINT
CENTER PANEL PATCH WITH OPPOSING JOINTS
Existing Joint
'RT' Joint
'KT-2' or 'BT-3' Joint
(2)
ONE PANEL WIDTH PATCH NO OPPOSING JOINT
OUTSIDE PANEL PATCH NO OPPOSING JOINT
CENTER PANEL PATCH NO OPPOSING JOINT
FULL ROADWAY WIDTH PATCH
ADJACENT PANELS PATCH
(1) Patches on roadways with quarter point jointing will be similar to third point jointing details.
(2) Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
(3) If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
LONGITUDINAL SECTION THRU PCC PATCH
Existing Curb
Dowel or Tie Bars
T/2
Existing Pavement
T+2" (typ.)
(3)
FIGURE 7040.101
SHEET 1 OF
SUDAS
REVISION
2
10-17-17
7040.101
SHEET 1 of 1
SUDAS Standard Specifications
FULL DEPTH PCC PATCHES LESS THAN OR EQUAL TO 15' LONG


GUTTERLINE JOINTING
Existing Pavement
Existing Joints
'BT' Joint
'RD' Joint
'RT' Joint
'KT-2' or 'BT-3' Joint
10'-0" min. 20'-0" max.
6'-0" min.
ONE PANEL WIDTH PATCH
'KT-2' or 'BT-3' Joint
'RD' Joint
'RD' Joint
6'-0" min.
10'-0" min. 20'-0" max.
6'-0" min.
FULL ROADWAY WIDTH PATCH
THIRD POINT JOINTING (1)
Existing Pavement
Existing Joints
'BT' Joint
'RD' Joint
'RT' Joint
10'-0" min. 20'-0" max.
6'-0" min.
OUTSIDE PANEL PATCH
Existing Pavement
Existing Joints
'RD' Joint
'RT' Joint
'BT' Joint
10'-0" min. 20'-0" max.
CENTER PANEL PATCH
'KT-2' or 'BT-3' Joint
'RD' Joint
'RD' Joint
6'-0" min.
10'-0" min. 20'-0" max.
6'-0" min.
FULL ROADWAY WIDTH PATCH
(1) Patches on roadways with quarter point jointing will be similar to third point jointing details.
(2) Minimum distance between existing joint and patch is 6 feet. If distance is less than 6 feet, extend patch to existing joint.
(3) Match existing joint type and locations.
(4) 'C' joint unless 'CD' joint is specified.
(5) If existing joint spacing is greater than 20 feet, add a 'CT' joint at mid-panel.
(6) If subgrade or subbase material is required below patch, bring material to a level 2 inches below bottom of existing pavement.
LONGITUDINAL SECTION THRU PCC PATCH
Existing Curb
Dowel or Tie Bars
T/2
Existing Pavement
T+2" (typ.)
SUDAS
REVISION
3 10-17-17
7040.102
SHEET 1 of 1
SUDAS Standard Specifications
FULL DEPTH PCC PATCHES GREATER THAN 15' LONG
FIGURE 7040.102
SHEET 1 OF 1

SECTION 7050 - ASPHALT STABILIZATION

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.08 MEASUREMENT AND PAYMENT

B. Fixture Adjustment: Comply with Section 6010 (ADD) and 6020 for adjustment of manholes and intakes and (DELETE) ~~Section 5020~~ (ADD) Marshalltown Water Works Requirements for adjustment of water valves and fire hydrants.

SECTION 7060 - BITUMINOUS SEAL COAT

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.08 MEASUREMENT AND PAYMENT

A. **Bituminous Seal Coat by Area:**

3. Includes: Unit price includes, but is not limited to, surface preparation including protection of street fixtures; furnishing and placing of materials, including fillets at intersecting streets, driveways, and turnouts; (ADD) sweeping; fog seal; and final clean up.

C. (ADD) Bituminous Material Fog Seal: Unless the Engineer directs otherwise, use asphalt emulsion grade CQS-1, CQS-1H, CSS-1, or SS-1.

1. Dilute the asphalt emulsion with water prior to application to the pavement surface. The dilution rate is one part of asphalt emulsion to four parts water.
2. Dilute the asphalt emulsion with water prior to application to the pavement surface. The dilution rate is one part of asphalt emulsion to four parts water.
3. Uniformly apply dilute asphalt emulsion at the rate of 0.12 gallon per square yard of pavement surface.

PART 3 - EXECUTION

3.01 EQUIPMENT

C. Brooms: A power-driven (DELETE) ~~rotary or~~ pick-up broom is required for cleaning surfaces before the bitumen is applied (ADD), in between applications, and after final application.

3.06 TWO COURSE SEAL COATS

B. Second Course Construction:

4. (ADD) Complete rolling operations as specified in 3.05.
5. (ADD) After a minimum of 24 hours, lightly broom surface with power sweeper to remove excess aggregate. All aggregate shall be removed with a vacuum machine.

3.08 (ADD) BITUMINOUS FOG SEAL

A. A bituminous fog seal shall be applied to all sealed streets after completion of the final seal coat layer.

B. Immediately prior to placing the emulsion, clean the entire pavement surface. Use scrapers, compressed air, or other approved methods.

C. Uniformly apply dilute asphalt emulsion at the rate of 0.12 gallon per square yard of pavement surface. The application rate may be reduced if directed by the Engineer. For excessive application rates, the Engineer may require a light coat of sand. The Engineer may require brooming of ponded areas prior to placing traffic on the pavement.

SECTION 7070 - EMULSIFIED ASPHALT SLURRY SEAL

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 7080 - PERMEABLE INTERLOCKING PAVERS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 7090 - COLD-IN-PLACE PAVEMENT RECYCLING

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 7091 - FULL DEPTH RECLAMATION

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

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SUPPLEMENTAL DIVISION 8 – TRAFFIC CONTROL

SECTION 8010 - TRAFFIC SIGNALS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.07 SPECIAL REQUIREMENTS

B. (ADD) Coordinate all design and construction work with the City of Marshalltown's Public Works Electrical Superintendent.

SECTION 8020 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.06 SCHEDULING AND CONFLICTS

B. (ADD) Schedule and coordinate all line markings with the Public Works Street Superintendent.

3.02 CONSTRUCTION

C. **Painted Pavement Markings:**

5. (ADD) Coordinate all painted pavement markings with Marshalltown's Public Works Street Department. Paint markings shall be calibrated to the City's standard marking spacing and widths.

SECTION 8030 - TEMPORARY TRAFFIC CONTROL

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

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SUPPLEMENTAL DIVISION 9 – SITE WORK AND LANDSCAPING

SECTION 9010 - SEEDING

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

1.08 MEASUREMENT AND PAYMENT

A. Conventional Seeding:

1. Seeding:
    a. Measurement: Measurement will be in acres (ADD) or square yards for each type of seed.
    b. Payment: Payment will be in unit price per acre (ADD) or square yards for each type of seed.
2. Fertilizing:
    a. Measurement: Measurement will be in acres (ADD) or square yards of fertilizer.
    b. Payment: Payment will be at unit price per acre (ADD) or square yards of fertilizer.
3. Mulching:
    a. Measurement: Measurement will be in acres (ADD) or square yards of mulch.
    b. Payment: Payment will be in unit price per acre (ADD) or square yards of mulch.

B. Seeding, Fertilizing, and Mulching for Hydraulic Seeding:

1. Measurement: Measurement will be in acres (ADD) or square yards for each type of seed.
2. Payment: Payment will be in unit price per acre (ADD) or square yards for each type of seed.

C. Seeding, Fertilizing, and Mulching for Pneumatic Seeding:

1. Measurement: Measurement will be in acres (ADD) or square yards for each type of seed.
2. Payment: Payment will be in unit price per acre (ADD) or square yards for each type of seed.

PART 2 - PRODUCTS

2.02 SEED MIXTURES AND SEEDING DATES

A. Type 1 (Permanent Lawn Mixture): Used for residential and commercial turf site, fertilized, and typically mowed. Use between March 1 and May 31 and between August 10 and September 30. (ADD) Dormant seeding from September 30 to freeze-up will be allowed if approved by City Engineer. Type 1 seed mixture will be used in all terrace or boulevard areas within the City of Marshalltown.

PART 3 - EXECUTION

3.05 HYDRAULIC SEEDING

A. **Seed Application, Fertilizing, and Mulching:**

8. Hydromulching (ADD) is required (DELETE) ~~may be done~~ over conventional seeding and/or fertilizing, (ADD) unless straw mulch is (DELETE) ~~if~~ approved by the Engineer.

SECTION 9020 - SODDING

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 9030 - PLANT MATERIAL AND PLANTING

PART 1 - GENERAL

1.03 SUBMITTALS

(DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications, as well as the following:

F. (ADD) Provide trees and shrubs planted in terrace areas in accordance with the City of Marshalltown's Code of Ordinances, Chapter 58 – Vegetation. A list of prohibited trees and recommended trees is provided in Table 1 at the end of this section.

G. (ADD) The placement of trees shall be in accordance with Chapter 10B-1 of the SUDAS Design Manual.

1.04 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 3 - EXECUTION

3.06 PLANTING

A. Bare Root Plants: (ADD) Not allowed without written approval of the City Engineer.

Table 1 - Tree List for Planting on Terrace or Other Public Right-of-Way

Prohibited Species

- All evergreen trees and shrub species except those with a mature height of 12 inches or less.
- All deciduous shrubs
- All Poplars (Populus spp.), including, but not limited to Cottonwood, White Poplar, Lombardy Poplar, and hybrids thereof
- American Elm (Ulmus americana) & Elm hybrids
- Birch (Betula spp.)
- Blue Ash (Fraxinus quadrangulata)
- Green Ash and cultivars (Fraxinus pennsylvanica lanceolatata)
- White Ash and cultivars (Fraxinus Americana)
- Box Elder (Acer negundo)
- Bradford Pear (Pyrus calleryana 'Bradford')
- Catalpa (Catalpa speciosa)
- Crab Apples with exception of Spring Snow or male sterile varieties
- Female Ginkgo (Ginkgo biloba).
- Hawthorn (Crataegus spp.)(except thornless cutlivars)
- Honey Locust (Gleditsia triacanthos) and all cultivars
- Japanese Tree Lilac (Syringa reticulata)
- Oriental Elms (Ulmus pumila & U. parvifolia)
- Pin Oak (Quercus palustris)
- Purple Leaf Plum (Prunus cerasifera)
- Red Mulberry, White Mulberry (Morus rubra & Morus alba)
- Russian Olive (Elaeagnus angnstifolia)
- Serviceberry (Amelanchier spp.)
- Silver Maple – Autumn Blaze Maple (Acer saccharinum) and all cultivars including Freeman cultivars

- Sycamore (Plantanus spp) and all cultivars
- Willow (Salix spp.)

Suggested trees for terrace area 8’ wide or greater

- Basswood/Linden (Tilia spp.)
- Kentucky Coffeetree (Gymnocladus dioicus)
- White Oak (Quercus alba)
- Bur Oak (Quercus macrocarpa)
- Swamp White Oak (Quercus bicolor)
- Northern Red Oak (Quecrus rubra)
- Sugar Maple (Acer saccharum)
- Red Maple (Acer rubrum)
- Black Maple (Acer nigrum)
- Hackberry (Celtis occidentalis)
- Male Ginkgo (Ginkgo biloba)

Suggested trees for terrace area less than 8‘ in width

- Amur Maple (Acer ginnala) (Tree form only)
- Tatarian Maple (Acer tataricum)
- American Hophornbeam (Ostrya virginiana)
- Thornless Cockspur Hawthorn (Crataegus crus-galli inermis)
- American Hornbeam (Carpinus caroliniana)
- Crabapple (Malus sp.) (Male sterile varieties only)
- Red Bud (Cercis Canadensis)

SECTION 9040 - EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) “Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications”

PART 3 - EXECUTION

3.13 RIP RAP (Figures 9040.110 and 9040.111)

B. (ADD) Contractor shall construct an anchor trench along the toe of the slope prior to placement of riprap. Anchor trench shall be 2' deep, 4' wide, and extend along the entire length of slope.

SECTION 9050 - GABIONS AND REVET MATTRESSES

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 9060 - CHAIN LINK FENCE

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 9070 - LANDSCAPE RETAINING WALLS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

PART 3 - EXECUTION

3.02 INSTALLATION

B. Modular Block Retaining Wall:

3. Tieback Reinforcement Installation: Install tieback reinforcement (ADD) every 24" of elevation. Geogrid shall conform to the manufacturer's requirements and be installed according to the manufacturer's requirements.

3.03 (ADD) NOTES ADDED TO FIGURES

A. SUDAS 9070.101 - Tie backs will be required for each 2-feet of vertical wall elevation constructed.

B. SUDAS 9070.102 - Geogrid reinforcement will be required for each 2-feet of vertical wall elevation constructed.

C. SUDAS 9070.103 - Geogrid reinforcement will be required for each 2-feet of vertical wall elevation constructed.

SECTION 9071 - SEGMENTAL BLOCK RETAINING WALLS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - General Conditions and Supplementary Conditions and Part II Technical Specifications Division 1"

SECTION 9072 - COMBINED CONCRETE SIDEWALK AND RETAINING WALL

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 9080 - CONCRETE STEPS, HANDRAILS, AND SAFETY RAIL

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SUPPLEMENTAL DIVISION 10 – DEMOLITION

SECTION 10,010 - DEMOLITION OF BUILDING STRUCTURES

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

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SUPPLEMENTAL DIVISION 11 – MISCELLANEOUS

SECTION 11,010 - CONSTRUCTION SURVEY

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 11,020 – MOBILIZATION

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 11,030 - TEMPORARY SERVICES DURING CONSTRUCTION

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 11,040 - TEMPORARY SIDEWALK ACCESS

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

SECTION 11,050 - CONCRETE WASHOUT

PART 1 - GENERAL

1.03 through 1.06: (DELETE): ~~Comply with Division 1 - General Provisions and Covenants~~ (ADD) "Comply with Part I - Bidding and Contract Documents and Part II - Technical Specifications"

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PART II – CONTRACT DOCUMENTS

D. Special Provisions

SPECIAL PROVISIONS

2020 SANITARY SEWER REHABILITATION PROJECT - CIPP
CITY OF MARSHALLTOWN, IOWA

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1. SPECIAL REQUIREMENTS

1.1. The Project will be constructed in accordance with the provisions of the Iowa Statewide Urban Standard Specifications for Public Improvements 2022 Edition as modified by the provision of this Special Provision.

1.2. Order of priority for determining applicable specification requirements:

1.2.1. Plan Drawings Bid Item Descriptions

1.2.2. This Special Provision.

1.2.3. City of Marshalltown Supplemental Specifications for the Iowa Statewide Urban Standard Specifications

1.2.4. Iowa Statewide Urban Standard Specifications for Public Improvements, 2019 Edition.

1.3. For purposes of the contract documents the Iowa Statewide Urban Standard Specifications for Public Improvements, 2022 Edition, shall be considered a part of this Special Provision. The order of priority of the Special Provision and the Iowa Statewide Urban Standard Specifications for Public Improvements, 2022 Edition, shall be as set forth in 1.2 above. When a conflict between specifications and requirements arises, the most stringent shall apply.

2. SPECIFICATION MODIFICATIONS

2.1. The procedures and documents set forth in "Specifications for 2020 Sanitary Sewer Rehabilitation Project - CIPP - Division 1 - General Requirements" shall govern over the provisions of Division 1 of the Iowa Statewide Urban Standard Specifications for Public Improvement, 2022 Edition unless otherwise indicated on the plans.

3. STAKING

3.1. Construction staking will be provided by the City of Marshalltown or the Owners Representative.

4. MANHOLE INSTALLATION

4.1. Verify all field dimensions and elevations prior to commencing installation of sanitary sewer manholes. Report any discrepancies to the Engineer.

4.2. Exercise care in handling, transporting and installing manholes to prevent damage to pipe or lining. Use exterior slings or other suitable means to handle manhole materials.

4.3. Manholes shall be constructed with a minimum of 12-inches of base beyond the exterior of the manhole. Additional base diameter shall be provided to resist manhole buoyancy forces as required for hydrostatic conditions present.

5. SUPPLEMENTAL TRENCH SHORING

5.1. New sewer construction is in close proximity to existing utilities, structures, and slopes.

5.2. It is anticipated that special construction methods, materials and/or temporary shoring may be needed to protect existing utilities and structures.

5.3. The anticipated supplemental trench shoring is in addition to the sheeting and bracing of deep excavations required of the Contractor by OSHA and shall be considered incidental.

5.4. Submit a supplemental trench shoring plan prepared by a licensed Professional Engineer in the State of Iowa showing how existing utilities and structures in close proximity to the construction will be protected prior to beginning construction.

6. FIELD TESTING

6.1. Contractor is responsible for meeting the specified testing requirements per SUDAS and the Special Provisions.

6.2. Compaction and other field testing will be completed by an independent testing firm procured by the Contractor.

6.3. Inspect and test pipe and manholes for infiltration in sections of approximately 1,000 feet after backfill has been completed, dewatering operations in the area have been stopped and groundwater levels have returned to natural levels.

6.4. Perform testing of final trench backfill beginning at a depth of 2 feet above the top of pipe, as follow:

6.4.1. Coordinate the timing of testing with Jurisdictional Representative.

6.4.2. Jurisdictional Representative will determine the location of testing unless otherwise directed by the Engineer.

6.4.3. For each 2 vertical feet of consolidated fill, provide tests at a maximum horizontal spacing of 200 feet and at all street or trail crossings.

6.4.4. Additional testing may be required by the Jurisdictional Representative in the event of non-compliance, changing conditions, or the determination by the Jurisdictional Representative that additional testing is required to document compaction. Additional tests shall be provided at no cost to the Jurisdiction.

6.4.5. If necessary, excavate to the depth and size as required by the Jurisdictional Representative to allow compaction tests. Place backfill material and recompact.

6.5. Physically inspect pipe, manholes and each joint in the pipes and manholes. Record locations of any visible leakage of pipe or joint damage.

7. DEWATERING

7.1. Conduct dewatering in accordance with SUDAS section 3010. The work of this Section includes site dewatering necessary to lower and control groundwater levels and hydrostatic pressure to permit excavation and construction to be performed properly under dry conditions.

7.2. Schedule and Plan

7.2.1. Dewatering operations shall be adequate to assure the integrity of the finished project. The responsibility for conducting the dewatering operation in a manner which will protect adjacent structures and facilities rests solely with the Contractor. The cost of repairing any damage to adjacent structures and restoration of facilities shall be the responsibility of the Contractor.

7.2.2. The Contractor shall bear the sole responsibility for the design, installation, operation, monitoring, and removal of the dewatering system to comply with the requirements of this section and any applicable regulatory agencies. The Contractor shall be required to install additional dewatering equipment as may be required throughout the duration of the project to maintain groundwater levels as described.

7.2.3. The Contractor shall be responsible for submitting the applications and obtaining the required permits for the well construction including obtaining approval from the Local Public Health Department and the County Office of Planning and Development. The Contractor shall further be responsible for filing a Field Office Notification (FON) with the Iowa Department of Natural Resources (IDNR) and developing a Well Water Pollution Prevention Plan for the discharge of wastewater from well construction activities per the Iowa Department of Natural Resources (IDNR) NPDES General Permit #6.

7.2.4. The Owner will notify the Contractor of any demands brought upon the project by the IDNR. The Contractor shall cooperate with the Owner in its efforts to comply with the site-specific guidelines provided by the IDNR, including the possibility of adjusting the dewatering system if the discharge exceeds limits imposed by the IDNR. The Contractor will be responsible for the costs of sampling and laboratory analysis if required by the IDNR.

7.2.5. Prior to commencement of construction, the Contractor shall submit a detailed dewatering plan including: dewatering method, a list of equipment, and estimated pumping rates.

7.2.6. Fluctuations of the groundwater level can occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time the borings were completed. The geotechnical information, if provided and available, will have been prepared for design purposes only and is not a contract document that can be relied upon by the Contractor to evaluate construction conditions or design the dewatering system. The Contractor should independently interpret the soil/groundwater conditions taking into consideration their intended means and methods of construction, and the Contractor may perform additional exploration at their own expense as necessary for design of the dewatering system.

7.2.6.1. Due to possible variations of soil conditions and groundwater levels between soil bore locations the Contractor shall be responsible for changing or modifying the dewatering system to accommodate such variations at no additional cost to the owner.

7.3. Control and Observation

7.3.1. Adequate control shall be maintained by the Contractor to ensure that the stability of excavated slopes are not adversely affected by water, that erosion is controlled and that flooding of excavation or damage to structures does not occur. The Contractor is solely responsible for site excavation safety and compliance with OSHA regulations, in particular Standard 29 CFR, part number 1926. The Engineer assumes no responsibility for site safety; the above information is provided for consideration by the Contractor only.

7.3.2. The Owner reserves the right to install piezometers, at its own expense, to observe the groundwater levels and monitor the performance of the system.

7.4. Execution

7.4.1. Maintain water levels 1 foot or more below the bottom of excavations or tunneling operations in saturated cohesionless (sand and/or gravel) soils to prevent upward seepage.

7.4.2. Contractor to provide temporary piping, as necessary, to transport pumped groundwater to suitable discharge locations and shall be considered incidental.

7.4.3. Do not pump water from within the trench of an open excavation in sand and gravel below natural ground water level.

7.4.4. The Contractor shall furnish, install, and operate pumps, pipes, appliances, and equipment of sufficient capability to maintain the absolute minimum or lower

groundwater elevation within the trench excavation limits until the trench is backfilled, unless otherwise authorized by the Engineer.

7.4.5. The Contractor shall provide any temporary ground surface piping necessary to convey dewatering well water discharge to an acceptable storm sewer intake with the capacity to convey said discharge. Any rerouting of temporary ground surface piping, necessary to complete the project, will be provided by the Contractor. Discharge directly onto the ground surface shall not be allowed unless approved by the Engineer. The Contractor shall supply a clean tapping device at each well location to allow easy discharge water sampling by the Engineer.

An adequate system shall be designed, installed and maintained to lower and control the groundwater elevations to permit excavation, construction of structures, and placement of fill materials to be performed under dry conditions.

7.4.6. The system shall be placed into operation, prior to beginning excavating below the natural groundwater level, to lower the groundwater to the elevation as described and shall be operated continuously 24 hours a day, 7 days a week until sewers have been constructed and backfill materials have been placed to the top of the trench.

7.4.6.1. If the dewatering system shuts down or if pumping is suspended, the groundwater levels will need to be lowered to the required level and verified by the Engineer before continuing any construction, including excavation or backfilling. The Engineer will also require any compaction, moisture and/or other soils testing, as determined necessary, of any backfill that is prematurely subjected to groundwater to verify said soils stability prior to placement of additional backfill. If said soils are determined to be unacceptable the Contractor will be required to remove and replace damaged soils at their own expense.

7.4.7. Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of subgrade soils at the bottom of the proposed excavation.

7.4.8. Diversion ditches and dikes shall be used, where necessary, to prevent surface water from entering the excavation.

8. PERMITS

8.1. The Contractor shall complete all work in conformance with all local, state, and federal permits obtained by the Owner, including, but not limited to, NPDES permits, Iowa Department of Transportation Permits, Iowa Department of Natural Resources Permits, Army Corp of Engineers Permits, and County Permits.

9. CROP DAMAGES

9.1. The Contractor shall be responsible for paying crop damages for any damaged crop during construction outside the planned limits of construction unless otherwise directed by the Engineer. Payment shall be based on the following:

9.1.1. The Contractor shall exercise due care in entering or reentering private property and shall minimize disturbance area to the extent possible. The Owner shall pay for all damages to crops and crop loss reduction in yield due to compaction or other factors caused by the construction or maintenance of said sanitary sewer

within the project work limits. For crop damages, the Owner agrees to pay 100% of the crop damaged area for the construction year based on average yield and local grain prices during the construction year. After construction, the Owner agrees to assess the damaged area, and pay for the actual compacted area based on a 3-year schedule for future reduction in yield due to compaction. The schedule will be 50% for the first year after construction, 25% for the second year, and 25% for the third year based on average yield and local grain prices during the construction year. Payment for all of the above-referenced damages in this paragraph shall be paid by the Owner after an assessment has been completed of the actual damaged area. Upon completion of any construction, reconstruction, repair, enlargement or maintenance of any sanitary sewer or any appurtenance thereto, the Contractor shall restore the Easement Area and Temporary Easement Area in good and workmanlike manner at no cost to the Owner . In agricultural areas, the land within the easement area will be tilled by the Contractor and returned to a condition suitable for planting; and in urban areas, restoration of lawns by seeding to a condition comparable to its condition before construction at no cost to the Owner . Any crop damages outside the construction limits will be paid by the Contractor to the Owner as a reduction in the total contract price per the schedule indicated and at no cost to the Owner .

10. WATERWORKS STANDARD SPECIFICATIONS FOR WATER MAIN INSTALLATION

10.1. The City of Marshalltown Waterworks Standard Specifications for Water Main Installation shall be included by reference.

11. MARSHALLTOWN WATERWORKS RULES & REGULATIONS

11.1. The City of Marshalltown Waterworks Rules & Regulations shall be included by reference.

ORDINANCE 15040

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA, REPEALING CODE SECTION 130.003 ASSEMBLIES, PARADES AND DEMONSTRATIONS AND ADOPTING A NEW CODE SECTION 130.003 PUBLIC USE AND SPECIAL EVENT PERMITS

WHEREAS, the City Council of the City of Marshalltown, Iowa, adopted ordinance 13149 to regulate Assemblies, Parades and Demonstrations and to Prescribe Penalties for Violations on June 13, 1977; and

WHEREAS, recommendations have been presented to the City Council to re-write the current code section 130.003 renaming it Public Use and Special Event Permits; and

WHEREAS, the City Council of the City of Marshalltown finds it is in the best interest of the City to amend code section 130.003 of the City Code of Ordinances.

NOW THEREFORE BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. The Code of Ordinances, City of Marshalltown, Iowa is hereby amended by repealing code section 130.003 Assemblies, Parades and Demonstrations and enacting and adopting the following in its place:

§ 130.003 PUBLIC USE AND SPECIAL EVENT PERMITS.

(A) Required. It is unlawful for any person to be or be concerned in or join or participate in any assembly, meeting, concert, parade, or other exercise or display or demonstration upon any street, sidewalk or public ground, or other public places without a written permit issued to one or more of the participants thereof by the City Clerk.

(B) Contents of the online application can be completed on the City website. The application for a permit shall state the following:

(1) The name, phone number, and email address of the applicant;

(2) The sponsoring organization, if any

(3) The exact location of the event or the exact starting and ending points of the parade as well as the exact route to be followed;

(4) Exactly what provisions have been made for dispersal of the event or parade, so such may be accomplished reasonably;

(5) What contingency plans exist to maintain order and to control the group if any;

(6) The exact time the event or parade is to commence and terminate;

(7) Devices or things that may produce noise, dirt, smoke, litter, or odor and the applicant's means of limiting, controlling, or removing such; and

(8) If alcohol is requested at said event.

(9) Such other and further information the City Clerk may request.

(C) Conditions. All such permits shall be issued on the express condition that all laws, statutes, or ordinances be observed and obeyed and that all activities be organized, peaceful and controlled. Applicants must adhere to State of Iowa event guidelines and licensing requirements.

(D) Restrictions. The Chief of Police may put such reasonable restrictions that he or she may deem necessary to preserve peace and order or promote traffic and pedestrian control, and generally protect the rights of others.

(E) Fees.

(1) The Public Works Division will drop off and pick up a stocked trailer with barricades, cones, and channelizers for small-scale events for a required fee as set by resolution. The organizer is responsible for setting up and taking down all barricades and equipment and returning them to the trailer after the event.

(2) The Public Works Division will drop off and pick up barricades, cones, and channelizers at requested drop points for large-scale events for a required fee as set by resolution. The organizer is responsible for setting up and taking down all barricades, cones, and channelizers and leaving them at the drop points after the event.

(3) The Chief of Police may bill for the use of equipment or extra-duty police personnel due to public use permits.

(2013 Code, § 21-2) (Ord. 13149, passed 6-13-1977) Penalty, see § 130.999

Section 2. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 3. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.

Section 4. That this ordinance shall be in full force and effect after its passage and publication as by law.

Passed this _____ day of _____, 2022, and signed this _____ day of _____, 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

I, Alicia Hunter, City Clerk of the City of Marshalltown, Iowa, do hereby certify that the foregoing ORDINANCE was passed and approved by the City Council of the City of Marshalltown, Iowa, on the _____ day of _____, 2022, and was published in the Marshalltown Times-Republican, a newspaper of general circulation in the City of Marshalltown, Iowa, on the _____ day of _____, 2022.

_____

Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA
CITY CLERK'S OFFICE

Joel Greer, Mayor
Jessica Kinser, Administrator
Alicia Hunter, City Clerk
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

March 22, 2022

To: Mayor Joel Greer & Members of the City Council
From: Alicia Hunter, City Clerk
Re: Chapter 130 Permits

Policy Issue: Goal 3 / Objective 1 of the Strategic Plan: Review City-issued licenses and permits for necessity.

Recommendation: To amend Chapter 130 Assemblies, Parades and Demonstrations to reflect the Public Use and Special Event Permit requirements.

Background: The City Clerk issues permits for events held on public property. The application process is done through the City website. Applications are reviewed by department directors before issuing.

Attached is the suggested markup revision of the ordinance updating the title and changing the application process to the City Clerk not the Chief of Police. It also adds information about the special events trailer that is used for events.

Budget Impact: The current fee schedule has a $100 deposit for barricades that is refunded upon return of barricades. This would be eliminated due the use of the special events trailer which has a $150 fee or barricade drop off/pick up for large scale events of $300.

The current fee schedule charges $100 for a public use permit where there is alcohol which liquor licensing is not obtain. Staff recommend eliminating this fee as this would only occur in small scale neighborhood events which require the rental of the trailer.

Attachment: Markup revision of ordinance.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

ORDINANCE 15041

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA CHAPTER 118 PEDDLERS, SOLICITORS, TRANSIENT MERCHANTS

WHEREAS, the City Council of the City of Marshalltown, Iowa, adopted an ordinance defining, regulating, and licensing peddlers and transient merchants on July 25, 1932. Since the enactment multiple revisions have been submitted; and

WHEREAS, recommendations have been presented to the City Council to amend the ordinance to update application and licensing requirements; and

WHEREAS, the City Council of the City of Marshalltown finds it is in the best interest of the City to amend Chapter 118 of the City Code of Ordinances.

NOW THEREFORE BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. The Code of Ordinances, City of Marshalltown, Iowa is hereby amended by repealing code sections 118.001 through 118.999 and enacting and adopting the following in its place:

CHAPTER 118: PEDDLERS, SOLICITORS, AND TRANSIENT MERCHANTS

§ 118.001 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

PEDDLER. Any person who sells or offers for sale for immediate delivery goods or merchandise from house-to-house, business-to-business, or upon public property.

SOLICITOR. Any person who solicits or attempts to solicit from house-to-house, business-to-business, or upon public property an order for goods, subscriptions or merchandise to be delivered at a future date.

SPECIAL COMMUNITY-WIDE EVENT. An event or community celebration for which a public use permit under § 130.003 has been issued and deemed exempt from licensing in this chapter at the discretion of the City Clerk.

TRANSIENT MERCHANT. Any person, firm, or corporation who engages in a merchandising business from a mobile facility (self-contained motorized or trailer) on any parcel.

§ 118.002 LICENSE REQUIRED.

Unless otherwise exempted by other provisions of this subchapter, any peddler, solicitor, or transient merchant operating within the city without first obtaining a license for such activity as herein provided, or operating in violation of the terms of the license, commits a simple misdemeanor subject to a fine.

§ 118.003 CERTAIN EXEMPTIONS.

(A) The following shall be exempt from the license requirement:

(1) Newspaper carriers;
(2) Youth fundraisers such as Scouts of America, community school districts
(3) Farmer's Market Vendors
(4) Farmer and gardener stand selling agricultural products they have grown; and
(5) Persons operating during special community-wide events, at the discretion of the City Clerk.

(B) While exempted from the license fee requirement, authorized representatives of religious, non-profit, and charitable organizations, or sponsors of a charitable event, desiring to solicit money or to distribute pertinent literature, must first apply to the City Clerk for approval. Such application shall set forth the name of such organization or sponsor and charitable purpose for which such activity is sought, the names and addresses of the officers and directors of the organization, satisfactory verification of its 501(c)(3) tax-exempt status, specification of the dates and times during which such activities are to be conducted and of the amounts of any commissions, fees or wages which are to be charged in connection with the activity. Upon proper application by a bona fide charitable or religious organization, the City Clerk shall issue the applicable license containing the above information to the applicant free of charge, subject to the time limitations as set forth in this subchapter.

§ 118.004 LICENSE APPLICATION.

A written application shall be filed with the City Clerk for a license under this subchapter unless exempted under § 118.003 of this chapter. Such application shall set forth the applicant's company name; contact person, phone number, address, and email address. An applicant for a license shall also submit recent photo identification and a copy of a current Department of Criminal Investigations (DCI) background check. The application shall also set forth the locations of activities and the length of time requested to be covered by the license and be accompanied by current written permission from any property owner upon whose property a transient merchant will be operating, or whose property (including parking) will be affected by the transient merchant's operation. Transient merchants shall make the facility or vehicle available for visual inspection by the Fire Marshal or their designee at a reasonably convenient location.

§ 118.005 SALES TAX PERMIT REQUIRED.

Before a license is issued under provisions of this subchapter, the applicant for the license shall submit to the City Clerk for inspection and copying a state sales tax permit when taxable items are intended to be sold.

§ 118.006 STATE FOOD LICENSE REQUIRED.

Before such license is issued under provisions of this subchapter, the applicant for the license shall submit to the City Clerk a state food sales license when applicable food items are intended to be sold.

§ 118.007 LICENSE ISSUANCE.

If the City Clerk finds the application in conformity with the requirements of this subchapter, that all federal and state law requirements have been met, that the facts stated within the application are accurate, that the applicant has not committed a crime of violence, theft, fraud or dishonesty, other than simple misdemeanors, has committed no prior violations of this

subchapter and is not a person required to register as a sex offender, the City Clerk shall issue a license upon payment of the applicable fee. The Clerk may rely upon the results of any routine background check without responsibility for verifying the accuracy of any information contained therein. The Chief of Police or City Attorney may authorize exceptions to criminal histories based on circumstances such as the number of years since the charge. A State of Iowa Division of Criminal Investigation background check is valid for one year.

§ 118.008 PERMITTED LOCATIONS.

(A) Peddler or solicitor licenses are issued for use in locations across the city without restrictions.

(B) Transient merchants issued an annual license are permitted to operate only on paved portions of private commercial property locations. A license must be obtained even if the transient merchant is operating on their commercial property.

(C) Transient merchants issued a 24-hour license are authorized to operate on public or private property locations as approved on the application.

(D) Requests to operate in the Marshalltown Central Business District will only be considered if it is at the request of a Main Street Business. Parking will only be permitted in front of the said business with the 24-hour Transient Merchant license.

§ 118.009 TIME RESTRICTIONS.

(A) Peddler or solicitor licenses allow activity only between the hours of 9:00 a.m. and 7:00 p.m., Monday through Saturday.

(B) Transient merchant licenses issued for private commercial properties shall be allowed at all times, Sunday through Saturday, upon authorization that the owner of the location where sales occur consents to use of its business premises for that purpose and that neither traffic nor nearby residents will be adversely affected.

§ 118.010 PERMITTED MOBILE FACILITIES OR VEHICLES.

(A) Mobile vendors shall operate only from facilities or vehicles which are structurally sound, in good repair and appearance, with no visible rust or damage. Adequate waste disposal receptacles shall be conveniently provided for customer use. No waste or garbage shall be allowed to accumulate on the exterior of the facility or vehicle. All grease shall be disposed of lawfully. Electrical connections shall be outdoor-rated with functioning ground fault interrupters (GFIs) and no extension cords shall cross any sidewalk or public access.

(B) Electrical connections across any sidewalk or public access shall be made by proper underground wiring method in compliance with the National Electric Code (NEC).

(C) Vendors shall comply with Chapter 91: Fire Prevention and Protection of this code.

Penalty, see § 118.999

§ 118.011 FEES.

(A) Except as provided in § 118.003 of this chapter, every applicant for a license under this subchapter shall pay the fee, set by Council resolution before a license shall be issued.

(B) A peddler or solicitor license shall be issued by the day per person.

(C) A transient merchant license shall be issued annually per unit for operation on private commercial property and shall expire on May 1st of each year.

(1) Transient merchants who also have a brick and mortar operation shall be issued an annual license for operation on private commercial property.

(D) A 24-hour transient merchant license may be issued for operation on public or private property. This is the only eligible license for operation on public property. It may be issued in addition to an annual license.

§ 118.012 LICENSE DISPLAY.

(A) Each solicitor or peddler shall, at all times while doing business in the city, keep in his or her possession and display upon request of any city official, peace officer, or prospective customer, the license issued pursuant to this subchapter, and shall, upon the request of prospective customers, exhibit the license as evidence that they have complied with all requirements of this subchapter.

(B) Each transient merchant shall publicly and visibly display the license at its temporary place of business.

(C) Licenses issued to any entity under the provisions of this subchapter are not transferable in any situation and grants authority only to the entity applying.

§ 118.013 LICENSE REVOCATION; RIGHT TO APPEAL.

(A) If the licensee, in the application for the license or in the course of conducting his or her business, has made incorrect or fraudulent statements, has conducted his or her business or activity unlawfully, or violated an ordinance or statute, including placement of illegal signage, or if the licensee has conducted his or her business in such manner as to endanger the public welfare or safety, the City Clerk may revoke any license issued under this subchapter. If a license is revoked the licensee is not eligible for reimbursement of any portion of the license fee.

(B) The licensee may appeal the revocation of the license to the City Council at its next regularly scheduled meeting by filing with the Clerk a written request for an appeal to the City Council. The City Council may affirm, modify or reverse its decision or the decision of the Clerk to revoke such license.

§ 118.014 TRANSFER OF LICENSE AND LIMITED USE.

No license provided for in this chapter shall be transferred without the consent of the Mayor endorsed thereon in writing. No license issued under this chapter shall include more than one transient merchant or extend to or include more than one peddler or solicitor under a single license.

§ 118.999 PENALTY.

(A) Any person violating any provision of this chapter for which no specific penalty is prescribed shall be subject to § 10.999 of this code of ordinances.

(B) Anyone violating any of the provisions of §§ 118.001 through 118.014 of this chapter shall, upon conviction, be subject to the penalties as provided in §§ 10.999(A) and (B) of this code of ordinances.

Section 2. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 3. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.
Section 4. That this ordinance shall be in full force and effect after its passage and publication as by law.

Passed this _____ day of _____, 2022, and signed this _____ day of _____, 2022.

CITY OF MARSHALLTOWN, IOWA

_____
Joel Greer, Mayor

ATTEST:

_____
Alicia Hunter, City Clerk

I, Alicia Hunter, City Clerk of the City of Marshalltown, Iowa, do hereby certify that the foregoing ORDINANCE was passed and approved by the City Council of the City of Marshalltown, Iowa, on the _____ day of _____, 2022, and was published in the Marshalltown Times-Republican, a newspaper of general circulation in the City of Marshalltown, Iowa, on the _____ day of _____, 2022.

_____
Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA
CITY CLERK'S OFFICE

Joel Greer, Mayor
Jessica Kinser, Administrator
Alicia Hunter, City Clerk
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

March 23, 2022

To: Mayor Joel Greer & Members of the City Council
From: Alicia Hunter, City Clerk
Re: Chapter 118 Permits

Policy Issue: Goal 3 / Objective 1 of the Strategic Plan: Review City-issued licenses and permits for necessity.

Recommendation: To amend Chapter 118 with the attached revisions and to amend the fee schedule.

Background: Chapter 118 – Peddlers and Solicitors, outlines the permit requirements for a peddler, solicitors, or transient merchants. Staff recommend separating the currently combined application to two separate applications for Peddler/Solicitors and Transient Merchants since they have different requirements.

Currently, transient merchants are limited to selling only seven days or less during any calendar month. There is no restriction on peddler/solicitors. A State of Iowa food license is a requirement of our Transient Merchant permit and it does not have any sales restrictions. The city also does not have staff to monitor when Transient Merchants are operating. It is staff recommendation to eliminate the restriction on the number of days.

Currently, transient merchants are only allowed to operate on private commercial property. Staff would like to allow operation on public property with a new 24-hour license. This license would be in addition to an annual license.

The current fee schedule for all 3 permits is: $200 per year, $60 per month, $25 per week, $6 per day. Staff recommendations include the following: eliminating weekly and monthly rates; issuing Peddler/Solicitors licenses by the day and increasing the fee to $10; issuing annual Transient Merchant licenses at the $200 per unit that expire May 1st each year (the State of Iowa license is $250); issuing annual Transient Merchant licenses for owners who also have a brick and mortar business at a reduced rate of $25 annually; creating a new 24-hour public property transient merchant license at $50 per day.

CITY COUNCIL
Al Hoop, Gabriel Isom, Barry Kell, Mike Ladehoff,
Jeff Schneider, Gary Thompson, Dex Walker

Budget Impact:

License	Current Fee	New Fee
Peddler/Solicitor (per person)	$6 per day	$10 per day
Peddler/Solicitor (per person)	$25 per week	N/A
Peddler/Solicitor (per person)	$60 per month	N/A
Peddler/Solicitor (per person)	$200 per year	N/A
Transient Merchant (per unit)	$6 per day	$50 per day
Transient Merchant (per unit)	$25 per week	N/A
Transient Merchant (per unit)	$60 per month	N/A
Transient Merchant (per unit)	$200 per year	$200 per year
Transient Merchant (with brick & mortar)	N/A	$25 per year
24-hr Transient Merchant (on public/private property)	N/A	$50 per day

Attachment: Chapter 118 Markup Revision

April 8, 2022

To: Mayor Joel Greer & Members of the City Council
From: Alicia Hunter, City Clerk
Re: Chapter 118 Permits

Further discussion was requested on this item regarding the approval of Transient Merchants in the Marshalltown Central Business District.

Suggested options for language for § 118.008 PERMITTED LOCATIONS.

(D) Requests to operate in the Marshalltown Central Business District will only be considered if it is at the request of a Main Street Business. Parking will only be permitted in front of said business with the 24-hour Transient Merchant license.

OR

(D) Transient Merchants are not allowed to operate on Main Street from 3rd Street to 3rd Avenue unless authorized as part of a special community-wide approved by the City Clerk referenced in § 118.003 CERTAIN EXEMPTIONS.

ORDINANCE 15042

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA, REPEALING CHAPTER 58: VEGETATION AND ENACTING AND ADOPTING A NEW CHAPTER 58: VEGETATION

WHEREAS, the City Council of the City of Marshalltown, Iowa, adopted ordinance 14429 Providing for the Management and Preservation of Trees, Shrubs, and Other Greenery within the City of Marshalltown, Iowa; and

WHEREAS, recommendations have been presented to the City Council to re-write the current Chapter 58 Vegetation to better define permits for right-of-way trees, add the responsibility of trimming right-of-way trees to the City and create the mechanism for the City Council to impose a fee for public trees and composting activities; and

WHEREAS, the City Council of the City of Marshalltown finds it is in the best interest of the City to amend Chapter 58 Vegetation of the City Code of Ordinances.

NOW THEREFORE BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. The Code of Ordinances, City of Marshalltown, Iowa is hereby amended by repealing Chapter 58 Vegetation and enacting and adopting the following in its place:

58.001 PURPOSE.

(A) It is the policy of the city to regulate and control the planting, removal, pruning and protection of trees and other vegetation within streets, highways and alley rights-of-way and public park areas within the boundaries of the city; to eliminate and guard against dangerous conditions which may result in injury to persons using the public areas of the city; to prevent damage to any public sewer or water main, street, sidewalk or other public property; to protect trees located in public areas from undesirable and unsafe planting, removal, pruning and protection practices; and to guard all trees within the public areas of the city against the spread of disease or pests. The provisions of this chapter shall apply to all trees, shrubs, weeds, vines and brush planted in or upon any public area and in certain instances on private property within the city and any existing trees that violate other sections of this chapter.

(B) It is also the intent of this chapter to maintain all public and private areas in the city in such a manner that they are free of weeds, vines and brush; to eliminate and guard against dangerous conditions which may cause injury or illness to persons using the public areas; to promote and enhance the beauty of the city; and to guard against pestilence and widespread weed invasion of any area of the city. State legislation or State Department of Transportation rules take precedence over this chapter if along a state-designated highway.

58.002 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

ALLEY. A thoroughfare through the middle of a block giving access to the rear of a building.

PARK. Any property owned in whole or in part by the city used in whole or in part for recreational purposes, wildlife purposes or other municipally-owned public purpose related to recreation or wildlife, but does not include parking or terraces or municipal parking lots.

PROPERTY OWNER. The contract purchaser if there is one of record, otherwise the record holder of legal title.

PUBLIC AREA. Parks and other lands owned or leased by the city and all terraces along all streets, highways, boulevards and alleys.

PUBLIC RIGHT-OF-WAY. Dedicated public property containing or proposed to contain publicly owned street surfaces, curb and gutter, sidewalks and planted strips.

SHRUB. A woody plant with several stems and usually with a low mature height of eight feet or less.

STREET INTERSECTION. The intersection of the public street right-of-way lines of the two intersecting streets. On streets that have sidewalks, this would be the intersection of the inside edges on the private property side of the sidewalks.

TREE. Any woody perennial plant of any age with a main trunk and many branches, and includes living or dead trees and standing or fallen trees.

58.003 REMOVAL OF WEEDS, VINES AND BRUSH.

All areas of the city are to be kept free of any noxious weeds and shall also be kept free of any other weeds, vines or brush for health and safety reasons.

TREES

58.004 INJURING OR DAMAGING.

(A) No person shall in any public area of the city break, injure, mutilate, kill or destroy any tree or shrub; permit any animal under his or her control to do so; permit any fire to injure any portion of any tree or shrub; or permit any toxic chemicals or materials to seep, drain, be emptied on or otherwise enter into any tree or shrub.

(B) It shall be unlawful for any person to cut, damage, carve, transplant or remove any tree, or injure the bark of any tree located in a park, except for authorized city personnel in the performance of his, her or their duties.

(C) During building operations, commercial promotions or public promotions, the builder or sponsor shall erect suitable protective barriers around public trees and shrubs that may be injured.

58.005 FASTENING MATERIALS.

No person shall fasten any sign, rope, wire or other materials to or around or through any trees or shrubs in any public area, except in emergencies such as storms or accidents.

58.006 PLANTING IN PUBLIC RIGHT-OF-WAY EASEMENTS.

It shall be unlawful to plant any tree or other woody plant material within any dedicated utility easement area within the city. Any tree or other wood plant material planted within public right of way requires a planting permit.

58.007 PLANTING PERMIT.

(A) No person shall plant a tree in a public right-of-way unless the individual has completed a planting permit application at the Parks and Recreation Office and has been issued a permit by the Parks and Recreation Director or their designee.

(B) (1) Trees shall be subject to conditions of the permit. Conditions of the permit shall include a requirement for diversity of species withal, the planting area, as well as other conditions as may be provided elsewhere in this subchapter.

(2) Whenever a tree is planted in conflict with the provisions of the permit or without obtaining a permit, it shall be lawful for city staff to remove or cause removal of the tree.

(3) The cost of the removal of such tree may be charged to the property owner responsible for the planting.

(C) The City may consider the following review criteria in permit approvals but not limited to:

- Visibility triangles at streets, alleys and driveways
- Sign visibility
- Proximity to other trees
- Proximity to utilities
- Proximity to pavement
- Area of space available

§ 58.008 CERTAIN SPECIES PROHIBITED.

(A) It shall be unlawful to plant any tree species on or within 25 feet of public right-of-way in the city that has been identified on a list of prohibited species compiled by city staff. The list shall be kept on file at the Parks and Recreation Office and on the city website.

(B) (1) The Parks & Recreation Department may issue a planting permit for planting evergreen and deciduous shrubs with a mature height greater than 12 inches within the public right-of-way for decorative purposes.

(2) Each request will be reviewed upon its own merits, and the proposed plantings at mature height shall not interfere with pedestrian and vehicular safety or the free use of the street or sidewalk.

(C) It shall also be unlawful to plant any tree species that bears fruit, except for male sterile varieties, on a public right-of-way or on private property in a location where the tree will overhang the public right-of-way.

(D) Any plant species prohibited by this section, but in place on the effective date of this ordinance, need not be removed by virtue of its mere existence unless interference with other sections of this chapter so requires.

58.009 SPACING AND PLACEMENT IN PUBLIC RIGHT-OF-WAY AREAS.

(A) No tree shall be planted nearer than three feet to the curb. No tree shall be planted within three feet of sidewalk in residential areas.

(B) (1) Trees planted on or adjacent to Highway 14 right-of-way shall be planted ten feet back from the back of the curb line.

(2) Other special considerations do exist and a special permit must be secured from the state's Department of Transportation; contact the local state's Department of Transportation Engineer.

(C) Trees shall be planted no closer than the sum of half of the mature spread of each tree from one another.

(D) Trees shall be planted no closer to a utility pole than a distance equal to half of the mature spread of the tree species being planted.

58.010 REMOVAL AND TRIMMING ON PUBLIC PROPERTY.

(A) The City shall be responsible for the removal of all dead and diseased trees from the public right-of-way and other public areas.

(B) The adjacent property owner shall be responsible for the trimming of all trees in the public right-of-way. The City shall be responsible for the trimming of trees in other public areas.

(1) Trees shall be so trimmed that the overhanging branches shall be at least fifteen feet above the surface of the street and at least eight feet above the surface of the sidewalk so as not to interfere with the street lighting or the free and safe use of the street and sidewalk by the public, taking into consideration tree maturity and size.

(2) Property owners, agents or occupants may trim limbs or branches not exceeding six inches in diameter from trees on public right-of-way areas adjacent to their property. Such cutting or trimming shall conform to the arboricultural specifications and standards of practice adopted by the city staff.

(3) Only City staff, tree trimming or removal contractor, or public service company can trim branches exceeding six inches in diameter from the public right-of-way area. Adjacent property owners, agents or occupants must obtain a contractor at their expense to have branches exceeding six inches removed from trees in the public right-of-way.

(C) The City shall have the authority to trim or remove any tree, shrub or other plant material planted on any public right-of-way for non-compliance of this subchapter. This work shall be done at City expense if notice is not given to the adjacent property owner.

58.011 REMOVAL AND TRIMMING ON PRIVATE PROPERTY.

(A) The property owner, agent or occupant of any lot or parcel of land shall keep the trees on their property so trimmed that the overhanging branches shall be at least 15 feet above the surface of the street and at least eight feet above the surface of the sidewalk so as not to interfere with the street lighting or the free and safe use of the street and sidewalk by the public and shall be kept free of dead limbs and branches, taking into consideration the tree maturity and size.

(B) The city shall have the right to trim or prune any tree or shrub on private property without notice when it overhangs public property and interferes with the proper spread of light along the street from a streetlight or interferes with visibility of any traffic control device or sign. The city may serve notice on the abutting property owner as per § 58.024 of this chapter to remedy the situation and assess the cost to the property.

§ 58.012 NOTICE AND ASSESSMENT OF COSTS TO PROPERTY OWNERS.

(A) If the property owner does not perform an action required under this subchapter within a reasonable time after written notice, the City may perform the required action and assess the costs against the property for collection in the same manner as a property tax. Notice shall be by certified mail or other personal service to the address of the property owner as well as the occupant of the premises as shown by the records of the County Auditor. The notice shall describe the violation and location of the violation, state the act(s) necessary to cure the violation, state the time within which action is required, and state that if the violation is not cured and no request of hearing is made within a set period of time, the City will assess costs as set forth above.

(B) In an emergency, the city may perform any action which may be required under this subchapter without prior notice if it is deemed an imminent hazard to the safety and well-being of the public and assess the costs as provided in this section after notice to the property owner and hearing. All action taken by the City without notice to the property owner is done at the City's expense and shall not be assessed to the property owner.

§ 58.013 BARRICADES AND OTHER PROTECTIVE DEVICES REQUIRED.

When necessary for the protection of the public, guards, barricades or other protective devices or warnings shall be maintained on any sidewalk, street or other public places where trees are being trimmed or removed. Barricades and other protective devices shall meet the standards set forth by the Public Works Department. Traffic on any street shall not be barricaded without first obtaining permission therefor from the Public Works Department and notifying the Fire Department, Police Department and the ambulance service of the closing and again when the street is reopened.

§ 58.014 ESTABLISHMENT OF A COMPOST UTILITY.

A compost utility is hereby established to provide for the operations of the Marshalltown Compost Facility, which includes the breaking down, processing and re-use of vegetative and tree materials.

§ 58.015 COMPOST FEE.

The City Council shall, by resolution, set the fee for the operation of the Marshalltown Compost Facility. This includes the initial establishment of fees and subsequent changes to the fees as deemed necessary by the City Council.

§ 58.016 PENALTY.

Violation of any section of this chapter shall be deemed to be a municipal infraction and be punished by a penalty as provided in § 10.999(A) of this code of ordinances.

Section 2. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 3. If any section, provision or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

Section 4. That this ordinance shall be in full force and effect after its passage and publication as by law.

Passed this _____ day of _____, 2022, and signed this _____ day of _____, 2022.

CITY OF MARSHALLTOWN, IOWA

_____

Joel Greer, Mayor

ATTEST:

_____

Alicia Hunter, City Clerk

I, Alicia Hunter, City Clerk of the City of Marshalltown, Iowa, do hereby certify that the foregoing ORDINANCE was passed and approved by the City Council of the City of Marshalltown, Iowa, on the _____ day of _____, 2022, and was published in the Marshalltown Times-Republican, a newspaper of general circulation in the City of Marshalltown, Iowa, on the _____ day of _____, 2022.

_____

Alicia Hunter, City Clerk

ORDINANCE 15043

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA BY REPEALING CODE SECTION 90.036 DOGS AT PUBLIC EVENTS

WHEREAS, the City Council of the City of Marshalltown, Iowa, adopted ordinance 14827 known as An Ordinance Relating to the Prohibition of Dogs at Public Events on March 10, 2008; and

WHEREAS, since 2008, communities throughout Central Iowa have adopted more lenient rules at public events and our outdated practice has become more difficult to enforce; and

WHEREAS, the City of Marshalltown will leave it to the event organizers to implement and enforce any rules regarding animals at public events; and

WHEREAS, the City Council of the City of Marshalltown finds it is in the best interest of the City to repeal code section 90.036 Dogs at Public Events of the City Code of Ordinances.

NOW THEREFORE BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA:

Section 1. The Code of Ordinances, City of Marshalltown, Iowa is hereby amended by repealing in its entirety, code section 90.036 Dogs at Public Events.

Section 2. That this ordinance shall be in full force and effect after its passage and publication as by law.

Passed this _____ day of _____, 2022, and signed this _____ day of _____, 2022.

CITY OF MARSHALLTOWN, IOWA

_____
Joel Greer, Mayor

ATTEST:

_____
Alicia Hunter, City Clerk

I, Alicia Hunter, City Clerk of the City of Marshalltown, Iowa, do hereby certify that the foregoing ORDINANCE was passed and approved by the City Council of the City of Marshalltown, Iowa, on the _____ day of _____, 2022, and was published in the Marshalltown Times-Republican, a newspaper of general circulation in the City of Marshalltown, Iowa, on the _____ day of _____, 2022.

_____
Alicia Hunter, City Clerk

MARSHALLTOWN
IOWA

Joel Greer, Mayor
Jessica Kinser, Administrator
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Michael W. Tupper, Chief of Police
DATE: April 20, 2022
RE: Dogs At Public Events

Policy Issue: Council approval is required for resolution and ordinance revision.

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☐ Goal 2: Enhance Marshalltown's public image	☐ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Objective 1: Review policies, procedures, and ordinances for updates.

Recommendation: Staff recommends repealing Resolution 2008-090 Designating Public Events at Which Dogs are Prohibited and repealing Code of Ordinance section 90.036 Dogs at Public Events.

Budget Impact: N/A

Description/Background: In 2008 the City Council implemented an ordinance prohibiting dogs from the immediate vicinity of certain public events in the city. A resolution was then adopted establishing the specific events they were prohibited at.

Since 2008, communities throughout Central Iowa have adopted more lenient rules for public events as it relates to dogs being allowed to be present at public events while under the supervision of the pet owner. The current rule in Marshalltown is an outdated practice and has become difficult to enforce.

The use of service animals is also more common today than in 2008. Consequently, the current rule leads to confusion. We should not keep service dogs out of a public event. When people see a service dog, they may not understand the purpose of the service animal and they assume law enforcement is either ignoring the rule or picking and choosing who can or cannot have a dog at a public event.

Whether dogs are allowed at public events or not is not a matter of public safety and should not be a concern of government requiring police intervention. Asking law enforcement to enforce these minor rules is a poor use of law enforcement resources and can diminish the relationship law enforcement has with community members. Enforcement of these minor rules comes off as trivial and can lead to unnecessary confrontation between police and the community. There are already ordinances on the books that require dog owners to have their animal under control and on a leash. Further government restriction is unnecessary.

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Jeff Schneider, Gary Thompson, Dex Walker

For these reasons, staff recommends repealing the ordinance and resolution and allowing event organizers to determine if dogs are allowed at an event. The event organizer would then be responsible for enforcement.

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Marshalltown, IA 50158-4911
Tel - (641) 754-5701
Fax - (641) 754-5717

TO: Mayor Greer and City Council
FROM: Michael W. Tupper, Chief of Police
DATE: 5 May 2022
RE: Public Safety Cameras

Policy Issue: City policy requires governing body approval of major capital project purchases and investments.

☐ Goal 1: Expand and improve development	☒ Goal 3: Continually improve the City's organization & services
☒ Goal 2: Enhance Marshalltown's public image	☒ Goal 4: Partner with others to improve quality of life

Specific Objective/Action: Build upon the current public safety camera program by adding camera sites for the purpose of enhancing public safety and dettering crime.

Recommendation: Authorize the police chief to build a public safety camera team to plan camera site priorities and build a preliminary plan for a project not to exceed $150,000.00.

Budget Impact: Dependent upon the scope of the project. See attached RACOM document for equipment pricing. $100,000.00 would be quickly spent on a limited scope project dependent upon equipment needs. It is important to remember there will be costs for system maintenance, software maintenance and data storage on the back end of these projects.

Description/Background: Since 2017 the city has had a limited public safety camera program. This program was initially funded by the Marshall County Crime Stoppers organization. Crime Stoppers conducted fundraising efforts that subsequently led to public safety camera sites being located in Marshalltown and in rural Marshall County. In Marshalltown, the camera sites are:

1. Center & Anson
2. 3rd Avenue & Anson
3. Parking lot behind Center Street Station bar

Since 2017, RACOM has installed cameras around the RACOM property the police department can access. The 13th Street District also funded a project in the 13th Street area. Although our current program is very limited, public safety cameras have assisted law enforcement is solving criminal offenses. The police department would like to expand this program. The department feels adding camera sites would enhance public safety and improve the overall effectiveness of this program.

The police department has the following priority sites but a discussion about sites needs to be refreshed.

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1. 3rd Avenue & Linn
2. Mega 10 Park
3. Skate Park
4. Gallery Garden
5. General downtown locations
6. Entire Highway 14 Corridor
7. Vet's Colisuem & City Hall Complex
8. Riverview Park
9. Nicholson Ford OHV Park

As new commecial developments, park projects, and road projects occur, there are opportunities to discuss how we can protect these projects and leverage these projects to enhance the public safety camera program.

Single Camera, Installed at a location that has existing network connection

Axis Q1615-LE MK III
Network Switch
Milestone Licensne
Camera Install

Total	$ 3,000.00

Single Camera, and Wireless Network Backhaul

Axis Q1615-LE MK III
Network Switch
Milestone Licensne
Camera/Network Install
Network Microwave

Total	$ 11,500.00

Intersection with (4) Cameras and Wireless Network Backhaul

Axis Q1615-LE MK III (4)
Network Switch
Milestone Licensne
Camera/Network Install
Network Microwave

Total	$ 17,500.00

Adding Access Points @ Existing Tower Site

Network Switch
(4) 90 Degree Antennas
Tower Crew
Install

Total	$ 23,550.00

MARSHALLTOWN
IOWA

City Administrator's Office

Joel Greer, Mayor
Jessica Kinser, Administrator
Alicia Hunter, City Clerk
24 North Center Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5799
Fax - (641) 754-5717

To: Mayor Greer and the City Council
From: Jessica Kinser, City Administrator
Date: May 3, 2022
RE: Request to Sell Vacant Lots

The City saw quite a bit of success in our most recent sale of vacant lots which were put out to bid, and I would request the City Council authorize the sale of the following lots by a sealed bid process:

- 510 East Main Street (will be 510/512 lots combined together)
- 105 North 2nd Avenue
- 500 Lee Street
- 506 East Boone Street
- 6 West Grant Street (will be 4/6 lots combined together)
- 708 Lee Street
- 101 East Ferner Street
- 503 Bromley Street
- 105 West Webster Street

These lots are of no future use or value to the City and disposal will result in savings in mowing and maintenance. The notices to the adjacent owners are also very helpful, and I would recommend we use the same procedure with this sale. I would like to have a motion from the City Council directing me to proceed as proposed with the disposal of the properties.

Also, I am working on a Request for Proposal process for disposing of two lots. We have not used this process before, and it is requiring some extra time to prepare, but I plan to bring this forward for the last meeting in May or first meeting in June.

City Council
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Jeff Schneider, Gary Thompson, Dex Walker