

**CITY OF MARSHALLTOWN COUNCIL AGENDA
CITY HALL COUNCIL CHAMBERS
10 WEST STATE STREET
MARCH 13, 2023, 5:30 PM**

Public Participation in a City Council Meeting:

The Public Comment portion of the meeting is the time to address the Mayor and City Council on topics not on the agenda. If a member of the public wishes to comment on an item on the agenda, they may do so while that item is being discussed by coming to the microphone and stating your name and address. Comments should be limited to 3 minutes or less and should be addressed to the Mayor and Council as a whole and not individually. Response from elected officials or staff is at the Mayor's discretion.

A. CALL TO ORDER

B. PLEDGE OF ALLEGIANCE

C. ROLL CALL

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

D. 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 meeting laws.

E. MAYOR, COUNCIL AND ADMINISTRATOR COMMENTS

F. CONSENT AGENDA

1. APPROVE MINUTES 02/27/23 MEETING AND BILL LIST
\$1,368,975.62

Documents:

[2023-02-27 SIGNED Council Minutes.pdf](#)
[2023-03-13_BILL LIST Summary.pdf](#)
[2023-03-13_BILL LIST Detail.pdf](#)

2. RECEIPT OF BUILDING AND TRADE PERMIT REPORT,
FEBRUARY 2023

Documents:

[0223.pdf](#)

3. APPOINT PAUL ALMAN & TIM URE TO THE STORM WATER
ADVISORY COMMITTEE, 4 YEAR TERM 01/01/23-12/31/2026

4. RESOLUTION 2023-044 DECLARING CERTAIN PROPERTY
SURPLUS PROPERTY AND AUTHORIZING DISPOSAL THEREOF
FROM THE STREET DIVISION OF THE PUBLIC WORKS
DEPARTMENT

Documents:

[2023-03-13_2023-044_Resolution Declaring Street
Surplus.pdf](#)

5. RESOLUTION 2023-045 APPROVING THE TITLE VI
AGREEMENT AND ASSURANCES FOR THE CITY OF
MARSHALLTOWN AND ADOPTING SUCH AS THE CITY'S
POLICY FOR FULL COMPLIANCE WITH TITLE VI OF THE CIVIL
RIGHTS ACT OF 1964

Documents:

[2023-03-13_2023-045_Resolution Title VI Agreement
and Assurances.pdf](#)

[2023-03-13_2023-045_Memo Title VI Agreement and
Assurances.pdf](#)

[2023-03-13_2023-045_City of Marshalltown Title VI
Non-Discrimination Agreement.pdf](#)

[2023-03-13_2023-045_Standard DOT Title VI
Assurances.pdf](#)

[2023-03-13_2023-045_Title VI Notice to Public.pdf](#)

6. RESOLUTION 2023-046 APPROVING A QUIT CLAIM DEED TO
ESTABLISH CITY OWNERSHIP OF A VACATED ALLEY IN THE
900 BLOCK OF SOUTH 11TH AVENUE

Documents:

[2023-03-13_2023-046_Resolution Approving Quit
Claim Deed for Alley S 11th Ave.pdf](#)

[2023-03-13_2023-046_Memo Quit Claim Deed for
Alley S 11th Ave.pdf](#)

[2023-03-13_2023-046_QCD - Vacated Alley \(Block 2
Suttons Addition\) - City to City \(SCL 3.7.23\).pdf](#)

[2023-03-13_2023-046_Ordinance No. 10141 Dated
08-03-1961.pdf](#)

[2023-03-13_2023-046_1961-09-25_1961-
10159 Resolution Providing Sale and Conveyance](#)

[Vacated Alley.pdf](#)

7. RESOLUTION 2023-047 SETTING A PUBLIC HEARING FOR THE CONVEYANCE AND TRANSFER OF TITLE TO A PORTION OF VACATED BUT UNCONVEYED ALLEY IN THE 900 BLOCK OF SOUTH 11TH AVENUE TO ABUTTING PROPERTY OWNERS

Documents:

[2023-03-13_2023-047_Resolution Setting PH to Convey Alley to S 11th Ave.pdf](#)

8. RESOLUTION 2023-048 ACCEPTING BID AND AUTHORIZING THE PURCHASE OF TWO 2023 CHEVROLET TAHOE POLICE PACKAGE VEHICLES FROM KARL CHEVROLET FOR THE PRICE OF \$120,375.94 FOR USE IN THE POLICE DEPARTMENT AS EMERGENCY RESPONSE VEHICLES AND DECLARING CERTAIN PROPERTY SURPLUS PROPERTY AND AUTHORIZING SALE AND DISPOSAL THEREOF TO KARL CHEVROLET TWO 2017 FORD INTERCEPTOR POLICE PACKAGE VEHICLES FOR \$11,000.00

Documents:

[2023-03-13_2023-048_Resolution for Purchase of MPD Vehicles.pdf](#)
[2023-03-13_2023-048_Memo Police Vehicle Purchase.pdf](#)
[2023-03-13_2023-048_Police Vehicle Purchase Karl Chevrolet.pdf](#)

9. RESOLUTION 2023-049 SETTING A DATE OF MEETING AT WHICH IT IS PROPOSED TO APPROVE A DEVELOPMENT AGREEMENT WITH BETTY'S PROPERTIES, LLC, INCLUDING ANNUAL APPROPRIATION TAX INCREMENT PAYMENTS

Documents:

[2023-03-13_2023-049_Resolution Set Date Dev Agmt AA \(Bettys\)\(Marshalltown-52 2023\)-v2.pdf](#)
[Development Agreement \(Pharmacy\).pdf](#)
[Memo - Bettys Properties Pharmacy.pdf](#)

10. RESOLUTION 2023-050 SETTING A PUBLIC HEARING FOR THE PROPOSED VACATION OF THE EAST-WEST ALLEY NORTH OF 328 SOUTH 3RD AVENUE

Documents:

[2023-03-13_2023-050_Resolution Setting PH to Vacate Alley North of 328 S 3rd Ave.pdf](#)

G. REPORTS

1. MID IOWA COMMUNITY ACTION (MICA) SERVICE
INFORMATION

Presented by: Clarissa Thompson, MICA Executive Director

H. MOTIONS

1. MOTION TO APPROVE 5-DAY LIQUOR LICENSE FOR
MIDNIGHT BALLROOM AT THE CENTRAL IOWA FAIRGROUNDS
FOR A RODEO ON 04/08/23 WITH A PREMISE UPDATE FOR
CENTRAL IOWA FAIRGROUNDS TO THE ACTIVITIES BUILDING
DURING THIS EVENT

I. RESOLUTIONS

1. RESOLUTION 2023-051 ACCEPTING THE DESTINATION IOWA
GRANT OF \$2 MILLION FOR CREATIVE PLACEMAKING
PROJECTS

Documents:

[2023-03-13_2023-051_Resolution Accepting Iowa
Destination Funding.pdf](#)

[2023-03-13_2023-051_Memo Iowa Destination
Funding.pdf](#)

[2023-03-13_2023-051_Press Release Destination
Iowa.pdf](#)

2. PUBLIC HEARING AND RESOLUTION 2023-052 APPROVING
PLANS, SPECIFICATIONS, FORM OF CONTRACT AND COST
FOR THE MARSHALLTOWN FACADE REHABILITATION
PROJECT, IN THE CITY OF MARSHALLTOWN, IOWA, BEING
PROJECT NO. ECO21002

Documents:

[2023-03-13_2023-052_Resolution Approve Plans,
Specs ECO21002.pdf](#)

[2023-03-13_2023-052_MEMO_Order Construction DTR
Grant ECO21002.pdf](#)

[2023-03-13_2023-052_Notice to bidders and notice
of public hearing ECO21002.pdf](#)

[2023-03-13_2023-052_Marshalltown CDBG_RDG
Project Budget Costs Estimate_022423a.pdf](#)

[2023-03-13_2023-052_Marshalltown Facades_Bid Set
Dwg_RDG 2023-0220b.pdf](#)

[2023-03-13_2023-052_Marshalltown Facades_Bid Set
Spec_RDG 2023-0220b.pdf](#)

J. ORDINANCES

1. ORDINANCE 15058 TO AMEND THE CODE OF ORDINANCE,
CITY OF MARSHALLTOWN, IOWA BY AMENDING CHAPTER 76
TRAFFIC SCHEDULES, SCHEDULE VIII SPEED LIMITS

2ND READING

Documents:

[2023-03-13_ORDINANCE 15058_Amend CH 76 Traffic Sch.pdf](#)
[2023-03-13_ORDINANCE 15058_Exhibit_Lincoln Way Speed Limit Changes.pdf](#)
[2023-03-13_ORDINANCE 15058_Memo - Ord Ch 76 Speed Amend - 23 02 27.pdf](#)

K. DISCUSSION

1. DISCUSSION - FY24 VALUATION UPDATE

Documents:

[100 Percent Valuation History FY18 to FY24.pdf](#)
[Taxable valuations by property class comparison FY20 to FY24.pdf](#)
[Taxable Valuations and levy history FY20 to FY24.pdf](#)

2. DISCUSSION - SENATE FILE 181 BUDGET & TAX LEVY CHANGES

Documents:

[SF 181 Memo 3.9.23.pdf](#)
[Comparison of tax levies before and after legislative change.pdf](#)
[3.7.23 Fund 030 032 Update.pdf](#)
[LOST detail FY23 and FY24 After Council action before Feb 13 2023 Council meeting.pdf](#)
[Cash Balances FY22 thru FY24.pdf](#)
[DRAFT CERTIFICATION OF TAXES.pdf](#)

L. CLOSED SESSION - REAL ESTATE

Closed session pursuant to Section 21.5 subsection (1) paragraph (j) OF THE CODE OF IOWA to discuss the purchase or sale of particular real estate only where premature disclosure could be reasonably expected to increase the price the governmental body would have to pay for that property or reduce the price the governmental body would receive for that property. The City of Marshalltown has an attorney-client relationship with Lynch Dallas P.C., by Council Resolution 2022-161, approved 06/13/22. There may be council action by motion following the closed session if directed by the city's attorney.

M. 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 at www.marshalltown-ia.gov.



COUNCIL PROCEEDINGS
FEBRUARY 27, 2023

In the absence of Mayor Greer, Mayor Pro-Tem Ladehoff called the meeting to order at 5:30 pm, February 27, 2023, at the City Hall Council Chambers, 10 W State Street, and led the pledge of allegiance. Roll call–Present: Hoop, Kell, Ladehoff, Schneider, Thompson, Walker; Absent: Isom.

PUBLIC COMMENT

Jim Shaw, 522 N 2nd St, requested the vicious animal ordinance be amended to have provisions against pit bulls before an incident occurs. Aimee Deimerly-Snyder, 1106 W Main St and owner of Lillie Mae thank the council for their support of the 13th Street District. Thad Lents, 2001 Westwood Dr, asked the council to reconsider the new compost hours and have hours during the week to encourage people to take care of their properties.

MAYOR, COUNCIL, ADMINISTRATOR COMMENTS

Councilor Thompson advised the city has 2 trucks, a street sweeper, and 790 cassette tapes for sale on GovDeals. Councilor Schneider announced Cleaniac will hold its annual clean-up on Saturday, April 22nd, anyone interested in being assigned a group can contact Cleaniac. Mayor Pro-Tem Ladehoff is pleased to see the restaurants busy and people getting back to normal.

CONSENT AGENDA

Motion by Schneider, second by Kell to adopt the consent agenda: APPROVE MINUTES 02/13/2023 MEETING AND BILL LIST \$1,231,959.16; APPROVE JANUARY 2023 FINANCIAL STATEMENTS; APPROVE LIQUOR LICENSE RENEWALS FOR JIFFY, 111 3RD AVE, WANDERING CREEK, 2436 233RD ST, AMERICAN LEGION, 1301 S 6TH ST, PERMANENT PREMISE TRANSFER OF OLIVER BEENE DESIGNS TO 2500 S CENTER ST, STE 120; RESOLUTION 2023-031 APPROVING CITY FEE SCHEDULE; RESOLUTION 2023-032 TO APPROVE THE USE OF COUNCIL-DESIGNATED LOCAL OPTION SALES TAX FOR THE DEFICIT IN FUND 183 ECONOMIC DEVELOPMENT INCENTIVE; RESOLUTION 2023-033 APPROVING CONTRACT CHANGE ORDER #1 FOR THE SOUTH 7TH AVENUE EXTENSION PROJECT #ECO22001; RESOLUTION 2023-034 APPROVING THE IOWA DEPARTMENT OF TRANSPORTATION PROJECT FUNDING AGREEMENT ADDENDUM NO. 21-TAP-167-A FOR THE IOWA RIVER TRAIL BRIDGE REPLACEMENT #2 TO #5; RESOLUTION 2023-035 APPROVING A SUPPLEMENTAL AGREEMENT FOR PROFESSIONAL SERVICES WITH CALHOUN-BURNS & ASSOCIATES, INC FOR THE 2023 BRIDGE INSPECTION AND RATING PROGRAM; RESOLUTION 2023-036 AUTHORIZING PUBLIC WORKS TO SUBMIT ONE STRUCTURE TO THE IOWA DEPARTMENT OF TRANSPORTATION HIGHWAY BRIDGE PROGRAM; RESOLUTION 2023-037 SETTING DATE FOR PUBLIC HEARING ON URBAN RENEWAL PLAN AMENDMENT FOR THE MARSHALLTOWN URBAN RENEWAL AREA NO. 4; RESOLUTION 2023-038 AUTHORIZING THE PURCHASE OF ONE CHEVROLET SILVERADO 1500 4WD FOR THE PARKS AND RECREATION DEPARTMENT FROM KARL CHEVROLET FOR THE PRICE OF \$40,924.90; RESOLUTION 2023-039 ORDERING CONSTRUCTION OF THE MARSHALLTOWN FAÇADE REHABILITATION PROJECT ECO21002, SETTING PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS,

FORM OF CONTRACT AND ESTIMATED COST AND DIRECTING PUBLICATION OF NOTICE TO BIDDERS. Motion carried 6-0.

RESOLUTIONS

Motion by Schneider, second by Walker to approve RESOLUTION 2023-040 ACCEPTING THE ARTS AND CULTURE MASTER PLAN. Amber Danielson, Alliance Marshall County Arts & Culture, presented the Arts and Culture Master Plan which will be used as an implementation strategy for the five placemaking themes of Revitalize Over Restore, Build Bridges, Activate Hope, Elevate Youth, Heritage of Innovation to cultivate community connectedness and economic growth and well-being. Public comment: Neil Dalal, 1504 Brentwood Terrace, participated on the steering committee and it was a great process with lots of representation through multiple surveys and focus groups. Jesus Rios, 810 S 9th Ave, spoke of his journey to continue to make Marshalltown home and getting involved with this initiative to represent the Hispanic community. Motion carried 6-0.

Mayor Pro-Tem Ladehoff opened a public hearing at 6:03 pm for PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 519 SOUTH 5TH STREET FROM THE CITY OF MARSHALLTOWN, IOWA TO JESUS AND BRENDA VILLA. City Administrator Kinser advised the bid is for \$7,500. The public hearing was closed at 6:03. Motion by Schneider, second by Walker to approve RESOLUTION 2023-041 PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 519 SOUTH 5TH STREET FROM THE CITY OF MARSHALLTOWN, IOWA TO JESUS AND BRENDA VILLA. Motion carried 6-0.

Mayor Pro-Tem Ladehoff opened a public hearing at 6:04 pm for PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 4 NORTH 12TH AVENUE FROM THE CITY OF MARSHALLTOWN, IOWA TO LIF ENTERPRISES LLC. City Administrator Kinser advised the bid is for \$3,100. The public hearing was closed at 6:04. Motion by Walker, second by Schneider to approve RESOLUTION 2023-042 PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 4 NORTH 12TH AVENUE FROM THE CITY OF MARSHALLTOWN, IOWA TO LIF ENTERPRISES LLC. Motion carried 6-0.

Mayor Pro-Tem Ladehoff opened a public hearing at 6:05 pm for PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 500 LEE STREET FROM THE CITY OF MARSHALLTOWN, IOWA TO LEVIS NDIHOKUBWAYO. City Administrator Kinser advised the bid is for \$501. The public hearing was closed at 6:05. Motion by Schneider, second by Thompson to approve RESOLUTION 2023-043 PROVIDING FOR THE CONVEYANCE AND TRANSFER OF TITLE FOR 500 LEE STREET FROM THE CITY OF MARSHALLTOWN, IOWA TO LEVIS NDIHOKUBWAYO. Motion carried 6-0.

ORDINANCES

Motion by Walker, second by Schneider to adopt the first reading of ORDINANCE 15057 TO AMEND CHAPTER 152: HOUSING CODE OF THE MUNICIPAL CODE OF THE CITY OF MARSHALLTOWN, IOWA. Michelle Spohnheimer, Housing & Community Development Director advised this amendment would exclude mobile home park rental units from inspections due to the frequency of transitioning from lease to purchase to owned units. Motion carried 5-1, Thompson dissenting. Motion by Walker, second by Kell to waive the second and third readings

of ORDINANCE 15057 TO AMEND CHAPTER 152: HOUSING CODE OF THE MUNICIPAL CODE OF THE CITY OF MARSHALLTOWN, IOWA. Motion carried 5-1, Thompson dissenting.

Motion by Kell, second by Walker to adopt the first reading of ORDINANCE 15058 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA BY AMENDING CHAPTER 76 TRAFFIC SCHEDULES, SCHEDULE VIII SPEED LIMITS. Heather Thomas, Public Works Director advised the amendment would change the speed limit on Lincoln Way from West of the city limits to Highland Acres Road to 45 mph, Highland Acres Road to approximately 200 feet West of Ann Rutledge Road to 35 mph, and from approximately 200 feet West of Ann Rutledge Road to 9th Street to 30 mph to prepare for the proposed fixed automated traffic enforcement signal near the intersection of Orchard Drive and also to address safety concerns along Lincoln Way. Additional speed limit signs would be installed. Councilor Thompson supports the speed change but does not want it done in conjunction with automated traffic enforcement. Public comment: Jim Shaw, 522 N 2nd St advised going down the hill on Lincoln Way you can gain 5-7 mph so you have to ride your breaks. Lyle Hineman, 2804 Arnold Dr is okay with either the speed limit change or the automated traffic enforcement but not both at the same time. Linda Clark, 306 S 2nd Ave feels the speed limit should be a uniform 35 mph for the entire stretch of Lincoln Way. Motion carried 6-0.

Motion by Schneider, second by Kell to adopt the first reading of ORDINANCE 15059 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA BY AMENDING CHAPTER 77, PARKING SCHEDULES, SCHEDULE II NO PARKING ANY TIME. Heather Thomas, Public Works Director advised this amendment will prohibit parking at any time on both sides of Swayze Street from 10th Avenue to 12th Avenue as JBS now has a parking lot for employees to utilize instead of on-street parking. Motion carried 6-0. Motion by Thompson, second by Schneider to waive the second and third readings of ORDINANCE 15059 TO AMEND THE CODE OF ORDINANCES, CITY OF MARSHALLTOWN, IOWA BY AMENDING CHAPTER 77, PARKING SCHEDULES, SCHEDULE II NO PARKING ANY TIME. Motion carried 6-0.

DISCUSSION

Mayor Pro-Tem Ladehoff presented discussion on implementing age restrictions for the use, purchase, or possession of spray paint. Chief Tupper would be in support of such an ordinance as he spoke with Muscatine and Sioux City who have ordinances in place and they feel it has been a good tool for them to use in investigations. Councilor Schneider does not support a ban as it can be purchased by other means but supports increased penalties. Councilor Thompson would like to see funds available to residents or businesses that want to install security cameras. Public comment: Linda Clark, 306 S 2nd Ave, does not agree with ordinances with selective enforcement. Chief Tupper encouraged the community to report incidents of graffiti and vandalism and any tips can be reported to Crime Stoppers.

City Administrator Kinser presented discussion on the sale of vacant lots. Motion by Schneider, second by Walker to dispose of 503 Woodbury Street and 503 Bromley Street through a request for Sealed Bids. Motion carried 6-0. Motion by Thompson, second by Ladehoff to dispose of 906 S 11th Ave and 407 Marion St through a request for Sealed Bids. Motion failed 2-4, Kell, Ladehoff,

Schneider, and Walker dissenting. Motion by Schneider, second by Kell to dispose of 906 S 11th Ave and 407 Marion St through a Neighborhood Improvement RFP. Motion carried 5-1, Thompson dissenting.

City Administrator Kinser presented discussion on the sale of property in Urban Renewal Area No. 4 to include 20 E Main St and 330 S 3rd Ave. Motion by Walker, second by Kell to establish a group of stakeholders in the community to evaluate proposals for the sites at 20 E Main St and 330 S 3rd Ave. Motion carried 4-2, Hoop and Thompson dissenting. Motion by Schneider, second by Kell to dispose of 20 E Main St and 330 S 3rd Ave through a request for proposal that would identify requirements for each property to better align known retail gaps in the community. City Administrator Kinser advised there would be a \$25,000 retail incentive grant through the Chamber of Commerce. Public comment: John Hall, Marshalltown Area Chamber of Commerce advised the suggested usage is based on our retail leakage. Motion carried 5-1, Thompson dissenting.

ADJOURNMENT

The meeting adjourned at 7:12 pm.

Respectfully Submitted,



Alicia Hunter, City Clerk

CITY OF MARSHALLTOWN, IOWA

Joel Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

BILL LIST 03/13/23

Advertising

TR/8	100.00
Trending.Media/2	150.00

Consulting & Professional Fees

AHLERS.COONEY/1	940.50
AMERICAN.LEGAL./1	2,247.09
Ciox Health/1	7.50
Health.Partners/1	11,949.72
I.L.E.A./1	150.00
Iowa.One.Call/2	59.60
Marco.Holdings/1	1,935.00
Myers, Laura/2	700.00
Stanley.Consult/1	64,496.00
WHKS.Co/2	5,280.34

Contracts

BDH/13	6,484.74
CenStates Scaff/1	800.00
City.Laundering/1	10.72
CIVICPLUS.INC/3	7,578.28
Cntrl.IA.Machin/2	15,441.97
CSW Srv Gen Con/1	36,750.60
Farber Vehicles/2	76,855.00
IAInspections/1	1,500.00
Impact.7G.Inc/2	12,818.75
Koch.Office/5	165.06
M.Co.Recorder/1	8,216.50
Marco.Holdings/16	2,466.96
Marsh.Co.Landfi/1	107.25
McGregor.Co/1	31,281.25
Mead.OBrien/2	41,489.73
Mobius Group/1	12,100.00
Mtwn.Wtrwrks/1	10.00
Premier.Equip/1	59.00
RICOH.USA.INC/4	56.65
Safe Building/1	3,010.00
Schendel.Pest.C/1	46.33
Schumacher.Elev/3	940.18
Siemens.Indust/1	4,110.00
Sje.Rhombus/1	1,250.00
Stericycle.Inc/2	121.61
Stone.Sanit/9	1,568.30
Tyler.Technolog/1	5,321.88
Veenstra & Kimm/1	4,052.80
WillardProperty/1	51,971.00
Xerox.Corp/1	44.25

Equipment

Construct/1	20,486.09
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Medical

HARTFORD.ACCTS/2	6,235.35
Health.Partners/5	109,755.78
Hunter Lane LLC/2	465.23
Lifeworks.Us/2	1,240.99
Unity Point-Occ/2	42.00

Payroll.Net

Payroll/1	305,072.85
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Refund/Reimbursed

BouhssineRachid/1	266.90
C Adkins Estate/1	175.84
Health.Partners/1	-184.64
Hernandez,Sugey/1	125.00
Priske, Jason/1	1,029.92

Rents/Leases

201 E Main MT/13	4,158.00
A.White/1	505.00
Ackley.Housing/2	328.00
Alejo, Jerry/1	164.00
AMES,STEVEN/1	329.00
Barnes,L/1	274.00
BJ&J.LLC/1	265.00
BLOOD,A/1	421.00
Borota,K/2	693.00
Brodin,C/1	58.00
Brown,L/1	316.00
Buchanan,Steven/1	252.00
Buckaroo.LLC/2	959.00
Chedester,James/1	400.00
CIRSI/8	798.00
CMHC.INVEST/1	230.00
Colson, Mary/2	741.00
Crestview Apts/25	7,038.00
D.D.Rentals/5	2,401.00
Daters, Toni Ra/1	549.00
DC Brown Rental/1	277.00
Douglas Ter Apt/2	1,300.00
ECKLOR,S/1	298.00
Elwayne.Inc./5	1,437.00
Engel, Drew/1	479.00
EPC LLC/5	1,135.00
EPM IA LLC/1	297.00
Etter, W/1	582.00
Eubanks,C/1	284.00
Frese.Propts/1	292.00
Friendly.Valley/3	310.00
Gonzales,G/1	181.00
Gorrell, Joseph/1	430.00
Gray,D/3	1,444.00
Gutierrez,Humbe/2	619.00
Hala,J/5	1,293.00
HARRIS,T/1	324.00
Hatch,R/4	1,468.00
Hilltop.Village/4	663.00
Hinmon,Linda/1	260.00
HOWARD,J/1	206.00
HUBBARD.MAPLE/2	407.00
Ibarra-LedezmaR/1	692.00
JB.I.COOP.Assn/5	1,608.00
Judge,M/23	5,652.00
Kading Prop LLC/3	548.00
Klinefelter,R/1	450.00
Kramer,M/1	138.00

BILL LIST 03/13/23

LAWSON,R/1	49.00	Gale-Hazen,K/1	255.00
Lawthers.Prop.M/1	184.00	Goken, Briana/1	7.00
LBO Investments/2	1,052.00	Hawkeye.Truck/2	975.00
Lopez, Jaime/1	395.00	Heart.of.Iowa/13	3,595.30
LUENSE,B/6	2,477.00	Hidalgo,Yesenia/1	10.00
Mansager, C/1	370.00	I.C.A.P./1	138.00
Manship,W/1	804.00	IA.Dept.Commrc/1	101.59
Marion.Manor2/1	559.00	Language.Line.S/1	1,396.46
Moore, Michelle/1	372.00	LARRY'S.TOWING/1	100.00
Mtown Lofts LLC/16	5,435.00	Louis, Marie/1	7.00
Mtwn/Westown/24	6,335.00	McAtee.Tire/4	360.00
Nelson,L/1	266.00	Mediacom/1	414.23
North.Tama.Hsg/1	184.00	Menards/2	198.00
Oetker,D/2	373.00	Mtwn.Wtrwrks/3	9,007.98
Palisade.Holdng/1	76.00	Munic.Pipe.Tool/2	112,876.15
Pebworth Homes/1	220.00	ONE.SOURCE/4	100.00
Pilot.Creek/1	165.00	Perez, Eliva/1	31.00
PizanoCisnerosA/1	411.00	RAMIREZ,J/1	31.00
Plymat Jr, Will/1	646.00	Scharnweber.Wtr/1	27.00
Premier.RE.Mgmt/6	3,185.00	Schmudlach,Cody/1	10.00
PremierIowaCity/8	2,882.00	Shattuck,Tracy/1	10.00
Pyramind Prop/3	1,008.00	SpyGlassLLC/3	1,112.16
RA.Rental.Prop/1	442.00	UPHDM.Medicine/1	1,069.00
Ramirez, Sergio/1	388.00	VanMaanen.Elect/1	200.54
RD.Toledo,LLP/1	344.00	Velazquez,Cindy/1	550.00
Reed,T/4	1,765.00	Velez, Yaralexi/1	13.00
River.Birch/5	2,075.00	Vung, Cing/1	63.00
River.Oaks/11	5,749.00	Werner,Jessica/1	13.00
RMB Cooperative/4	643.00	Witte,J/1	64.00
Roth, Kamaria/1	489.00		
Schmidt,M/1	471.00	Sewer	
Squire,B/1	177.00	Mtwn.Wtrwrks/1	70.44
Steffensen, G/1	428.00		
Sunrise.Apt/1	116.00	Supplies/Parts	
Swiff, Scott/1	413.00	Adland.Engrvg/1	63.60
Tallcorn.Tower/22	6,230.00	Airgas.U.S.A./1	51.25
TOWN.APARTMENT/2	201.00	Alex.Air.Appar./1	1,138.26
TTL.C.Hsg/1	788.00	Appliance.Dr/1	34.95
Walker, Angela/1	298.00	Arnold.Motor.Su/12	827.93
Weatherly.Erin/2	507.00	Barco.MuniProd/1	3,694.44
WEB III Invest/1	550.00	Bound.Tree.Medi/2	956.30
Worent.Inc/1	143.00	Browns.Shoe.Fit/1	157.50
Worsfold Farm/1	384.00	City.Laundering/4	94.53
		Cntrl.IA.Distr/1	760.00
Service/Repairs		Cntrl.IA.Machin/2	863.20
AAA.Septic/1	115.00	Cummins.Service/1	287.94
Airgas.U.S.A./1	76.30	Diamond.Mfg/1	1,799.50
Aponte,M/1	27.00	Ed.M.Feld.Eq/1	570.00
AssuredPartners/1	5,141.00	Evenflo Company/1	1,387.80
BG.HVAC.INC/2	1,016.75	Fastenal.Co/2	196.71
Century.Link/50	790.00	FIRSTNET.ATT/1	212.35
CIVICPLUS.INC/1	786.03	Gervich.Sons/1	130.60
Deemer, David/1	33.89	Hawkeye.Truck/3	2,428.46
Devig,T/1	2,025.00	IA.Prison.Ind/1	2,004.20
Fexsteve Ltd Co/2	46,000.00	IA.Water.Mgmt/2	1,865.00
FIRSTNET.ATT/2	1,348.57	Jensen.Inc/5	1,985.43
		Koch.Office/1	131.00

BILL LIST 03/13/23

Logan.Contract/2	321.92
Macqueen.Equip/2	2,057.82
Marsh.Co.Engr/25	19,896.19
McAtee.Tire/5	2,290.82
Menards/12	346.26
Midland.Scienti/5	3,193.75
Napa.Auto/6	397.23
Nutrien.Ag.Sol/1	724.00
Racom.Corp/1	3.00
SE.Jones.Indust/3	975.40
Strands Inc/1	24.05
Streichers.Inc/5	1,014.99
Thiesens.Supply/11	1,743.42
Vajgrt.R/2	263.18
Workforce Solut/1	570.00
Worsfold, Kyle/1	685.00
Ziegler/2	83.66
Travel/Training	
Hawkeye.College/1	5,500.00
Hillers,C/1	10.00
I.L.E.A./1	7,100.00
Markle, William/1	535.50
Shelangoski,W/1	10.00
Utilities	
Alliant.Energy/28	24,639.94
I.R.U.A./1	164.32
Mtwn.Wtrwrks/2	898.65
New.CenturyFS/1	2,167.00
Nutrien.Ag.Sol/2	1,740.00
WoodRiver.Enrgy/3	5,222.92
Wage Assignment	
American.Educa./1	64.41
Collection.Svs./6	1,375.62
Colonial.Life/1	321.13
Fidelity.Securt/4	428.03
I.R.S./12	81,138.37
IA.Treasurer/4	15,593.42
ICMA457Mission/14	15,596.91
Perez, Enestina/1	110.00
Rodgers, Tricia/1	25.00
TotalAdmin.Serv/6	6,568.50
Worsfold, Kyle/1	11.00
Total/765	1,368,975.62

BILL LIST 03/13/23

Account Number	Vendor Name	Description (Item)	Amount
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 227.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 208.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 570.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 443.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 418.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 405.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 403.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 137.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 120.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 255.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 296.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 385.00
184.5030.5242.000	201 E Main MT LLC	Housing Assistance Payment	\$ 291.00
690.8050.5380.000	AAA SEPTIC SERVICE INC	Fisher Comm Center rental	\$ 115.00
184.5030.5242.000	ACKLEY HOUSING INC	Housing Assistance Payment	\$ 78.00
184.5030.5242.000	ACKLEY HOUSING INC	Housing Assistance Payment	\$ 250.00
140.4041.5600.000	ADLAND ENGRAVING CO INC	Parks bobcat tee shirts	\$ 63.60
001.6040.5236.000	AHLERS & COONEY	Labor relations	\$ 940.50
110.2010.5380.000	AIRGAS USA, LLC	rentals	\$ 76.30
110.2010.5600.000	AIRGAS USA, LLC	carbon dioxide rental	\$ 51.25
184.5030.5242.000	Alejo, Jerry	Housing Assistance Payment	\$ 164.00
001.1050.5600.000	ALEX AIR APPARATUS INC	Fire dept foam	\$ 1,138.26
001.1099.5481.000	ALLIANT ENERGY	909 S 2nd St Fire & Police Bldg	\$ 4,085.87
001.1099.5482.000	ALLIANT ENERGY	909 S 2nd St Fire & Police Bldg	\$ 655.30
001.4030.5481.000	ALLIANT ENERGY	HIGHLAND ACRES RD	\$ 23.71
001.4030.5481.000	ALLIANT ENERGY	500 Plaza Hts Rd	\$ 26.76
001.4030.5481.000	ALLIANT ENERGY	KIWANIS PARK	\$ 20.38
001.4030.5481.000	ALLIANT ENERGY	N 13th St	\$ 70.25
001.4030.5481.000	ALLIANT ENERGY	Arnolds Park	\$ 13.36
001.4030.5481.000	ALLIANT ENERGY	220 N 13th St Rest room	\$ 39.64
001.4030.5481.000	ALLIANT ENERGY	407 Marion St	\$ 26.56
110.2010.5481.000	ALLIANT ENERGY	1600 S Center St irrigation system	\$ 21.11
110.2030.5481.000	ALLIANT ENERGY	S 6TH ST	\$ 49.00
110.2030.5481.000	ALLIANT ENERGY	1707 Laurel Dr Viaduct Light	\$ 30.39
110.2030.5481.000	ALLIANT ENERGY	MARSHALLTOWN	\$ 18,552.44
110.2030.5481.000	ALLIANT ENERGY	N 13th Street lights	\$ 113.61
110.2030.5481.000	ALLIANT ENERGY	25 N 13th St	\$ 58.03
110.2030.5481.000	ALLIANT ENERGY	207 W Main St	\$ 43.26
110.2040.5481.000	ALLIANT ENERGY	S CENTER ST CNR ANSON	\$ 54.37
110.2040.5481.000	ALLIANT ENERGY	W High St & S 6th St	\$ 23.57
110.2040.5481.000	ALLIANT ENERGY	S 1ST AVE & E ANSON	\$ 55.54
110.2040.5481.000	ALLIANT ENERGY	S 6TH ST CNR OLIVE	\$ 30.12
110.2040.5481.000	ALLIANT ENERGY	S CENTER ST & SOUTH ST	\$ 35.34
110.2040.5481.000	ALLIANT ENERGY	S CENTER ST CNR OLIVE	\$ 41.58
110.2040.5481.000	ALLIANT ENERGY	W Meadowlane cnr Center	\$ 35.79
110.2040.5481.000	ALLIANT ENERGY	Westwood Dr cnr Center	\$ 31.85
142.4030.5481.000	ALLIANT ENERGY	800 S 6TH ST	\$ 112.02
610.8015.5481.000	ALLIANT ENERGY	N 3rd Ave River Sign	\$ 24.53
610.8016.5481.000	ALLIANT ENERGY	S 2nd St cnr Player	\$ 300.30
610.8016.5481.000	ALLIANT ENERGY	N 22nd St	\$ 65.26
999.1121.000	American Education Services	PR WITHHOLDING	\$ 64.41
001.6020.5230.000	American Legal Publishing Corp	2023 S-6 supplement pages	\$ 2,247.09
184.5030.5242.000	AMES, STEVEN	Housing Assistance Payment	\$ 329.00
184.5030.5246.000	Aponte, Miguel	Housing Assistance Payment	\$ 27.00
001.1050.5600.000	APPLIANCE DOCTOR	Fire dept dishwasher adjuster kit	\$ 34.95
001.1010.5565.000	ARNOLD MOTOR SUPPLY LLP	PD 500 radiator fan assembly	\$ 222.25
001.1010.5565.000	ARNOLD MOTOR SUPPLY LLP	PD 517 ignition coils, spark plugs	\$ 324.81
001.1050.5565.000	ARNOLD MOTOR SUPPLY LLP	Fire #170 motorad	\$ 36.77
110.2010.5565.000	ARNOLD MOTOR SUPPLY LLP	Street #33 engine oil filters	\$ 71.09
110.2010.5600.000	ARNOLD MOTOR SUPPLY LLP	Street #36 light	\$ 19.11
110.2010.5600.000	ARNOLD MOTOR SUPPLY LLP	Street #61 lights	\$ 21.64

110.2010.5600.000	ARNOLD MOTOR SUPPLY LLP	Street spark plugs	\$	25.68
110.2010.5600.000	ARNOLD MOTOR SUPPLY LLP	Street paint	\$	41.15
110.2010.5600.000	ARNOLD MOTOR SUPPLY LLP	Paint Truck - white road paint	\$	45.04
610.8016.5565.000	ARNOLD MOTOR SUPPLY LLP	Sewer dept engine oil filter	\$	3.06
690.8050.5565.000	ARNOLD MOTOR SUPPLY LLP	Transit engine oil filters	\$	15.29
740.8065.5565.000	ARNOLD MOTOR SUPPLY LLP	Sewer dept engine oil filter	\$	2.04
001.6900.5290.000	Assured Partners Capital Inc	Crime policy 4/1/23-3/31/24	\$	5,141.00
001.1099.5410.000	B&G HVAC INC	PD/FD hot water circulation pump repair	\$	690.50
610.8015.5410.000	B&G HVAC INC	WPCP AC repairs	\$	326.25
110.2050.5600.000	BARCO MUNICIPAL PRODUCTS INC	Street truck tire chains	\$	3,694.44
184.5030.5242.000	Barnes, Lonnie	Housing Assistance Payment	\$	274.00
001.1010.5347.000	BDH INFORMATION TECHNOLOGY LLC	PD Covert internet	\$	79.34
001.1010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup 4500 Veeam Backup & Recovery PD	\$	38.80
001.1010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Police dept block time of hours	\$	1,266.25
001.4010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Library block time of hours	\$	633.13
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Remote Monitoring monthly	\$	50.00
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Veeam monthly services for Tyler users	\$	116.40
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	OpenDNS Enterprise Monthly Subscription	\$	152.00
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Mailfilter Spam/Virus Email Filtering	\$	175.00
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Remote Monitoring Management	\$	750.00
001.6070.5347.000	BDH INFORMATION TECHNOLOGY LLC	Block time of hours	\$	3,165.62
110.2010.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup 4500 Veeam Backup & Recovery PW	\$	19.40
110.2060.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup 4500 Veeam Backup & Recovery PW	\$	19.40
610.8015.5347.000	BDH INFORMATION TECHNOLOGY LLC	Backup Veeam WPCP	\$	19.40
184.5030.5242.000	BJ&J LLC	Housing Assistance Payment	\$	265.00
184.5030.5242.000	BLOOD, ALEX	Housing Assistance Payment	\$	421.00
184.5030.5242.000	Borota, Kent	Housing Assistance Payment	\$	272.00
184.5030.5242.000	Borota, Kent	Housing Assistance Payment	\$	421.00
610.8015.5980.000	Bouhssine, Rachid	Sewer refund 2023- water faucet	\$	266.90
001.1050.5630.000	Bound Tree Medical LLC	gloves, OB kit, respirator	\$	338.70
148.1050.5630.000	Bound Tree Medical LLC	gloves, OB kit, respirator	\$	617.60
184.5030.5242.000	BRODIN, CHRIS	Housing Assistance Payment	\$	58.00
184.5030.5242.000	BROWN, LARRY & KAREN	Housing Assistance Payment	\$	316.00
001.1010.5132.000	BROWNS SHOE FIT CO	PD Watson allowance	\$	157.50
184.5030.5242.000	Buchanan, Steven	Housing Assistance Payment	\$	252.00
184.5030.5242.000	Buckaroo LLC	Housing Assistance Payment	\$	491.00
184.5030.5242.000	Buckaroo LLC	Housing Assistance Payment	\$	468.00
610.8015.5980.000	Carolyn Adkins Estate	Sewer refund 2023- water pipe break	\$	175.84
610.8015.5600.000	CENTRAL IOWA DISTRIBUTING INC	WPCP bleach, paper towels, mats	\$	760.00
030.4030.5718.000	CENTRAL IOWA MACHINE SHOP INC	Flush Mount Camera	\$	309.70
030.4030.5718.000	CENTRAL IOWA MACHINE SHOP INC	Acme Lift Gate Trailer Hitch	\$	553.50
030.4030.5750.000	CENTRAL IOWA MACHINE SHOP INC	Tommy Liftgate and Install	\$	4,944.24
030.4030.5750.000	CENTRAL IOWA MACHINE SHOP INC	9'6" Western Plow	\$	10,497.73
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	123.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	58.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	70.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	102.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	108.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	110.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	112.00
184.5030.5242.000	CENTRAL IOWA RESIDENTIAL SERV INC	Housing Assistance Payment	\$	115.00
355.1075.5331.000	Central States Scaffolding LLC	Rental - Stepping Stones	\$	800.00
001.1010.5450.000	CENTURYLINK	TRUNK LINES	\$	94.46
001.1010.5450.000	CENTURYLINK	TRUNK LINES	\$	94.46
001.1050.5450.000	CENTURYLINK	TRUNK LINES	\$	34.35
001.1050.5450.000	CENTURYLINK	TRUNK LINES	\$	34.35
001.1070.5450.000	CENTURYLINK	TRUNK LINES	\$	8.59
001.1070.5450.000	CENTURYLINK	TRUNK LINES	\$	8.59
001.1071.5450.000	CENTURYLINK	TRUNK LINES	\$	8.59
001.1071.5450.000	CENTURYLINK	TRUNK LINES	\$	8.59
001.1075.5450.000	CENTURYLINK	TRUNK LINES	\$	8.59
001.1075.5450.000	CENTURYLINK	TRUNK LINES	\$	8.59
001.4010.5450.000	CENTURYLINK	TRUNK LINES	\$	17.17
001.4010.5450.000	CENTURYLINK	TRUNK LINES	\$	17.17

001.4030.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.4030.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.4040.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.4040.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.4045.5450.000 CENTURYLINK	TRUNK LINES	\$	17.17
001.4045.5450.000 CENTURYLINK	TRUNK LINES	\$	17.17
001.4065.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.4065.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6010.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6010.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6012.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6012.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6020.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6020.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6021.5450.000 CENTURYLINK	TRUNK LINES	\$	34.31
001.6021.5450.000 CENTURYLINK	TRUNK LINES	\$	34.31
001.6025.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
001.6025.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
110.2010.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
110.2010.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
110.2040.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
110.2040.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
110.2060.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
110.2060.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
184.5030.5450.000 CENTURYLINK	TRUNK LINES	\$	17.17
184.5030.5450.000 CENTURYLINK	TRUNK LINES	\$	17.17
189.3040.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
189.3040.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
610.8015.5450.000 CENTURYLINK	TRUNK LINES	\$	25.76
610.8015.5450.000 CENTURYLINK	TRUNK LINES	\$	25.76
610.8016.5450.000 CENTURYLINK	TRUNK LINES	\$	10.30
610.8016.5450.000 CENTURYLINK	TRUNK LINES	\$	10.30
690.8050.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
690.8050.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
740.8065.5450.000 CENTURYLINK	TRUNK LINES	\$	6.87
740.8065.5450.000 CENTURYLINK	TRUNK LINES	\$	6.87
750.8070.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
750.8070.5450.000 CENTURYLINK	TRUNK LINES	\$	8.59
184.5030.5242.000 Chedester, James	Housing Assistance Payment	\$	400.00
001.1010.5230.000 Ciox Heath	health records	\$	7.50
110.2010.5132.000 CITY LAUNDERING COMPANY	Street dept uniform cleaning	\$	8.32
110.2010.5342.000 CITY LAUNDERING COMPANY	Street Dept. -comfort flow	\$	10.72
110.2010.5600.000 CITY LAUNDERING COMPANY	Street Dept. - supplies	\$	27.38
110.2040.5132.000 CITY LAUNDERING COMPANY	uniform cleaning Utility Dept.	\$	22.64
690.8050.5132.000 CITY LAUNDERING COMPANY	uniform cleaning-Transit dept	\$	36.19
001.1010.5280.000 CivicPlus Inc	Department Header Page - Police	\$	786.03
001.1050.5347.000 CivicPlus Inc	Department Header Page - Fire	\$	786.03
001.4030.5342.000 CivicPlus Inc	Department Header Page - Park & Rec	\$	786.03
001.6070.5347.000 CivicPlus Inc	CivicPlus Annual Fee 4/10/23-4/9/24	\$	6,006.22
184.5030.5242.000 CMHC Investments LLC	Housing Assistance Payment	\$	230.00
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	\$	146.76
999.1121.000 COLLECTION SERVICES CENTER	CHILD SUPPORT	\$	101.59
999.1121.000 COLLECTION SERVICES CENTER	CHILD SUPPORT	\$	102.11
999.1121.000 COLLECTION SERVICES CENTER	CHILD SUPPORT	\$	461.53
999.1133.000 COLONIAL LIFE	COLONIAL LIFE INSURANCE	\$	321.13
184.5030.5242.000 Colson, Mary	Housing Assistance Payment	\$	503.00
184.5030.5242.000 Colson, Mary	Housing Assistance Payment	\$	238.00
395.2012.5779.000 CONSTRUCT INC	ECO22001 S 7th Ave Extension	\$	20,486.09
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	175.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	171.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	78.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	208.00

184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	221.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	160.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	327.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	515.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	301.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	296.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	301.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	333.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	327.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	327.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	327.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	315.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	263.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	261.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	223.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	327.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	327.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	312.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	307.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	333.00
184.5030.5242.000 Crestview Apts LLC	Housing Assistance Payment	\$	303.00
121.4030.5342.000 CSW Services General Contracting	Park Stump Removal	\$	36,750.60
690.8050.5565.000 CUMMINS Sales & Service	Bus 181 water pump kit	\$	287.94
184.5030.5242.000 D & D RENTALS INC	Housing Assistance Payment	\$	1,050.00
184.5030.5242.000 D & D RENTALS INC	Housing Assistance Payment	\$	434.00
184.5030.5242.000 D & D RENTALS INC	Housing Assistance Payment	\$	422.00
184.5030.5242.000 D & D RENTALS INC	Housing Assistance Payment	\$	349.00
184.5030.5242.000 D & D RENTALS INC	Housing Assistance Payment	\$	146.00
184.5030.5242.000 DATERS, TONI RAE	Housing Assistance Payment	\$	549.00
184.5030.5242.000 DC Brown Rentals	Housing Assistance Payment	\$	277.00
001.4010.5410.000 Deemer, David	Lennox pressure blower switch	\$	33.89
001.1075.5263.000 DEVIG, TAYLOR	Nuisance mowings	\$	2,025.00
690.8050.5565.000 DIAMOND MANUFACTURING INC	Transit	\$	1,799.50
184.5030.5242.000 Douglas Terrace Apartments LLC	Housing Assistance Payment	\$	625.00
184.5030.5242.000 Douglas Terrace Apartments LLC	Housing Assistance Payment	\$	675.00
184.5030.5242.000 Ecklor, Shane	Housing Assistance Payment	\$	298.00
156.1050.5718.000 ED M FELD EQUIPMENT CO INC	Fire security straps for stoke baskets	\$	570.00
184.5030.5242.000 ELWAYNE INC	Housing Assistance Payment	\$	185.00
184.5030.5242.000 ELWAYNE INC	Housing Assistance Payment	\$	281.00
184.5030.5242.000 ELWAYNE INC	Housing Assistance Payment	\$	288.00
184.5030.5242.000 ELWAYNE INC	Housing Assistance Payment	\$	514.00
184.5030.5242.000 ELWAYNE INC	Housing Assistance Payment	\$	169.00
184.5030.5242.000 Engel, Drew	Housing Assistance Payment	\$	479.00
184.5030.5242.000 EPC LLC	Housing Assistance Payment	\$	58.00
184.5030.5242.000 EPC LLC	Housing Assistance Payment	\$	255.00
184.5030.5242.000 EPC LLC	Housing Assistance Payment	\$	259.00
184.5030.5242.000 EPC LLC	Housing Assistance Payment	\$	281.00
184.5030.5242.000 EPC LLC	Housing Assistance Payment	\$	282.00
184.5030.5242.000 EPM Iowa LLC	Housing Assistance Payment	\$	297.00
184.5030.5242.000 ETTER, WILLIAM	Housing Assistance Payment	\$	582.00
184.5030.5242.000 EUBANKS, CHAD	Housing Assistance Payment	\$	284.00
153.1010.5601.000 Evenflo Company	Car Seats	\$	1,387.80
030.4010.5750.000 Farber Speciality Vehicles	Bookmobile, Outreach Vehicle	\$	61,489.50
170.4010.5750.000 Farber Speciality Vehicles	Book Mobile Outreach Vehicle	\$	15,365.50
110.2010.5600.000 FASTENAL COMPANY	Street spray paint	\$	129.60
610.8015.5600.000 FASTENAL COMPANY	WPCP screws, drill bits, plumbing supplies	\$	67.11
189.3040.5410.000 FEXSTEVE LIMITED CO	515 N 2nd St- Lead	\$	44,500.00
189.3040.5415.000 FEXSTEVE LIMITED CO	515 N 2nd St- HH	\$	1,500.00
999.1125.000 FIDELITY SECURITY LIFE INSURANCE CO	VISION INSURANCE	\$	(7.59)
999.1125.000 FIDELITY SECURITY LIFE INSURANCE CO	VISION INSURANCE	\$	326.35
999.1125.000 FIDELITY SECURITY LIFE INSURANCE CO	VISION INSURANCE	\$	101.68
999.1125.000 FIDELITY SECURITY LIFE INSURANCE CO	VISION INSURANCE	\$	7.59
001.1010.5450.000 FIRSTNET-AT&T Mobility	PD cell phones/ hotspots/ cameras/ car phones	\$	816.97
001.1010.5451.000 FIRSTNET-AT&T Mobility	PD cell phones/ hotspots/ cameras/ car phones	\$	212.35

001.1050.5450.000 FIRSTNET-AT&T Mobility	Fire dept cell services, traffic mgmt, data trsrfr	\$	531.60
184.5030.5242.000 FRESE PROPERTIES LLC	Housing Assistance Payment	\$	292.00
184.5030.5242.000 FRIENDLY VALLEY APARTMENTS INC	Housing Assistance Payment	\$	69.00
184.5030.5242.000 FRIENDLY VALLEY APARTMENTS INC	Housing Assistance Payment	\$	121.00
184.5030.5242.000 FRIENDLY VALLEY APARTMENTS INC	Housing Assistance Payment	\$	120.00
001.4040.5358.000 GALE-HAZEN, Karen A	classes 2/05-3/05	\$	255.00
110.2010.5600.000 GERVICH & SONS INC	Street dept steel	\$	130.60
184.5030.5246.000 Goken, Briana	Housing Assistance Payment	\$	7.00
184.5030.5242.000 Gonzales, Gilbert	Housing Assistance Payment	\$	181.00
184.5030.5242.000 Gorrell, Joseph	Housing Assistance Payment	\$	430.00
184.5030.5242.000 GRAY, DENNIS	Housing Assistance Payment	\$	787.00
184.5030.5242.000 GRAY, DENNIS	Housing Assistance Payment	\$	236.00
184.5030.5242.000 GRAY, DENNIS	Housing Assistance Payment	\$	421.00
184.5030.5242.000 Gutierrez, Humberto Fabian	Housing Assistance Payment	\$	233.00
184.5030.5242.000 Gutierrez, Humberto Fabian	Housing Assistance Payment	\$	386.00
184.5030.5242.000 HALA, JANET	Housing Assistance Payment	\$	70.00
184.5030.5242.000 HALA, JANET	Housing Assistance Payment	\$	172.00
184.5030.5242.000 HALA, JANET	Housing Assistance Payment	\$	275.00
184.5030.5242.000 HALA, JANET	Housing Assistance Payment	\$	722.00
184.5030.5242.000 HALA, JANET	Housing Assistance Payment	\$	54.00
184.5030.5242.000 HARRIS, TOM	Housing Assistance Payment	\$	324.00
884.7010.5337.000 HARTFORD- PRIORITY ACCTS	March insurance premium	\$	5,865.70
913.1013.5337.000 HARTFORD- PRIORITY ACCTS	March insurance premium	\$	369.65
184.5030.5242.000 HATCH, Roger	Housing Assistance Payment	\$	660.00
184.5030.5242.000 HATCH, Roger	Housing Assistance Payment	\$	373.00
184.5030.5242.000 HATCH, Roger	Housing Assistance Payment	\$	201.00
184.5030.5242.000 HATCH, Roger	Housing Assistance Payment	\$	234.00
001.1010.5470.000 HAWKEYE COMMUNITY COLLEGE	ILEA Basic Level II Academy - 03/13- 05/26/23	\$	5,500.00
110.2010.5410.000 HAWKEYE TRUCK EQUIPMENT INC	Street vehicle grip steps, cab guard, light bar	\$	487.50
110.2010.5410.000 HAWKEYE TRUCK EQUIPMENT INC	Street dept vehicle grip steps, cab guard, lights	\$	487.50
110.2010.5565.000 HAWKEYE TRUCK EQUIPMENT INC	Street vehicle grip steps, cab guard, light bar	\$	1,199.00
110.2010.5565.000 HAWKEYE TRUCK EQUIPMENT INC	Street dept vehicle grip steps, cab guard, lights	\$	1,018.00
110.2010.5565.000 HAWKEYE TRUCK EQUIPMENT INC	Street #42 conveyor chain part	\$	211.46
884.7010.5339.000 Health Partners	claims 2/16-2/22	\$	5,265.40
884.6021.4875.000 Health Partners	Claims 2/26-2/22	\$	(184.64)
884.7010.5339.000 Health Partners	Claims 2/26-2/22	\$	34,002.10
884.7010.5230.000 Health Partners	Monthly fees and premiums	\$	11,949.72
884.7010.5337.000 Health Partners	Monthly fees and premiums	\$	24,492.22
884.7010.5339.000 Health Partners	claims 2/23-3/01/23	\$	8,345.65
884.7010.5339.000 Health Partners	claims 2/23-03/01	\$	37,650.41
001.1099.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	Police & Fire Bldg	\$	2,130.14
001.4045.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	Aquatic Center	\$	10.00
001.4065.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	Coliseum	\$	62.00
001.6050.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	City Hall	\$	320.09
110.2010.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	PW Bldg	\$	55.04
610.8015.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	March 2023 Direct conn. internet PW/WPCP	\$	438.92
610.8015.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	WPCP	\$	42.57
610.8016.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	March 2023 Direct conn. internet PW/WPCP	\$	263.35
610.8016.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	WPCP	\$	25.54
610.8016.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	PW Bldg	\$	33.03
740.8065.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	March 2023 Direct conn. internet PW/WPCP	\$	175.57
740.8065.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	PW Bldg	\$	22.02
740.8065.5450.000 HEART OF IOWA COMMUNICATIONS CO-OP	WPCP	\$	17.03
001.4030.5980.000 Hernandez, Suguey	Park Bldg rental cancellation	\$	125.00
184.5030.5246.000 Hidalgo, Yesenia	Housing Assistance Payment	\$	10.00
001.1010.5464.000 HILLERS, CHAD A	lunch during training	\$	10.00
184.5030.5242.000 HILLTOP VILLAGE INC	Housing Assistance Payment	\$	96.00
184.5030.5242.000 HILLTOP VILLAGE INC	Housing Assistance Payment	\$	162.00
184.5030.5242.000 HILLTOP VILLAGE INC	Housing Assistance Payment	\$	188.00
184.5030.5242.000 HILLTOP VILLAGE INC	Housing Assistance Payment	\$	217.00
184.5030.5242.000 Hinmon, Linda	Housing Assistance Payment	\$	260.00
184.5030.5242.000 HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	136.00
184.5030.5242.000 HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	247.00
184.5030.5242.000 HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	112.00

184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	237.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	247.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	247.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	449.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	439.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	270.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	273.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	316.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	416.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	392.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	148.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	387.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	350.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	219.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	222.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	225.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	549.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	257.00
184.5030.5242.000	HISTORIC TALLCORN TOWERS LLP	Housing Assistance Payment	\$	92.00
184.5030.5242.000	HOWARD, JAMMIE	Housing Assistance Payment	\$	206.00
184.5030.5242.000	HUBBARD MAPLE ST APTS, LLC	Housing Assistance Payment	\$	181.00
184.5030.5242.000	HUBBARD MAPLE ST APTS, LLC	Housing Assistance Payment	\$	226.00
881.1010.5339.000	Hunter Lane LLC	paid medical claims 2/16-2/28	\$	28.47
881.1050.5339.000	Hunter Lane LLC	paid medical claims 2/16-2/28	\$	436.76
184.5030.5242.000	Ibarra-Ledezma, Ramon	Housing Assistance Payment	\$	692.00
110.2010.5290.000	ICAP	2022 Caterpillar Wheel Loader 2/22/23-3/31/23	\$	138.00
999.1131.000	ICMA 457-Mission Square Retirement	ROTH > 50	\$	(30.00)
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	\$	722.45
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	\$	5,368.07
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEFERRED COMP	\$	963.22
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	\$	1,439.23
999.1131.000	ICMA 457-Mission Square Retirement	ROTH > 50	\$	2,895.22
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	\$	1,225.00
999.1131.000	ICMA 457-Mission Square Retirement	ICMA DEF COMP	\$	269.23
999.1131.000	ICMA 457-Mission Square Retirement	ROTH %	\$	111.05
999.1131.000	ICMA 457-Mission Square Retirement	ROTH < 50	\$	1,075.00
999.1131.000	ICMA 457-Mission Square Retirement	ROTH > 50	\$	945.00
999.1131.000	ICMA 457-Mission Square Retirement	ROTH > 50	\$	30.00
001.1010.5230.000	ILEA	Admin MMPI-2	\$	150.00
001.1010.5470.000	ILEA	01/03-04/16/23 PD Markle training	\$	7,100.00
133.2900.5342.000	Impact 7G Inc	Brownfields Assistance Contract	\$	3,077.50
189.3040.5342.000	Impact 7G Inc	125 Homes LI/RA and HHA	\$	9,741.25
999.1101.000	INTERNAL REVENUE SERVICE	Bi-Weekly Federal Taxes	\$	(310.42)
999.1101.000	INTERNAL REVENUE SERVICE	Bi-Weekly Federal Taxes	\$	25,759.14
999.1101.000	INTERNAL REVENUE SERVICE	Bi-Weekly Federal Taxes	\$	12,289.85
999.1101.000	INTERNAL REVENUE SERVICE	Bi-Weekly Federal Taxes	\$	275.66
999.1103.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Social Security	\$	(461.14)
999.1103.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Social Security	\$	26,074.56
999.1103.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Social Security	\$	4,567.86
999.1103.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Social Security	\$	422.82
999.1107.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Medicare	\$	(107.86)
999.1107.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Medicare	\$	8,518.14
999.1107.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Medicare	\$	4,010.86
999.1107.000	INTERNAL REVENUE SERVICE	Bi-Weekly Payroll Medicare	\$	98.90
884.7010.5250.000	IOWA DEPT OF COMMERCE	509A Application or Renewal	\$	101.59
001.1050.5342.000	Iowa Inspections	Commerical business inspections	\$	1,500.00
610.8016.5230.000	IOWA ONE CALL	Sewer underground location services	\$	35.76
740.8065.5230.000	IOWA ONE CALL	Sewer underground location services	\$	23.84
110.2010.5626.000	IOWA PRISON INDUSTRIES	Street sign sheeting and signs	\$	2,004.20
001.2080.5483.000	Iowa Regional Utilities Association	Airport water	\$	164.32
610.8015.5600.000	IOWA WATER MANAGEMENT CORP	Hot water heating system- filter bags	\$	190.00
610.8015.5600.000	IOWA WATER MANAGEMENT CORP	Hot water heating system- closed system treatment	\$	1,675.00

184.5030.5242.000 JBI COOP ASSOCIATION	Housing Assistance Payment	\$	160.00
184.5030.5242.000 JBI COOP ASSOCIATION	Housing Assistance Payment	\$	276.00
184.5030.5242.000 JBI COOP ASSOCIATION	Housing Assistance Payment	\$	372.00
184.5030.5242.000 JBI COOP ASSOCIATION	Housing Assistance Payment	\$	397.00
184.5030.5242.000 JBI COOP ASSOCIATION	Housing Assistance Payment	\$	403.00
001.1010.5565.000 JENSEN INC	PD 514 light and moulding	\$	1,054.10
001.1010.5565.000 JENSEN INC	PD 514 alternator assy and core	\$	722.73
001.1010.5565.000 JENSEN INC	PD 510 window switch	\$	36.00
001.1010.5565.000 JENSEN INC	core credit	\$	(30.00)
001.1010.5565.000 JENSEN INC	PD vehicle radiator assy	\$	202.60
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	252.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	374.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	368.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	218.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	249.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	327.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	137.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	125.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	116.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	329.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	111.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	262.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	262.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	298.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	29.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	299.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	142.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	195.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	172.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	157.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	257.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	406.00
184.5030.5242.000 JUDGE, MIKE	Housing Assistance Payment	\$	567.00
184.5030.5242.000 Kading Properties LLC	Housing Assistance Payment	\$	(684.00)
184.5030.5242.000 Kading Properties LLC	Housing Assistance Payment	\$	431.00
184.5030.5242.000 Kading Properties LLC	Housing Assistance Payment	\$	801.00
184.5030.5242.000 Klinefelter, Richard J	Housing Assistance Payment	\$	450.00
001.4030.5344.000 KOCH Office Group	copies	\$	6.34
001.6020.5605.000 KOCH Office Group	Copier part OCR Unit Type M13 IMC4500	\$	131.00
110.2010.5344.000 KOCH Office Group	copies	\$	31.70
184.5030.5344.000 KOCH Office Group	Housing contract and copies	\$	101.66
610.8016.5344.000 KOCH Office Group	copies	\$	15.85
740.8065.5344.000 KOCH Office Group	copies	\$	9.51
184.5030.5242.000 KRAMER, Marsha	Housing Assistance Payment	\$	138.00
001.1010.5431.000 LANGUAGE LINE SERV INC	PD over the phone interpretation	\$	1,396.46
001.1010.5359.000 LARRYS TOWING & TIRE SERVICE	PD Tow from 3rd/6th to Goodyear	\$	100.00
184.5030.5242.000 LAWSON, RODNEY W	Housing Assistance Payment	\$	49.00
184.5030.5242.000 LAWTHERS PROPERTY MANAGEMENT	Housing Assistance Payment	\$	184.00
184.5030.5242.000 LBO INVESTMENTS	Housing Assistance Payment	\$	585.00
184.5030.5242.000 LBO INVESTMENTS	Housing Assistance Payment	\$	467.00
884.7010.5337.000 LIFEWORKS US INC	Employee assistance program June 2022	\$	19.30
884.7010.5337.000 LIFEWORKS US INC	Janu-March employee assistance program	\$	1,221.69
110.2010.5565.000 LOGAN CONTRACTORS SUPPLY INC	Patch wagon bolt flanges	\$	160.96
110.2010.5565.000 LOGAN CONTRACTORS SUPPLY INC	Patch wagon bearings	\$	160.96
184.5030.5242.000 Lopez, Jaime	Housing Assistance Payment	\$	395.00
184.5030.5246.000 Louis, Marie	Housing Assistance Payment	\$	7.00
184.5030.5242.000 Luense, Brant	Housing Assistance Payment	\$	264.00
184.5030.5242.000 Luense, Brant	Housing Assistance Payment	\$	562.00
184.5030.5242.000 Luense, Brant	Housing Assistance Payment	\$	506.00
184.5030.5242.000 Luense, Brant	Housing Assistance Payment	\$	461.00
184.5030.5242.000 Luense, Brant	Housing Assistance Payment	\$	358.00
184.5030.5242.000 Luense, Brant	Housing Assistance Payment	\$	326.00
110.2050.5600.000 MACQUEEN EQUIPMENT	Snow blower shear bolts	\$	84.15
110.2070.5565.000 MACQUEEN EQUIPMENT	Street #74 repair parts	\$	1,973.67

184.5030.5242.000 Mansager, Cynthia	Housing Assistance Payment	\$ 370.00
184.5030.5242.000 Manship, Wyatt	Housing Assistance Payment	\$ 804.00
001.6070.5230.000 Marco Holdings LLC	Phone system upgrades labor charges	\$ 1,935.00
001.6070.5347.000 Marco Holdings LLC	15% Parks	\$ 12.47
001.6070.5347.000 Marco Holdings LLC	1980451 Library	\$ 83.16
001.6070.5347.000 Marco Holdings LLC	25013659 Fire Dept	\$ 83.16
001.6070.5347.000 Marco Holdings LLC	80293899 City Hall MiVoice Business	\$ 118.63
001.6070.5347.000 Marco Holdings LLC	2598936 vMAS (MiCollab)	\$ 179.65
001.6070.5347.000 Marco Holdings LLC	70035994 ULM/ UCC	\$ 1,800.60
001.6070.5347.000 Marco Holdings LLC	68165100 vMBG	\$ 16.54
110.2010.5347.000 Marco Holdings LLC	29% Street	\$ 24.11
110.2040.5347.000 Marco Holdings LLC	6% Utility	\$ 4.99
610.8015.5347.000 Marco Holdings LLC	60% WPC	\$ 61.24
610.8016.5347.000 Marco Holdings LLC	18% Sanitary sewer	\$ 18.37
610.8016.5347.000 Marco Holdings LLC	9% Sanitary sewer	\$ 7.48
690.8050.5347.000 Marco Holdings LLC	35% Transit	\$ 29.11
740.8065.5347.000 Marco Holdings LLC	6% Storm sewer	\$ 4.99
740.8065.5347.000 Marco Holdings LLC	12% Storm Sewer	\$ 12.25
750.8070.5347.000 Marco Holdings LLC	10% Compost	\$ 10.21
184.5030.5242.000 Marion Manor 2	Housing Assistance Payment	\$ 559.00
001.1010.5472.000 Markle, William	Training school mileage 1/3-3/5/23	\$ 535.50
001.1010.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 5,283.64
001.1050.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 327.10
001.1050.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 802.94
001.1071.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 34.15
001.1075.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 95.76
001.2020.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 121.36
001.4030.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 996.86
001.6050.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 106.98
110.2010.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 758.00
110.2010.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 69.76
110.2010.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 167.59
110.2010.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 699.35
110.2040.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 143.67
110.2050.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 57.71
110.2050.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 1,956.05
110.2060.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 230.69
610.8015.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 524.33
610.8016.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 43.48
610.8016.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 232.88
610.8016.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 57.55
690.8050.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 869.17
690.8050.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 6,094.56
740.8065.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 155.26
740.8065.5570.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 28.98
740.8065.5571.000 MARSHALL COUNTY ENGINEER	February fuel purchases	\$ 38.37
110.2010.5342.000 MARSHALL COUNTY LANDFILL	Street dept tires	\$ 107.25
151.1010.5331.000 MARSHALL COUNTY RECORDER	Marshall County's share of Byrne Justice Grant	\$ 8,216.50
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 773.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 176.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 773.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 336.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 52.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 323.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 297.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 527.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 3.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 57.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 257.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 211.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 149.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 564.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 773.00
184.5030.5242.000 Marshalltown Lofts, LLC	Housing Assistance Payment	\$ 164.00

001.2090.5220.000 MARSHALLTOWN WATER WORKS	LANDFILL BILLS	\$	252.20
001.4065.5342.000 MARSHALLTOWN WATER WORKS	backflow fee	\$	10.00
001.4065.5483.000 MARSHALLTOWN WATER WORKS	Coliseum water	\$	60.66
001.4065.5488.000 MARSHALLTOWN WATER WORKS	Coliseum sewer	\$	70.44
610.8015.5220.000 MARSHALLTOWN WATER WORKS	Sanitary Collections Costs	\$	8,095.43
610.8015.5483.000 MARSHALLTOWN WATER WORKS	February 2023 WPCP plant water usage	\$	837.99
740.8065.5220.000 MARSHALLTOWN WATER WORKS	Storm Sewer Collection Services	\$	660.35
001.1010.5410.000 MCATEE TIRE SALES & SERVICE INC	PD 511 tire repair	\$	30.00
001.1010.5410.000 MCATEE TIRE SALES & SERVICE INC	PD vehicle oil change	\$	2.00
001.1010.5410.000 MCATEE TIRE SALES & SERVICE INC	PD 514 oil change	\$	2.00
001.1010.5565.000 MCATEE TIRE SALES & SERVICE INC	PD vehicle oil change	\$	49.00
001.1010.5565.000 MCATEE TIRE SALES & SERVICE INC	PD 514 oil change	\$	49.00
001.1050.5413.000 MCATEE TIRE SALES & SERVICE INC	Fire dept #177 tire repair	\$	65.00
001.1050.5413.000 MCATEE TIRE SALES & SERVICE INC	Fire #177 tire replacment	\$	833.64
690.8050.5410.000 MCATEE TIRE SALES & SERVICE INC	Transit bus tires	\$	326.00
690.8050.5565.000 MCATEE TIRE SALES & SERVICE INC	Transit bus tires	\$	1,294.18
132.5020.5331.000 McGregor Company	Exterior Wall repairs -105 W Main St	\$	31,281.25
610.8015.5750.000 MEAD O'BRIEN INC	Primary Replacement Milliken Valves	\$	6,800.00
610.8015.5750.000 MEAD O'BRIEN INC	Primary Limitorque Actuators	\$	34,689.73
001.1099.5450.000 MEDIACOM	Police and Fire internet	\$	414.23
001.1099.5611.000 MENARDS	Utility cleaning supplies	\$	14.44
001.4030.5410.000 MENARDS	Coliseum decor light switch plate and straps	\$	4.65
001.4030.5562.000 MENARDS	Parks pink stake flags	\$	8.97
001.4030.5565.000 MENARDS	Coliseum cushion clamp	\$	3.96
001.4030.5611.000 MENARDS	Reunion hall bldg supplies	\$	37.87
001.6050.5600.000 MENARDS	Utility cleaning supplies	\$	19.49
110.2010.5600.000 MENARDS	Street	\$	57.45
110.2010.5600.000 MENARDS	Utility cleaning supplies	\$	13.32
110.2010.5600.000 MENARDS	Street dept 6' step ladder	\$	59.99
110.2010.5600.000 MENARDS	Street dept steel cable ties	\$	24.45
140.4030.5410.000 MENARDS	Reunion hall lumber	\$	193.35
610.8016.5600.000 MENARDS	Sewer dept marine adhesive	\$	33.70
690.8050.5600.000 MENARDS	Utility cleaning supplies	\$	13.32
690.8050.5600.000 MENARDS	Transit mop, graffiti remover	\$	59.30
610.8015.5603.000 MIDLAND SCIENTIFIC INC	lab supplies - pipettes	\$	38.42
610.8015.5603.000 MIDLAND SCIENTIFIC INC	lab supplies - No. 8 stoppers	\$	48.18
610.8015.5603.000 MIDLAND SCIENTIFIC INC	lab supplies - HN cartridges	\$	382.57
610.8015.5603.000 MIDLAND SCIENTIFIC INC	lab supplies- boilers for still, rubber tubing	\$	2,515.33
610.8015.5603.000 MIDLAND SCIENTIFIC INC	lab supplies - nitrate reagent	\$	209.25
132.5020.5331.000 Mobius Group	Repair of Shared Wall - 22 N 1st Ave	\$	12,100.00
184.5030.5242.000 Moore, Michelle	Housing Assistance Payment	\$	372.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	121.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	139.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	194.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	268.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	278.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	282.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	292.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	292.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	313.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	220.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	242.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	249.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	264.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	268.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	268.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	408.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	350.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	321.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	196.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	203.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	219.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	317.00
184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$	318.00

184.5030.5242.000 MTOWN/WESTOWN LLLP	Housing Assistance Payment	\$ 313.00
616.8016.5348.000 MUNICIPAL PIPE TOOL CO LLC	SAN21001 2020 Sanitary Sewer CIPP	\$ 42,599.80
616.8016.5348.000 MUNICIPAL PIPE TOOL CO LLC	SAN21001 2020 Sanitary Sewer CIPP	\$ 70,276.35
001.1010.5230.000 Myers, Laura	Polygraph exam 01/27/23	\$ 350.00
001.1010.5230.000 Myers, Laura	polygraph exam	\$ 350.00
001.1050.5565.000 NAPA AUTO PARTS	Ladder 174 headlight	\$ 13.71
001.1050.5600.000 NAPA AUTO PARTS	Fire dept oil dry	\$ 141.00
610.8016.5565.000 NAPA AUTO PARTS	Sewer dept air filter, 5W30 oil	\$ 66.33
690.8050.5600.000 NAPA AUTO PARTS	Transit oil dry	\$ 58.75
690.8050.5600.000 NAPA AUTO PARTS	Transit shop towels	\$ 73.21
740.8065.5565.000 NAPA AUTO PARTS	Sewer dept air filter, 5W30 oil	\$ 44.23
184.5030.5242.000 Nelson, LaNeal	Housing Assistance Payment	\$ 266.00
001.2080.5484.000 NEW CENTURY FS INC	Airport propane 12/05/22 fill	\$ 2,167.00
184.5030.5242.000 NORTH TAMA HOUSING, INC	Housing Assistance Payment	\$ 184.00
001.6050.5480.000 NUTRIEN AG SOLUTIONS INC	City Hall/ YSS generator diesel fuel	\$ 870.00
001.6050.5480.000 NUTRIEN AG SOLUTIONS INC	City Hall/ YSS generator diesel fuel	\$ 870.00
690.8050.5565.000 NUTRIEN AG SOLUTIONS INC	Transit - 1 keg 75/90	\$ 724.00
184.5030.5242.000 OETKER, DEBRA	Housing Assistance Payment	\$ 238.00
184.5030.5242.000 OETKER, DEBRA	Housing Assistance Payment	\$ 135.00
610.8015.5216.000 ONE SOURCE-THE BACKGROUND CHECK CO	applicant checks	\$ 15.00
610.8016.5216.000 ONE SOURCE-THE BACKGROUND CHECK CO	applicant checks	\$ 15.00
740.8065.5216.000 ONE SOURCE-THE BACKGROUND CHECK CO	applicant checks	\$ 10.00
886.2010.5216.000 ONE SOURCE-THE BACKGROUND CHECK CO	applicant checks	\$ 60.00
184.5030.5242.000 PALISADE HOLDING CO	Housing Assistance Payment	\$ 76.00
Payroll Payroll	Payroll #5	\$ 305,072.85
184.5030.5242.000 Pebworth Homes LLC	Housing Assistance Payment	\$ 220.00
184.5030.5246.000 Perez, Eliva Mejia	Housing Assistance Payment	\$ 31.00
999.1166.000 Perez, Enestina	Reimburse overpayment - parking hold	\$ 110.00
184.5030.5242.000 Pilot Creek Properties	Housing Assistance Payment	\$ 165.00
184.5030.5242.000 Pizano-Cisneros, Angel	Housing Assistance Payment	\$ 411.00
184.5030.5242.000 Plymat Jr, William	Housing Assistance Payment	\$ 646.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 68.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 168.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 208.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 251.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 350.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 369.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 704.00
184.5030.5242.000 Premier Iowa City IA LLC	Housing Assistance Payment	\$ 764.00
184.5030.5344.000 PREMIER OFFICE EQUIPMENT	Housing contract and copies	\$ 59.00
184.5030.5242.000 Premier Real Estate Mgmnt	Housing Assistance Payment	\$ 177.00
184.5030.5242.000 Premier Real Estate Mgmnt	Housing Assistance Payment	\$ 353.00
184.5030.5242.000 Premier Real Estate Mgmnt	Housing Assistance Payment	\$ 659.00
184.5030.5242.000 Premier Real Estate Mgmnt	Housing Assistance Payment	\$ 695.00
184.5030.5242.000 Premier Real Estate Mgmnt	Housing Assistance Payment	\$ 721.00
184.5030.5242.000 Premier Real Estate Mgmnt	Housing Assistance Payment	\$ 580.00
610.8015.5980.000 Priske, Jason	Sewer refund 2023- water pipe break	\$ 1,029.92
184.5030.5242.000 Pyramind Property Solutions Inc	Housing Assistance Payment	\$ 375.00
184.5030.5242.000 Pyramind Property Solutions Inc	Housing Assistance Payment	\$ 349.00
184.5030.5242.000 Pyramind Property Solutions Inc	Housing Assistance Payment	\$ 284.00
184.5030.5242.000 R & A RENTAL PROPERTIES LLC	Housing Assistance Payment	\$ 442.00
001.1010.5600.000 RACOM CORPORATION	PD car piece	\$ 3.00
184.5030.5246.000 Ramirez, Juana	Housing Assistance Payment	\$ 31.00
184.5030.5242.000 Ramirez, Sergio Rios	Housing Assistance Payment	\$ 388.00
184.5030.5242.000 RD TOLEDO LLP	Housing Assistance Payment	\$ 344.00
184.5030.5242.000 REED, TONY	Housing Assistance Payment	\$ 570.00
184.5030.5242.000 REED, TONY	Housing Assistance Payment	\$ 496.00
184.5030.5242.000 REED, TONY	Housing Assistance Payment	\$ 437.00
184.5030.5242.000 REED, TONY	Housing Assistance Payment	\$ 262.00
001.2060.5344.000 RICOH USA INC	Engineering color copies	\$ 23.96
001.2060.5344.000 RICOH USA INC	Engineering BW copies	\$ 4.36
110.2060.5344.000 RICOH USA INC	Engineering color copies	\$ 23.96
110.2060.5344.000 RICOH USA INC	Engineering BW copies	\$ 4.37
184.5030.5242.000 RIVER BIRCH APTS	Housing Assistance Payment	\$ 54.00

184.5030.5242.000 RIVER BIRCH APTS	Housing Assistance Payment	\$	400.00
184.5030.5242.000 RIVER BIRCH APTS	Housing Assistance Payment	\$	595.00
184.5030.5242.000 RIVER BIRCH APTS	Housing Assistance Payment	\$	700.00
184.5030.5242.000 RIVER BIRCH APTS	Housing Assistance Payment	\$	326.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	708.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	672.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	226.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	180.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	708.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	700.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	672.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	515.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	311.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	302.00
184.5030.5242.000 RIVER OAKS APARTMENTS	Housing Assistance Payment	\$	755.00
184.5030.5242.000 RMB Cooperative	Housing Assistance Payment	\$	435.00
184.5030.5242.000 RMB Cooperative	Housing Assistance Payment	\$	(757.00)
184.5030.5242.000 RMB Cooperative	Housing Assistance Payment	\$	733.00
184.5030.5242.000 RMB Cooperative	Housing Assistance Payment	\$	232.00
999.1166.000 Rodgers, Tricia	Reimburse overpayment - parking hold	\$	25.00
184.5030.5242.000 Roth, Kamaria Mary	Housing Assistance Payment	\$	489.00
001.1071.5342.000 Safe Building	Services Areement FY22/23	\$	3,010.00
610.8015.5380.000 SCHARNWEBER WATER CONDITIONING INC	February 2023 water softener lease	\$	27.00
001.4030.5342.000 SCHENDEL PEST CONTROL INC	Parks Comm bldg	\$	46.33
184.5030.5242.000 SCHMIDT, Michael T	Housing Assistance Payment	\$	471.00
184.5030.5246.000 Schmudlach, Cody	Housing Assistance Payment	\$	10.00
001.4065.5344.000 SCHUMACHER ELEVATOR COMPANY	Coliseum monthly service	\$	463.50
001.6050.5344.000 SCHUMACHER ELEVATOR COMPANY	City Hall Elevator Maintenance	\$	237.14
001.6051.5344.000 SCHUMACHER ELEVATOR COMPANY	Carnegie Bldg elevator	\$	239.54
110.2010.5718.000 SE Jones Industries Inc	Break bar, pickle fork, lockpliers	\$	781.90
110.2010.5718.000 SE Jones Industries Inc	spark plug socket	\$	87.00
110.2010.5718.000 SE Jones Industries Inc	8IN DOUBLE JAW CABLE SHEAR	\$	106.50
184.5030.5246.000 Shattuck, Tracy	Housing Assistance Payment	\$	10.00
001.1010.5464.000 SHELANGOSKI, WYATT	lunch during training	\$	10.00
001.1099.5347.000 SIEMENS INDUSTRY, INC.	PD/Fire Annual Building Software	\$	4,110.00
610.8015.5344.000 SJE-RHOMBUS	Service flex plan level 3-2nd qtr	\$	1,250.00
001.4030.5450.000 SPYGLASS GROUP LLC	P&R jetpak	\$	495.24
110.2040.5450.000 SPYGLASS GROUP LLC	Utility jetpak	\$	495.24
184.5030.5450.000 SPYGLASS GROUP LLC	Housing iPad3	\$	121.68
184.5030.5242.000 Squire, Bert	Housing Assistance Payment	\$	177.00
363.2010.5233.000 STANLEY CONSULTANTS INC.	STR21002 S. Center St Bridge	\$	64,496.00
184.5030.5242.000 Steffensen, Gary	Housing Assistance Payment	\$	428.00
001.1010.5344.000 Stericycle Inc	PD & Housing February services	\$	78.81
184.5030.5344.000 Stericycle Inc	PD & Housing February services	\$	42.80
001.1099.5342.000 STONE SANITATION	Police & Fire Bldg	\$	118.78
001.4010.5342.000 STONE SANITATION	Library - 105 W Boone St	\$	115.56
001.5010.5342.000 STONE SANITATION	Central Business District	\$	200.00
001.6050.5342.000 STONE SANITATION	City Hall	\$	118.78
110.2010.5342.000 STONE SANITATION	Bullpen Woodland Dr	\$	95.00
110.2010.5342.000 STONE SANITATION	Street Dept	\$	118.78
110.2010.5342.000 STONE SANITATION	Bullpen Woodland Dr	\$	95.00
610.8015.5342.000 STONE SANITATION	Waste Plant	\$	118.78
610.8015.5342.000 STONE SANITATION	February 2023 Grit/ screening removal	\$	587.62
001.4065.5611.000 Strands Inc	Coliseum paint	\$	24.05
001.1010.5132.000 STREICHER'S INC	PD employee clothing	\$	34.99
030.1010.5718.000 STREICHER'S INC	PD new officer ballistic vest	\$	512.50
030.1010.5718.000 STREICHER'S INC	creidt for trauma plate	\$	(22.50)
151.1010.5718.000 STREICHER'S INC	PD new officer ballistic vest	\$	512.50
151.1010.5718.000 STREICHER'S INC	creidt for trauma plate	\$	(22.50)
184.5030.5242.000 SUNRISE APARTMENTS, INC	Housing Assistance Payment	\$	116.00
184.5030.5242.000 Swift, Scott	Housing Assistance Payment	\$	413.00
110.2010.5132.000 THEISENS SUPPLY INC	Street markers, gloves, high vis clothing	\$	47.98
110.2010.5132.000 THEISENS SUPPLY INC	Street dept new employee City provided clothes	\$	628.90
110.2010.5132.000 THEISENS SUPPLY INC	Street employee High visible clothing	\$	452.45

110.2010.5132.000 THEISENS SUPPLY INC	Street employee clothing	\$	104.98
110.2010.5570.000 THEISENS SUPPLY INC	Street bar & chain oil, transfer pump, chain	\$	49.98
110.2010.5600.000 THEISENS SUPPLY INC	tarp strap, lynch pins	\$	24.89
110.2010.5600.000 THEISENS SUPPLY INC	Street tow chain, cleaner	\$	87.98
110.2010.5600.000 THEISENS SUPPLY INC	Street bar & chain oil, transfer pump, chain	\$	207.22
110.2010.5600.000 THEISENS SUPPLY INC	Street markers, gloves, high vis clothing	\$	67.10
110.2010.5600.000 THEISENS SUPPLY INC	100lb cable tie	\$	39.96
110.2010.5600.000 THEISENS SUPPLY INC	Street ladder truck braided rope	\$	31.98
001.1072.5210.000 TIMES REPUBLICAN	Advertising	\$	4.28
001.4040.5210.000 TIMES REPUBLICAN	Advertising	\$	14.28
001.4041.5210.000 TIMES REPUBLICAN	Advertising	\$	28.60
110.2010.5210.000 TIMES REPUBLICAN	Advertising	\$	14.28
110.2030.5210.000 TIMES REPUBLICAN	Advertising	\$	1.43
110.2040.5210.000 TIMES REPUBLICAN	Advertising	\$	8.57
110.2060.5210.000 TIMES REPUBLICAN	Advertising	\$	14.28
690.8050.5210.000 TIMES REPUBLICAN	Advertising	\$	14.28
999.1128.000 TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX HEALTH BENEFITS	\$	(110.41)
999.1128.000 TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX HEALTH BENEFITS	\$	4,981.05
999.1128.000 TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX HEALTH BENEFITS	\$	654.13
999.1128.000 TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX HEALTH BENEFITS	\$	110.41
999.1129.000 TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX DEP CARE BENEFITS	\$	724.99
999.1129.000 TOTAL ADMINISTRATIVE SERVICE CORP.	FLEX DEP CARE BENEFITS	\$	208.33
184.5030.5242.000 Town Apartments Corporation	Housing Assistance Payment	\$	150.00
184.5030.5242.000 Town Apartments Corporation	Housing Assistance Payment	\$	51.00
999.1102.000 TREASURER STATE OF IOWA	Bi-Weekly Payroll SIT	\$	(118.84)
999.1102.000 TREASURER STATE OF IOWA	Bi-Weekly Payroll SIT	\$	10,642.51
999.1102.000 TREASURER STATE OF IOWA	Bi-Weekly Payroll SIT	\$	4,967.42
999.1102.000 TREASURER STATE OF IOWA	Bi-Weekly Payroll SIT	\$	102.33
690.8050.5210.000 Trending Media Inc	Transit advertising	\$	122.00
690.8050.5210.000 Trending Media Inc	Transit advertising	\$	28.00
184.5030.5242.000 TTLC Coop Housing	Housing Assistance Payment	\$	788.00
001.1075.5347.000 TYLER TECHNOLOGIES INC	EnerGov 4/23-3/24	\$	5,321.88
610.8016.5339.000 Unity Point- Occupational Medicine	paid medical claims	\$	25.20
740.8065.5339.000 Unity Point- Occupational Medicine	paid medical claims	\$	16.80
001.1010.5151.000 UPHDM OCCUPATIONAL MEDICINE	PD new hire physical/ immunizations	\$	1,069.00
001.4030.5718.000 Vajgrt, Roger	Parks sprayer and chain	\$	80.00
110.2010.5600.000 Vajgrt, Roger	Street propane	\$	183.18
001.2080.5410.000 VanMaanen Electric Inc	electrical repair- runway lights	\$	200.54
001.1070.5342.000 Veenstra & Kimm Inc	Building inspection services- January	\$	4,052.80
189.3040.5433.000 Velazquez, Cindy Avila	Lead Hazard reduction program	\$	550.00
184.5030.5246.000 Velez, Yaralexi	Housing Assistance Payment	\$	13.00
184.5030.5246.000 Vung, Cing	Housing Assistance Payment	\$	63.00
184.5030.5242.000 Walker, Angela	Housing Assistance Payment	\$	298.00
184.5030.5242.000 WEATHERLY, ERIN & BOB	Housing Assistance Payment	\$	190.00
184.5030.5242.000 WEATHERLY, ERIN & BOB	Housing Assistance Payment	\$	317.00
184.5030.5242.000 WEB III Investments LLC	Housing Assistance Payment	\$	550.00
184.5030.5246.000 Werner, Jessica	Housing Assistance Payment	\$	13.00
184.5030.5242.000 White, Amalia	Housing Assistance Payment	\$	505.00
355.1075.5230.000 WHKS & Co	#14 temp support 1/24-2/10	\$	2,150.42
355.1075.5230.000 WHKS & Co	Amendment 2	\$	3,129.92
132.5020.5331.000 Willard Property LLC	Willard Housing	\$	51,971.00
110.2010.5251.000 Witte, Joe	CDL license	\$	64.00
001.1099.5482.000 WoodRiver Energy LLC	Police & Fire Bldg 11672	\$	3,668.20
001.4010.5482.000 WoodRiver Energy LLC	Library gas #7078	\$	1,477.50
001.4045.5482.000 WoodRiver Energy LLC	SWIMMING POOL 7077	\$	77.22
184.5030.5242.000 Worent Inc	Housing Assistance Payment	\$	143.00
001.1010.5460.000 Workforce Solutions LLC	2 day Midwest EVOC Conference	\$	570.00
184.5030.5242.000 Worsfold Farm LLC	Housing Assistance Payment	\$	384.00
001.1010.5132.000 Worsfold, Kyle	SWAT Clothing graphics	\$	685.00
999.1164.000 Worsfold, Kyle	SWAT Clothing graphics	\$	11.00
610.8015.5344.000 XEROX CORPORATION	February 2023 Xerox and copies	\$	44.25
110.2010.5565.000 ZIEGLER INC	Street #27 shaft and slotted nuts	\$	1,039.10
110.2010.5565.000 ZIEGLER INC	Street - returned shaft and slotted nuts	\$	(955.44)
TOTAL		\$	1,368,975.62

BUILDING REPORT FOR THE MONTH OF FEBRUARY 2023							MARSHALLTOWN I O W A		
PERMIT NUMBER	OWNER OF IMPROVEMENT	LOCATION OF IMPROVEMENT	TYPE OF IMPROVEMENT	NEW DWELLING	ALTER DWELLING	MINOR RES. BUILDING	COMMERCIAL IMPROVEMENT	FEE	
BLDC-008338-2023	Maggie Santillan	118 W Main St	Commercial Alteration				\$14,492.00	\$243.00	
BLDR-008335-2023	JAR Reality Corp	110 W Ingledue St	Residential Addition		\$23,251.20			\$369.00	
BLDR-008357-2023	Levis Ndiokubwayo	307 N 1st St	Residential Addition		\$15,120.00			\$257.00	
DEMO-008364-2023	Jerome Vyizigiro	309 W Boone St	Demo					\$50.00	
			TOTALS:	\$0.00	\$38,371.20	\$0.00	\$14,492.00	\$919.00	
			TOTAL IMPROVEMENT AMOUNT: \$52,863.20						
				Units	Permits	Permits	Permits	Com. Permits	Demo Permits
			# OF PERMITS:	0	0	2	0	1	1

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PERMIT NUMBER	OWNER OF IMPROVEMENT	LOCATION OF IMPROVEMENT	TYPE OF IMPROVEMENT	NEW DWELLING		ALTER DWELLING	MINOR RES. BUILDING	COMMERCIAL IMPROVEMENT	FEE
BLDC-008338-2023	Maggie Santillan	118 W Main St	Commercial Alteration					\$14,492.00	\$243.00
BLDR-008335-2023	JAR Reality Corp	110 W Ingledue St	Residential Addition			\$23,251.20			\$369.00
BLDR-008357-2023	Levis Ndiwokubwayo	307 N 1st St	Residential Addition			\$15,120.00			\$257.00
DEMO-008364-2023	Jerome Vyizigiro	309 W Boone St	Demo						\$50.00
			TOTALS:	\$0.00		\$38,371.20	\$0.00	\$14,492.00	\$919.00
			TOTAL IMPROVEMENT AMOUNT: \$52,863.20						
				Units	Permits	Permits	Permits	Com. Permits	Demo Permits
*Work started without a permit - fee is doubled			# OF PERMITS:	0	0	2	0	1	1

TRADE PERMIT REPORT FOR THE MONTH OF FEBRUARY 2023					MARSHALLTOWN — I O W A —	
PERMIT NUMBER	LOCATION OF IMPROVEMENT	RESIDENTIAL/ COMMERCIAL	PERMIT TYPE (ELEC., PLUMB., MECH. OR SOLAR)	VALUATION	FEE	
MECH-008333-2023	3106 S 14th St	Residential	Mechanical		\$62.00	
MECH-008339-2023	906 (908) N 3rd Ave	Commercial	Mechanical	\$994,340.00	\$5,016.70	
PLMC-008337-2023	906 (908) N 3rd Ave	Commercial	Plumbing	\$631,750.00	\$3,203.75	
MECH-008341-2023	5 N 7th Ave	Residential	Mechanical		\$62.00	
MECH-008342-2023	910 Prairie Ln	Residential	Mechanical		\$85.00	
PLMR-008344-2023	302 Bromley St	Residential	Plumbing		\$85.00	
ELER-008343-2023	407 N 7th Ave	Residential	Solar		\$95.00	
ELER-008346-2023	511 W South St	Residential	Electrical		\$85.00	
ELER-008347-2023	314 N 14th Ave	Residential	Electrical		\$85.00	
MECH-008348-2023	408 1/2 E Linn St	Residential	Mechanical		\$62.00	
ELER-008350-2023	809 W Main St	Residential	Electrical		\$85.00	
MECH-008352-2023	609 Thunderbird Dr	Residential	Mechanical		\$62.00	
ELER-008351-2023	1002 Bromley St	Residential	Electrical		\$85.00	
PLMR-008358-2023	808 S 12th St	Residential	Plumbing		\$85.00	
PLMC-008356-2023	119 E Main St	Commercial	Plumbing	\$5,000.00	\$70.00	
MECH-008359-2023	108 W Church St	Residential	Mechanical		\$85.00	
ELER-008361-2023	605 E Church St	Residential	Solar		\$95.00	
ELER-008360-2023	519 N 15th St	Residential	Electrical		\$85.00	
PLMR-008362-2023	1705 E Nevada St	Residential	Plumbing		\$62.00	
ELER-008363-2203	2213 Wakefield Dr	Residential	Solar		\$95.00	
ELER-008365-2023	413 Park St	Residential	Electrical		\$85.00	
MECH-008366-2023	407 Innes Blvd	Residential	Electrical		\$62.00	
			TOTALS:	\$1,631,090.00	\$9,797.45	
	# Residential Permits	Residential Fees	# of Commercial Permits	Commercial Valuation	Commercial Fees	Total Fees
Electrical	7	\$572.00				\$572.00
Plumbing	3	\$232.00	2	\$636,750.00	\$3,273.75	\$3,505.75
Mechanical	6	\$418.00	1	\$994,340.00	\$5,016.70	\$5,434.70
Solar	3	\$285.00				\$285.00
TOTALS	19	\$1,507.00	3	\$1,631,090.00	\$8,290.45	\$9,797.45

Building Division Improvement Value & Fee Summary - Feb. 2023

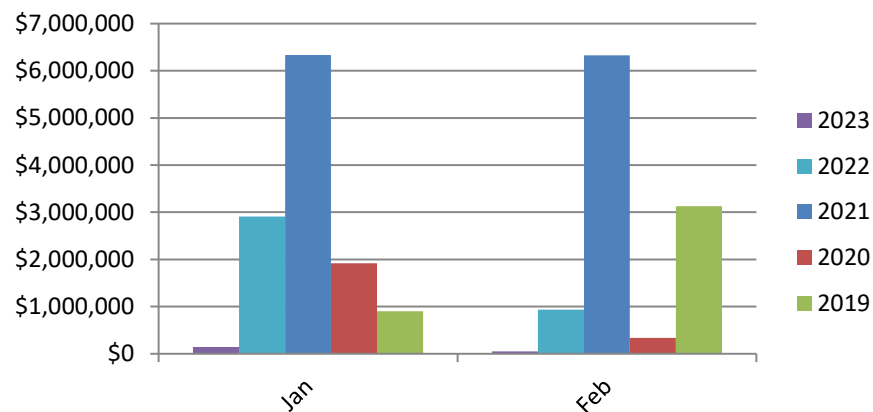
Total Improvement Value Comparison

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2023	\$146,879	\$52,863											\$199,742
2022	\$2,912,000	\$937,862											\$3,849,862
2021	\$6,335,000	\$6,324,000											\$12,659,000
2020	\$1,921,000	\$339,000											\$2,260,000
2019	\$903,000	\$3,132,000											\$4,035,000

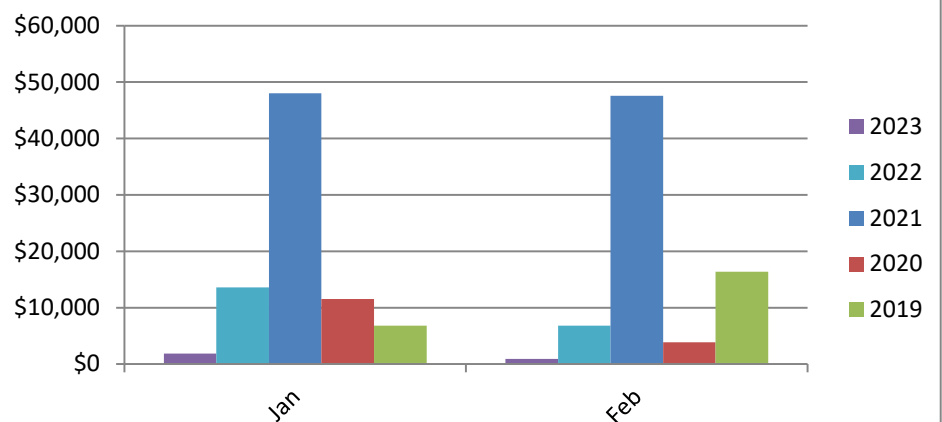
Total Fees Received Comparison

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2023	\$1,840	\$919											\$2,759
2022	\$13,584	\$6,803											\$20,387
2021	\$48,028	\$47,605											\$95,633
2020	\$11,506	\$3,879											\$15,385
2019	\$6,828	\$16,366											\$23,194

Total Improvement Value Comparison



Total Fees Received Comparison



**RESOLUTION DECLARING CERTAIN PROPERTY SURPLUS PROPERTY AND
AUTHORIZING DISPOSAL THEREOF FROM THE STREET DIVISION OF THE
PUBLIC WORKS DEPARTMENT**

WHEREAS the City of Marshalltown (hereinafter referred to as the “City”), State of Iowa is a political subdivision organized and existing under the law and the Constitution of the State of Iowa (the “State”); and

WHEREAS the City is the sole owner of the equipment listed in Section 1 which is to be declared surplus property; and

WHEREAS the equipment is no longer in use; and

WHEREAS the disposal of the equipment is in the best interests of the City of Marshalltown.

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

Section 1. The equipment listed below is hereby declared as surplus property:

Asset No 4235 – Road Laser Paint Line Striper (BA207), Acquired in 1998

Asset No 7039 – 2012 John Deere UV550 Gater, VIN 1M0550TBKCM012992

Section 2. The equipment, the subject of this resolution, shall be disposed of.

Passed this 13th day of March 2023, and signed this ____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

RESOLUTION APPROVING THE TITLE VI AGREEMENT AND ASSURANCES FOR THE CITY OF MARSHALLTOWN AND ADOPTING SUCH AS THE CITY'S POLICY FOR FULL COMPLIANCE WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

WHEREAS, there is herewith submitted to the City Council of Marshalltown, Iowa, a proposed Title VI Approval of Agreement and Assurances for the City of Marshalltown; and

WHEREAS, the City Council appoints the Public Works Director as the City of Marshalltown's Title VI Coordinator; and

WHEREAS, the Title VI Assurance and Title VI Agreement documents should be signed by the mayor and are required to be updated within 30 days each time the head of the agency changes, or every 5 years, whichever is less; and

WHEREAS, the City Council authorize updated documents to be signed and submitted to the Title VI Specialist in the Iowa DOT Civil Rights Bureau in the event of a change in the head of the agency or Title VI Coordinator; and

WHEREAS, the Council has fully examined the same and has found the same to be in the best interests of the City of Marshalltown, Iowa, and that same should now be approved and accepted.

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

Section 1. That the proposed Title VI Approval of Agreement and Assurances for the City of Marshalltown is hereby fully approved in all respects and particulars and the Mayor and City Clerk are hereby authorized and directed to execute same for and on behalf of said City.

Section 1. That the proposed Agreement and Assurances for the City of Marshalltown shall become the policy for compliance with Title VI of the Civil Rights Act of 1964 for said City.

Passed this 13th day of March 2023, and signed this ____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: March 13, 2023
RE: Title VI Agreement and Assurances – Policy for Compliance with Title VI of the Civil Rights Act of 1964

Strategic Plan:

- ☐ Strategy 1: Expand and improve development in the community.
- ☐ Strategy 2: Enhance Marshalltown's public image.
- ☒ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☐ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective:

Review City policies, procedures, plans, ordinances, programs, and services for updates and efficiencies.

Recommendation:

Approval of the proposed agreement and assurances & adoption of such as the City's policy.

Budget Impact:

None.

Description/Background:

Compliance with Title VI of the Civil Rights Act of 1964 is a requirement for all operations and activities conducted by entities that accept federal funding, no matter if federal funding is being used on a specific project. City council approved our most recent Title VI Agreement & Assurances on June 14, 2021 (Resolution 2021-140). This most recent 2021 adoption was a result of Transportation Alternative Funding the city received for the Iowa River's Edge Trail. We were contacted by Iowa DOT in February who were unable to locate a fully executed copy signed both by the City of Marshalltown and Iowa DOT. We were able to determine that the city executed our side of the agreement and it was submitted to Iowa DOT; however, due to some staffing changes at Iowa DOT – Iowa DOT had not executed their end of the agreement. Therefore, I have been in contact with Steven Kerber who is the Title VI Compliance Officer for the Civil Rights Bureau of Iowa DOT and we believe the best course of action is to have the city adopt the attached agreement and assurances as policy.

Title VI of the Civil Rights Act of 1964

"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." (42 U.S.C. 2000d)

CITY COUNCIL

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



The Civil Rights Act of 1964 (the Act) is a fundamental piece of legislation that forms the basis for a wide array of subsequent laws, executive orders and regulations, all designed to prohibit discrimination. Technically, Title VI covers race, color and national origin. However, the term “Title VI” is also used more generically to refer to non-discrimination on any basis.

What Title VI Does

- Prohibits entities from denying an individual any service, financial aid, or other benefit.
- Prohibits entities from providing services or benefits that are different or inferior (either in quantity or quality) to those provided to others.
- Prohibits segregation or separate treatment in any manner related to receiving program services or benefits.
- Prohibits entities from requiring different standards or conditions as prerequisites for serving individuals.
- Encourages the participation of minorities as members of planning or advisory bodies for programs receiving Federal funds.
- Prohibits discriminatory activity in a facility built in whole or in part with Federal funds.
- Requires information and services to be provided in languages other than English when significant numbers of beneficiaries are of limited English-speaking ability.
- Requires entities to notify the eligible population about applicable programs.
- Prohibits locating facilities in any way that would limit or impede access to a Federally funded service or benefit.
- Requires assurance of nondiscrimination in purchasing of services.

CITY COUNCIL

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



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The United States Department of Transportation (USDOT)

Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

The CITY of MARSHALLTOWN, IA (herein referred to as the “Recipient”), **HEREBY AGREES THAT**, as a condition to receiving any Federal financial assistance from the United States Department of Transportation (DOT), through the **Federal Highway Administration (FHWA)**, is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled *Nondiscrimination In Federally-Assisted Programs Of The Department Of Transportation—Effectuation Of Title VI Of The Civil Rights Act Of 1964*);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the “Acts” and “Regulations,” respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

*“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity,” for which the Recipient receives Federal financial assistance from DOT, including the **FHWA**.*

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973) by restoring the broad, institutional-wide scope and coverage of these non-discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted **Federal Highway Program**:

1. The Recipient agrees that each “activity,” “facility,” or “program,” as defined in §§ 21.23 (b) and 21.23 (e) of 49 C.F.R. § 21 will be (with regard to an “activity”) facilitated, or will be (with regard to a “facility”) operated, or will be (with regard to a “program”) conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.

2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all **Federal Highway Programs** and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

“The CITY of MARSHALLTOWN, IA, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.”

3. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.
4. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
7. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
 - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
 - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:
 - a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
 - b. the period during which the Recipient retains ownership or possession of the property.
9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal

financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.

10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, CITY of MARSHALLTOWN, IA also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the **FHWA** access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by the **FHWA**. You must keep records, reports, and submit the material for review upon request to **FHWA**, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

CITY of MARSHALLTOWN, IA gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the **Federal Highway Program**. This ASSURANCE is binding on **Iowa**, other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the **Federal Highway Program**. The person (s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

CITY of MARSHALLTOWN, IA

(Name of Recipient)

by

(Signature of Authorized Official)

DATED _____

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the Department of Transportation as authorized by law and upon the condition that the CITY of MARSHALLTOWN, IA will accept title to the lands and maintain the project constructed thereon in accordance with laws of the state of Iowa, the Regulations for the Administration of **Federal Highway Program**, and the policies and procedures prescribed by the **Federal Highway Administration** of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the CITY of MARSHALLTOWN, IA all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto CITY of MARSHALLTOWN, IA and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the CITY of MARSHALLTOWN, IA, its successors and assigns.

The CITY of MARSHALLTOWN, IA, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the CITY of MARSHALLTOWN, IA will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the CITY of MARSHALLTOWN, IA pursuant to the provisions of Assurance 7(a):

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add “as a covenant running with the land”] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Non-discrimination covenants, CITY of MARSHALLTOWN, IA will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the CITY of MARSHALLTOWN, IA will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the CITY of MARSHALLTOWN, IA and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/ agreements entered into by CITY of MARSHALLTOWN, IA pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, “as a covenant running with the land”) that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, CITY of MARSHALLTOWN, IA will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*
- C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, CITY of MARSHALLTOWN, IA will there upon revert to and vest in and become the absolute property of CITY of MARSHALLTOWN, IA and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

CITY of MARSHALLTOWN, IA

Title VI Notice to the Public

hereby gives public notice that it is the policy of the **CITY of MARSHALLTOWN, IA** to assure full compliance with Title VI of the Civil Rights Act of 1964, related statutes and regulation provide that no person shall on the ground of race, color, national origin, gender, age or disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. The Civil Rights Restoration Act of 1987 amended Title VI to specify that entire institutions receiving federal funds, whether schools, colleges, government entities, or private employers, must comply with Federal civil rights laws, rather than just the programs or activities that receive federal funds.

We are also concerned about the impacts of our programs, projects and activities on low income and minority populations (“Environmental Justice”) under Title VI. Any person who believes that they are being denied participation in a project, being denied benefits of a program, or otherwise being discriminated against because of race, color, national origin, gender, age, or disability, may contact:

Heather Thomas
City of Marshalltown, IA
641-754-5734

Civil Rights Coordinator – IA DOT
Bureau of Civil Rights
800-262-0003 or 515-239-1304

YOU SHOULD CONTACT THE ABOVE INDIVIDUAL OR IOWA DOT OFFICE AS SOON AS POSSIBLE BUT NO LATER THAN 180 DAYS AFTER THE ALLEGED DISCRIMINATION OCCURRED, OR IF THERE HAS BEEN A CONTINUING COURSE OF CONDUCT, NO LATER THAN 180 DAYS AFTER THE ALLEGED DISCRIMINATION WAS DISCONTINUED. CONTACT THE CIVIL RIGHTS COORDINATOR TO GET MORE INFORMATION ON THE IOWA DOT’S TITLE VI PROGRAM.

**RESOLUTION APPROVING A QUIT CLAIM DEED TO ESTABLISH CITY OWNERSHIP OF
A VACATED ALLEY IN THE 900 BLOCK OF SOUTH 11TH AVENUE**

WHEREAS, the City Council of the City of Marshalltown adopted Ordinance 10141 on August 3, 1961, which vacated an eight (8) foot alley to the west of Block Two (2), Sutton's Addition to the Town of Marshall; and

WHEREAS, the City Council held a public hearing and adopted resolution 1961-10159 Providing for the Sale and Conveyance by the City of Marshalltown, Iowa, to the Abutting Lot Owners of Their Respective Portions of the Vacated Alley West of Block Two (2), Sutton's Addition to the Town of Marshall on September 25, 1961; and

WHEREAS, Marshall County currently has no record of a Quit Claim Deed for the respective portion of the alley being recorded to the following properties:

- 903 South 11th Avenue
- 911 South 11th Avenue
- 913 South 11th Avenue
- 917 South 11th Avenue; and

WHEREAS, Marshall County has requested a quit claim deed to provide for the City's ability to own and dispose of the vacated alley; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARSHALLTOWN, IOWA, that the quit claim deed to the City of Marshalltown establishing ownership of the following described real estate in Marshall County, Iowa is hereby approved and the Mayor is authorized to execute the deed for:

THOSE PORTION OF THE EIGHT FOOT ALLEY WEST (W) OF BLOCK TWO (2)
SUTTON'S ADDITION TO THE TOWN OF MARSHALL, NOW THE CITY OF
MARSHALLTOWN, MARSHALL COUNTY, IOWA, AS VACATED BY CITY OF
MARSHALLTOWN ORDINANCE 10141, AND SITUATED WEST OF THE SOUTH 24.7
FEET OF LOT 2 AND WEST OF LOT 3, LOT 6, LOT 7, LOT 8, AND LOT 9, BLOCK TWO
(2) SUTTON'S ADDITION TO THE TOWN OF MARSHALL, NOW THE CITY OF
MARSHALLTOWN, MARSHALL COUNTY, IOWA.

Passed this 13th day of March 2023, and signed this ____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor Greer and the City Council
FROM: Jessica Kinser, City Administrator
DATE: March 8, 2023
RE: QCD for Alley in Sutton's Addition

Strategic Plan:

- ☐ Strategy 1: Expand and improve development in the community.
- ☐ Strategy 2: Enhance Marshalltown's public image.
- ☒ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☐ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective:

Recommendation: To approve the resolution as proposed

Budget Impact: None

Description/Background:

The City vacated and conveyed an alley behind the west properties in the 900 block of South 11th Avenue in 1961. However, as of today, there are four properties where the quit claim deeds were not recorded- 903, 911, 913, and 917 South 11th Avenue. This resolution is to give the City ownership of the vacated alley in order that we may undertake the process to complete the conveyances to the current property owners by Quit Claim Deed. The original ordinance and resolution is included in the Council packet.

CITY COUNCIL

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



Prepared By/Return to: Steven C. Leidinger of Lynch Dallas, P.C.,
526 Second Avenue SE, P.O. Box 2457, Cedar Rapids, IA 52406 Phone: (319) 365-9101
Taxpayer Information: City of Marshalltown, 24 N Center Street, Marshalltown, IA 50158

QUIT CLAIM DEED

For the consideration of One Dollar and other valuable consideration, the **CITY OF MARSHALLTOWN, IOWA**, an Iowa municipal corporation, hereby Quit Claims to the **CITY OF MARSHALLTOWN, IOWA**, all of its right, title, interest, estate, claim and demand in the following described real estate in Marshall County, Iowa:

THOSE PORTION OF THE EIGHT FOOT ALLEY WEST (W) OF BLOCK TWO (2) SUTTON'S ADDITION TO THE TOWN OF MARSHALL, NOW THE CITY OF MARSHALLTOWN, MARSHALL COUNTY, IOWA, AS VACATED BY CITY OF MARSHALLTOWN ORDINANCE 10141, AND SITUATED WEST OF THE SOUTH 24.7 FEET OF LOT 2 AND WEST OF LOT 3, LOT 6, LOT 7, LOT 8, AND LOT 9, BLOCK TWO (2) SUTTON'S ADDITION TO THE TOWN OF MARSHALL, NOW THE CITY OF MARSHALLTOWN, MARSHALL COUNTY, IOWA.

Subject nevertheless to all easements, covenants, conditions, and restrictions of record, including any and all utility easements.

This transfer is exempt from revenue stamps and Declaration of Value pursuant to Iowa Code §428A.2(19) this being a deed executed by public officials in the performance of their official duties.

There is no known private burial site, well, solid waste disposal site, underground storage tank, hazardous waste, or private sewage disposal system on the property as described in Iowa Code section 558.69, and therefore the transaction is exempt from the requirement to submit a groundwater hazard statement.

Words and phrases herein, including acknowledgment hereof, shall be construed as in the singular or plural number, and as masculine or feminine gender, according to the context.

Dated this ____ day of _____ 2023

CITY OF MARSHALLTOWN, IOWA,
an Iowa municipal corporation

By: _____ Attest: _____
Joel Greer, Mayor Alicia Hunter, City Clerk

STATE OF IOWA,
COUNTY OF MARSHALL, ss:

This instrument was acknowledged before me on the _____ day of _____ 2023, by **Joel Greer**, as Mayor for the City of Marshalltown, Iowa known to me to be the same individual named in and who executed the foregoing document and acknowledged that he executed the same as his voluntary act and deed on behalf of the City of Marshalltown.

Notary Public in and for said State

STATE OF IOWA,
COUNTY OF MARSHALL, ss:

This instrument was acknowledged before me on the _____ day of _____ 2023, by **Alicia Hunter**, as City Clerk for the City of Marshalltown, Iowa known to me to be the same individual named in and who executed the foregoing document and acknowledged that she executed the same as her voluntary act and deed on behalf of the City of Marshalltown.

Notary Public in and for said State

AN ORDINANCE TO VACATE ALLEY.

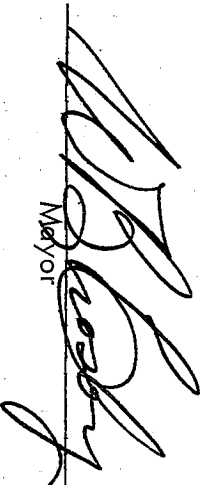
AN ORDINANCE TO VACATE EIGHT (8') FEET ALLEY EXTENDING
FROM THE SOUTH LINE OF EAST ANSON STREET TO THE NORTH LINE
OF EAST HIGH STREET AND DESCRIBED AS THE WEST EIGHT (8') FEET
OF SUTTON'S ADDITION TO MARSHALL.

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

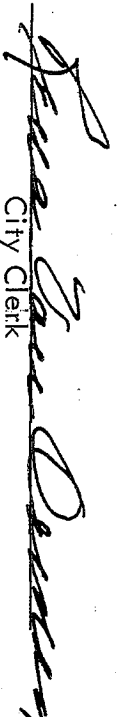
Section 1. That the west eight (W 8') feet of Sutton's Addition to Marshall extending from the south line of East Anson Street to the north line of East High Street be and the same is hereby vacated and the right of public user therein terminated.

Section 2. This ordinance shall be in full force and effect from and after its passage and publication as provided by law.

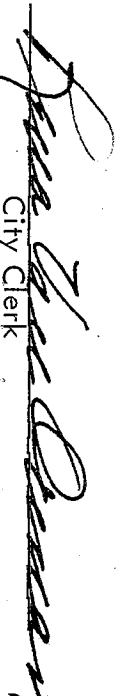
Signed this 3rd day of August, 1961.

me

Mayor

The above ordinance entitled "AN ORDINANCE TO VACATE EIGHT (8') FOOT ALLEY EXTENDING FROM THE SOUTH LINE OF EAST ANSON STREET TO THE NORTH LINE OF EAST HIGH STREET AND DESCRIBED AS THE WEST EIGHT (W 8') FEET OF SUTTON'S ADDITION TO MARSHALL" was authenticated this 3rd day of August, 1961.


City Clerk

I, Rena Van Orman, do hereby certify that the above ordinance entitled "AN ORDINANCE TO VACATE EIGHT (8') FOOT ALLEY EXTENDING FROM THE SOUTH LINE OF EAST ANSON STREET TO THE NORTH LINE OF EAST HIGH STREET AND DESCRIBED AS THE WEST EIGHT (W 8') FOOT OF SUTTON'S ADDITION TO MARSHALL" was duly passed by the Council on the 2nd day of August, 1961; signed by the Mayor on the 3rd day of August, 1961; authenticated by the Mayor and City Clerk on the 3d day of August, 1961; and published in the Times Republican on the 17 day of August, 1961.


City Clerk

10159
RESOLUTION ADOPTING TENTATIVE RESOLUTION PROVIDING FOR THE SALE AND CONVEYANCE BY THE CITY OF MARSHALLTOWN, IOWA, OF THE VACATED PORTION OF THE EIGHT (8') FOOT ALLEY EXTENDING FROM THE SOUTH LINE OF EAST ANSON STREET TO THE NORTH LINE OF EAST HIGH STREET AND DESCRIBED AS THE WEST EIGHT (W 8') FEET OF SUTTON'S ADDITION TO MARSHALL TO ABUTTING PROPERTY OWNERS.

WHEREAS, the Council of the City of Marshalltown, Iowa, did on August 28, 1961, place on file a tentative resolution whereby it proposed to sell, dispose of and convey the title of the City of Marshalltown, Iowa, to abutting property owners, hereinafter named, that portion of a vacated alley described in the caption of this resolution upon consideration of the payment of all costs of publication for vacating such alley and for the costs of the publication of notice of intent to sell and convey, together with the costs of recording the record of proceedings with reference to the vacation and sale of the same; and

WHEREAS, published notices, as required by law, of the intended conveyance by the City of Marshalltown, Iowa, of the real estate owned by it and described in the caption of this resolution, has all been duly published and no objection to the proposed conveyance has been filed in writing with the City Clerk and no objections thereto are made in open council meeting to the proposed conveyance for the consideration as is therein described and as heretofore set forth, and that this is the time and place provided for in said tentative resolution and in the published notices for this Council to take final action upon said tentative resolution.

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

Section 1. That the tentative resolution placed on file in the office of the Clerk of the City of Marshalltown, Iowa, on August 28, 1961, whereby it is proposed to sell, dispose of and convey the title of the City of Marshalltown, Iowa, in and to the vacated portion of the alley described as

The west eight (W 8') feet of Sutton's Addition to Marshall extending from the south line of East Anson Street to the north line of East High Street,

in consideration for the payment of all publication costs of vacating said alley and of the notice of the intent to sell and convey and for the recording of the Council proceedings with reference thereto to abutting property owners, be and the same is now finally approved and adopted.

Section 2. That the conveyance thereof shall be by Quit Claim Deed from the City of Marshalltown, Iowa, to the abutting property owners of the vacated portions of said alley as abuts the respective property subject to easement rights in the following portions:

1. To Albert J. and Bertha Siefken, the north seventy-three and four tenths (N 73.4') feet of vacated alley abutting Lot One (1) and the north twenty-five and five tenths (N 25.5') feet of Lot Two (2), Block Two (2), Sutton's Addition to Marshall.
2. To Carl E. and Ruth B. Hagstrand, the south seventy-four and seven tenths (S 74.7') feet of the north one hundred forty-eight and one tenth (N 148.1') feet of the vacated portion of alley abutting the south twenty-four and seven tenths (S 24.7') feet of Lot Two (2) and abutting Lot Three (3) in Block Two (2), Sutton's Addition to Marshall.
3. To James N. and Vera M. West, the south one hundred (S 100') feet of the north two hundred forty-eight and one tenth (N 248.1') feet of the vacated portion of alley abutting Lots Four and Five (4 and 5), Block Two (2), Sutton's Addition to Marshall.
4. To Mabel Verona Paxson, the south one hundred (S 100') feet of the north three hundred forty-eight and one tenth (N 348.1') feet of the vacated portion of alley abutting Lots Six and Seven (6 and 7), Block Two (2), Sutton's Addition to Marshall.
5. To I. E. and Mettie Robinett, the north one hundred (N 100') feet of the south two hundred fifty (S 250') feet of vacated portion of alley abutting Lots Eight and Nine (8 and 9), Block Two (2), Sutton's Addition to Marshall.
6. To Floyd D. and Pearl E. Poland, the north one hundred (N 100') feet of the south one hundred fifty (S 150') feet of vacated portion of alley abutting Lots Ten and Eleven (10 and 11), Block Two (2), Sutton's Addition to Marshall.
7. To Keith King and Doris Orpha Kerr, the south fifty (S 50') feet of vacated portion of alley abutting Lot Twelve (12), Block Two (2), Sutton's Addition to Marshall.

Section 3. That the Mayor and Clerk of the City of Marshalltown, Iowa, respectively, are authorized to execute the required Quit Claim Deeds for the conveyance of said portions of ground, as is described in the previous section of this resolution, and to the persons therein named and that when the consideration provided for herein has been paid to the City Clerk that said deeds shall then be delivered.

Passed and approved this 25 day of September, 1961.

Attest: *Sue Ann Carpenter*
Clerk, City of Marshalltown, Iowa.

W. B. Cook
Mayor, City of Marshalltown, Iowa

In Port
10137

CITY OF MARSHALLTOWN

COUNCIL RECORD NO. _____

DATE 7/25/61

APPLICATIONS)
COMMUNICATIONS)
PETITIONS)
REPORTS)
APPOINTMENTS)
REFUNDS)
BIDS)
RESOLUTIONS)
ORDINANCES)

OF _____

SUBJECT _____

REMARKS _____

Moved by Councilman _____

Seconded by Councilman _____

That _____

Be received ☐

Placed on file ☐

Referred to committee ☐

The Roll Call was as follows:

Vote was as follows:

YES

MEMBERS OF COUNCIL

NO

ABSENT

WM. BALTISBERGER

F. J. CROWTHER SR.

EMMOR EDSALL

ARNE GRUNDSTAD

VERA MACK

HOWARD MALONEY

RAYMOND RASMUSSEN

HARRY REESE

MAYOR

Motion carried _____

City Clerk

**RESOLUTION SETTING A PUBLIC HEARING FOR THE CONVEYANCE AND
TRANSFER OF TITLE TO A PORTION OF VACATED BUT UNCONVEYED ALLEY
IN THE 900 BLOCK OF SOUTH 11TH AVENUE TO ABUTTING PROPERTY OWNERS**

WHEREAS, the City Council of the City of Marshalltown adopted Ordinance 10141 on August 3, 1961, which vacated an eight (8) foot alley to the west of Block Two (2), Sutton's Addition to the Town of Marshall; and

WHEREAS, the City Council held a public hearing and adopted resolution 1961-10159 Providing for the Sale and Conveyance by the City of Marshalltown, Iowa, to the Abutting Lot Owners of Their Respective Portions of the Vacated Alley West of Block Two (2), Sutton's Addition to the Town of Marshall on September 25, 1961; and

WHEREAS, the quit claim deed transferring title of the portion of the vacated alley to 903 South 11th Avenue, 911 South 11th Avenue, 913 South 11th Avenue, and 917 South 11th Avenue appears to have not been recorded; and

WHEREAS, the above-referenced portions of the vacated but unconveyed alley have been utilized and maintained by the owners of these parcels and is not required for any public purpose and no rights of private persons will be adversely affected by the proposed conveyance; and

WHEREAS, this portion of the vacated but unconveyed alley is not presently attributed ownership in the County system and is not identified by the County as a taxable parcel; and

WHEREAS, the City Council of the City of Marshalltown, Iowa, proposes to convey and transfer by Quit Claim Deed to the current record owner of 903 South 11th Avenue, 911 South 11th Avenue, 913 South 11th Avenue, and 917 South 11th Avenue, for the sum of \$1.00 and other good and valuable consideration, title to the following described portion of vacated but unconveyed alley in the City of Marshalltown, Marshall County, Iowa, for the purpose of effectuating the intent of Resolution 1961-10159:

THOSE PORTION OF THE EIGHT FOOT ALLEY WEST (W) OF BLOCK TWO (2) SUTTON'S ADDITION TO THE TOWN OF MARSHALL, NOW THE CITY OF MARSHALLTOWN, MARSHALL COUNTY, IOWA, AS VACATED BY CITY OF MARSHALLTOWN ORDINANCE 10141, AND SITUATED WEST OF THE SOUTH 24.7 FEET OF LOT 2 AND WEST OF LOT 3, LOT 6, LOT 7, LOT 8, AND LOT 9, BLOCK TWO (2) SUTTON'S ADDITION TO THE TOWN OF MARSHALL, NOW THE CITY OF MARSHALLTOWN, MARSHALL COUNTY, IOWA; and

WHEREAS, the City of Marshalltown hereby proposes that the transfer of said portion of vacated but unconveyed alley shall be subject to easements for any installed utilities and all easements of record.

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

Section 1. The City Clerk shall cause to be published the notice required by law, by publication once in the Marshalltown Times-Republican, a newspaper having general circulation in the City of Marshalltown, Iowa, the publication to be not less than four (4) days nor more than twenty (20) days prior to the date hereinafter fixed in the City Hall, 10 W State Street, Marshalltown, Iowa, on March 27, 2023, 5:30 pm to consider any and all comments filed with the City Clerk or made in open Council to the proposal for conveyance as herein contained and to take final action thereon.

Passed this 13th day of March 2023, and signed this _____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

**RESOLUTION ACCEPTING BID AND AUTHORIZING THE PURCHASE OF TWO
2023 CHEVROLET TAHOE POLICE PACKAGE VEHICLES FROM KARL
CHEVROLET FOR THE PRICE OF \$120,375.94 FOR USE IN THE POLICE
DEPARTMENT AS EMERGENCY RESPONSE VEHICLES AND DECLARING
CERTAIN PROPERTY SURPLUS PROPERTY AND AUTHORIZING SALE AND
DISPOSAL THEREOF TO KARL CHEVROLET TWO 2017 FORD INTERCEPTOR
POLICE PACKAGE VEHICLES FOR \$11,000.00**

WHEREAS, the City of Marshalltown (hereinafter referred to as the “City”), State of Iowa, is a political subdivision organized and existing under the law and the Constitution of the State of Iowa (the “State”); and

WHEREAS, the City desires to procure two, 2023 Chevrolet Tahoe police package vehicles to be utilized by the police department as emergency response vehicles and sought quotes for this purpose; and

WHEREAS, Karl Chevrolet of Cedar Rapids, Iowa submitted a bid for this police vehicle purchase for a total purchase price of \$120,375.94 and offered to credit the City \$11,000.00 in total trade value on two, 2017 Ford Interceptor police package vehicles that are being retired from the police department fleet. Less trade value on the two retired vehicles, the purchase price of the two, new 2023 Chevrolet Tahoe police package vehicles is \$109,375.94; and

WHEREAS, the City is the sole owner of two, 2017 Ford Interceptor police package vehicles which are to be declared surplus property and disposed of or sold to raise additional revenue and prevent the further decline in value thereof prior to sale; and

WHEREAS, the acceptance of this bid and disposal of surplus property is in the best interest of the City.

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

Section 1. The City accepts the bid from Karl Chevrolet for the purchase of two, 2023 Chevrolet Tahoe police package vehicles to be used as a police response vehicle for \$120,375.94. Less trade value of the surplus property (\$11,000.00), the purchase price of the two, new 2023 Chevrolet Tahoe police package vehicles decreases to \$109,375.94.

Section 2. The property listed below is hereby declared as surplus property:

1. 2017 Ford Interceptor, VIN: 1FM5K8AR9HGD57655
2. 2017 Ford Interceptor, VIN: 1FM5K8AR2HGA37223

Section 3. The surplus property the subject of this resolution shall be sold or disposed of in accordance with applicable Federal, State and City guidelines.

Section 4. The Chief of Police of the City is hereby authorized to enter into agreements on behalf of the City to purchase said vehicles at the above referenced price and conditions.

Passed this 13th day of March 2023, and signed this _____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk



Joel Greer, Mayor
Jessica Kinser, City Administrator
Michael W. Tupper, Chief of Police
909 South 2nd Street
Marshalltown, IA 50158-4911
Tel - (641) 754-5725
Fax - (641) 752-1211

TO: Chief Tupper

FROM: Captain Stevenson

DATE: March 2, 2023

RE: Marshalltown Police Department Vehicle Purchase FY 22-23

Recommendation: The Marshalltown Police Department should approve the purchase of two 2023 Chevrolet Tahoe vehicles from Karl Chevrolet. This purchase should include the trade of two 2017 Ford Interceptor SUV police package vehicles.

Background: I have evaluated our current vehicle fleet and determined that two 2017 Ford Interceptor SUVs should be replaced. I elicited input from department supervisors, specifically Sergeant Tuttle, who is in charge of fleet maintenance. The two vehicles selected for replacement are (505) a 2017 Ford Interceptor (VIN-1FM5K8AR9HGD57655) with 98,000 miles and (521) a 2017 Ford Interceptor (VIN-1FM5K8AR2HGA37223) with 97,000 miles.

The Marshalltown Police Department purchased one Ford F150 vehicle during this fiscal year. The Ford F150 was purchased to replace a K9 Unit vehicle. The Marshalltown Police Department entered into an agreement with Jensen Ford to purchase an additional Ford Interceptor SUV for general patrol use. After this order was placed, the department was notified that Jensen would be unable to fulfil the order because of supply chain issues being experienced by Ford.

The department then entered an agreement with Stiver's Ford to purchase a Ford Interceptor SUV. Stiver's Ford indicated a tentative delivery date of December, 2022. As of this date, Stiver's Ford has been unable to fulfil this order because of supply chain issues being experienced by Ford.

It has now been eight months since this vehicle purchase was approved. During that time, the department has been operating with two vehicles out of service, awaiting trade. This has caused additional mileage and use on the vehicles currently in service. This has also caused vehicle shortages during extra duty assignments.

Since neither dealership has been able to fulfil our order, I began looking for alternative options to maintain our vehicle fleet. Karl Chevrolet has agreed to sell two Chevrolet Tahoe 4x4 vehicles to the department. They have also agreed to take the two 2017 Ford Interceptor vehicles as a trade. This purchase would include upfitting the vehicles with equipment. Existing equipment will be used to the

CITY COUNCIL

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

extent possible, but there will be additional equipment expense to fully upfit one of those vehicles. Equipment will be purchased from BDH Technologies and vinyl lettering will be completed through S&S Auto.

The following chart shows a summary of the expenses:

Marshalltown Police Department- Vehicle Purchases FY 22-23		
New Vehicle Estimate		
<u>Vendor</u>	<u>Item</u>	<u>Price</u>
Karl Chevrolet	2023 Chevy Tahoe PPV 4x4	\$40,382.00
	Emergency Vehicle Upfit	\$19,805.97
	2023 Chevy Tahoe PPV 4x4	\$40,382.00
	Emergency Vehicle Upfit	\$19,805.97
	Subtotal	\$120,375.94
	Trade (2) 2017 Ford Interceptor	\$11,000.00
	Karl Chevrolet Total	\$109,375.94
BDH	Computer & Modem	\$4,957.73
	BDH Total	\$4,957.73
S&S Auto	Police Vinyl Wrap	\$2,500.00
	Grand Total	\$116,833.67

It should be noted that the department currently has \$61,759.45 remaining in the vehicle fund. The recommended purchase would exceed the amount budgeted for vehicle purchases this fiscal year. I make this recommendation because I fear that acquiring vehicles will continue to be a problem in the coming years. Adding two additional vehicles will help reduce the amount of time each vehicle is being operated. This will reduce maintenance costs and reduce how often the department is short vehicles when they are being repaired or serviced.

MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor Joel Greer, City Council & City Administrator Jessica Kinser
FROM: Michael W. Tupper, Chief of Police
DATE: 8 March 2023
RE: Police Department Vehicle Purchase FY23

Strategic Plan:

- ☐ Strategy 1: Expand and improve development in the community.
- ☐ Strategy 2: Enhance Marshalltown's public image.
- ☒ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☐ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective: City policy requires governing body approval of all vehicle purchases. This vehicle purchase will enhance city services provided by the police department by supplying staff with safe vehicles for patrol operations.

Recommendation: Staff recommends approving the purchase of two 2023 Chevrolet Tahoe SUV police package vehicles from Karl Chevrolet (Cedar Rapids, Iowa). These vehicles will be utilized in the police department's uniform patrol division as marked police vehicles.

As part of this purchase, staff recommends approval of trading two, 2017 Ford Interceptor SUV police package vehicles to Karl Chevrolet to offset costs of purchasing the 2023 Chevrolet Tahoe vehicles. Both of the 2017 Ford Interceptors are currently owned by the City of Marshalltown and they are being retired from police department fleet due to increasing maintenance and mileage concerns. These vehicles should be declared surplus property as part of this vehicle purchase recommendation.

Budget Impact: The CIP budget for FY23 has sufficient funds for this vehicle purchase.

Description/Background: MPD staff will be present at the March 13, 2023 meeting of the Marshalltown City Council to answer questions regarding this vehicle purchase. See memo from Captain Kiel Stevenson for additional background information.

CITY COUNCIL

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





March 8, 2023

Via Email

Jessica Kinser
City Administrator/City Hall
Marshalltown, IA

Re: Development Agreement (Betty's Properties, LLC)
Our File No. 422742-52

Dear Jessica:

Attached please find proceedings to enable the City Council to act on March 13th to set March 27th as the date for a public hearing on the proposed Development Agreement with Betty's Properties, LLC.

The notice of public hearing on the Agreement must be published once, not less than four (4) and not more than twenty (20) days prior to the City Council meeting at which the hearing will be held. The last date on which the notice can be effectively published is March 23, 2023. Please print an extra copy of the notice for delivery to the newspaper. Please insert the time and place of the hearing in both the resolution, and please email a copy of the published notice to lemke.susan@dorsey.com.

We will prepare and forward to you in time for the March 27th meeting the necessary proceedings to approve the Agreement.

We would appreciate receiving one fully executed copy of these proceedings as soon as they are available.

Please contact John Danos, Severie Orngard, or me if you have questions.

Kind regards,

Amy Bjork

Attachments

cc: Diana Steiner
Alicia Hunter

SET DATE FOR HEARING ON
DEVELOPMENT AGREEMENT AND
TAX INCREMENT PAYMENTS

(Betty's Properties, LLC)

422742-52

Marshalltown, Iowa

March 13, 2023

The City Council of the City of Marshalltown, Iowa, met on March 13, 2023, at 5:30 p.m., at the City Council Chambers, 10 West State Street, in the City, pursuant to the rules of the Council.

The Mayor presided and the roll was called, showing members present and absent as follows:

Present: _____

Absent: _____.

City Clerk Alicia Hunter introduced the resolution next hereinafter set out and Council Member _____ moved its adoption, seconded by Council Member _____; and after due consideration thereof by the City Council, the Mayor put the question upon the adoption of said resolution, and the roll being called, the following named Council Members voted:

Ayes: _____

Nays: _____.

Whereupon, the Mayor declared said resolution duly adopted, as follows:

RESOLUTION NO. 2023-049

Resolution Setting a Date of Meeting at Which it is Proposed to Approve a Development Agreement with Betty's Properties, LLC, Including Annual Appropriation Tax Increment Payments

WHEREAS, the City of Marshalltown, Iowa (the "City"), pursuant to and in strict compliance with all laws applicable to the City, and in particular the provisions of Chapter 403 of the Code of Iowa, has adopted an Urban Renewal Plan for the Marshalltown Urban Renewal Area No. 4 (the "Urban Renewal Area"); and

WHEREAS, this City Council has adopted an ordinance providing for the division of taxes levied on taxable property in the Urban Renewal Area pursuant to Section 403.19 of the Code of Iowa and establishing the fund referred to in Subsection 2 of Section 403.19 of the Code of Iowa, which fund and the portion of taxes referred to in that subsection may be irrevocably pledged by the City for the payment of the principal of and interest on indebtedness incurred under the authority of Section 403.9 of the Code of Iowa to finance or refinance in whole or in part projects in the Urban Renewal Area; and

WHEREAS, the City proposes to enter into a certain development agreement (the "Development Agreement") with Betty's Properties, LLC ("the Developer") in connection with the construction of a commercial building for use in the business operations of a pharmacy; and

WHEREAS, under the Development Agreement the City would provide financial incentives to the Developer in the form of economic development incremental property tax payments in an amount not to exceed \$160,000 under the authority of Section 403.9(1) of the Code of Iowa; and

WHEREAS, it is necessary to set a date for a public hearing on the Development Agreement, pursuant to Section 403.9 of the Code of Iowa;

NOW THEREFORE, It Is Resolved by the City Council of the City of Marshalltown, Iowa, as follows:

Section 1. This City Council shall meet on March 27, 2023, at 5:30 p.m., at the City Council Chambers, 10 West State Street, in the City, at which time and place proceedings will be instituted and action taken to approve the Development Agreement and to authorize the annual appropriation incremental property tax payments.

Section 2. The City Clerk is hereby directed to give notice of the proposed action, the time when and place where said meeting will be held, by publication at least once not less than four (4) and not more than twenty (20) days before the date of said meeting in a legal newspaper of general circulation in the City. Said notice shall be in substantially the following form:

NOTICE OF MEETING FOR APPROVAL OF DEVELOPMENT
AGREEMENT WITH BETTY'S PROPERTIES, LLC AND AUTHORIZATION
OF ANNUAL APPROPRIATION TAX INCREMENT PAYMENTS

The City Council of the City of Marshalltown, Iowa (the "City"), will meet at the City Council Chambers, 10 West State Street, Marshalltown, on March 27, 2023, at 5:30 p.m., at which time and place proceedings will be instituted and action taken to approve a Development Agreement (the "Agreement") between the City and Betty's Properties, LLC ("the Developer") in connection with the construction of a commercial building for use in the operations of a pharmacy in the Marshalltown Urban Renewal Area No. 4 (the "Urban Renewal Area"). The Agreement provides for certain financial incentives in the form of economic development incremental property tax payments to the Developer in a total amount not exceeding \$160,000 as authorized by Section 403.9 of the Code of Iowa.

The commitment by the City to make incremental property tax payments to the Developer under the Agreement will not be a general obligation of the City, but such payments will be payable solely and only from incremental property tax revenues generated within the Urban Renewal Area. Some or all of the payments under the Agreement may be subject to annual appropriation by the City Council.

At the meeting, the City Council will receive oral or written objections from any resident or property owner of the City. Thereafter, the City Council may, at the meeting or at an adjournment thereof, take additional action to approve the Agreement or may abandon the proposal.

This notice is given by order of the City Council of Marshalltown, Iowa, in accordance with Section 403.9 of the Code of Iowa.

Alicia Hunter
City Clerk

Section 3. All resolutions or parts of resolutions in conflict herewith are hereby repealed.

Section 4. This resolution shall be in full force and effect immediately upon its adoption and approval, as provided by law.

Passed and approved March 13, 2023.

Mayor

Attest:

City Clerk

• • • •

On motion and vote the meeting adjourned.

Mayor

Attest:

City Clerk

STATE OF IOWA
MARSHALL COUNTY SS:
CITY OF MARSHALLTOWN

I, the undersigned, City Clerk of the City of Marshalltown, Iowa hereby certify that the foregoing is a true and correct copy of the minutes of the Council of the City relating to the adoption of a resolution to fix a date of meeting at which it is proposed to take action to approve a Development Agreement.

I do further certify that the notice of hearing, to which the printed slip attached to the publisher's original affidavit hereto attached is a true and complete copy, was published on the date and in the newspaper specified in such affidavit, which newspaper has a general circulation in the City.

WITNESS MY HAND this ____ day of _____, 2023.

City Clerk

(Attach here the publisher's original affidavit with clipping of the notice as published.)

(PLEASE NOTE: Do not sign and date this certificate until you have checked a copy of the published notice and have verified that it was published on the date indicated in the publisher's affidavit.)

DEVELOPMENT AGREEMENT

This Agreement is entered into between the City of Marshalltown, Iowa (the “City”) and Betty’s Properties, LLC (the “Company”) as of the ____ day of _____, 2023 (the “Commencement Date”).

WHEREAS, the City has established the Marshalltown Urban Renewal Area No. 4 (the “Urban Renewal Area”), and has adopted a tax increment ordinance for the Urban Renewal Area; and

WHEREAS, the Company owns certain real property which is situated in the City, lies within the Urban Renewal Area and is more specifically described on Exhibit A hereto (the “Property”); and

WHEREAS, the Company has proposed to undertake the construction of a new commercial building on the Property (the “Project”) for use in the business operations of a pharmacy; and

WHEREAS, the Company has requested that the City provide financial assistance in the form of incremental property tax payments to be used by the Company in defraying the costs of constructing and maintaining the Project; and

WHEREAS, Chapter 403 of the Code of Iowa authorizes cities to establish urban renewal areas and to undertake economic development; and

WHEREAS, Chapter 15A of the Code of Iowa authorizes cities to provide grants, loans, guarantees, tax incentives and other financial assistance to or for the benefit of private persons; and

NOW, THEREFORE, in consideration of the mutual obligations contained in this Agreement, the parties hereto agree as follows:

A. Company’s Covenants

1. Project Construction. The Company agrees to construct the Project on the Property. Furthermore, the Company agrees to invest not less than \$815,000 into capital improvement for the Projects, including construction work and other furnishings. The Company agrees to submit a detailed site plan (the “Site Plan”) for the development of the Project to the City. Upon its approval by the City, the Site Plan shall be attached hereto as Exhibit B.. The Company agrees to complete the Project by no later than December 31, 2023.

The Company agrees to ensure that the completed Project is used in the business operations of a pharmacy throughout the Term (as hereinafter defined) of this agreement (the “Business Operations Requirement”).

Further, the Company agrees to maintain, preserve, and keep the Property, including but not limited to the Project, useful and in good repair and working order, ordinary wear and tear excepted, and from time to time will make all necessary repairs, replacements, renewals, and additions. The Company further agrees to maintain compliance with local zoning, land use, building and safety codes and regulations

2. Employment Requirements. The Company agrees to meet the following employment requirements (the “Employment Requirements”) during the Term, as hereinafter defined, of this Agreement.

a. Establishment of Employment Positions. The Company agrees to establish not less than one and a half (1.5) full-time equivalent pharmacist employment positions and two (2) **[part-time][full-time]** equivalent pharmacy technician employment positions in connection with its business operations on the Property by no later than March 1, 2024.

Full-Time Equivalent Employment Positions means either (i) an employee who works at least 40 hours per week or 2,000 hours per year; or (ii) any combination of employees who, in the aggregate, work at least forty hours per week at least 2,000 hours per year.

b. Maintenance of Employment Positions. From March 1, 2024, and continuing throughout the remainder of the Term of this Agreement, the Company agrees to comply with the Employment Requirements in connection with its business operations on the Property.

3. Company’s Annual Report. The Company agrees to submit an annual report (the “Annual Report”) to the satisfaction of the City by no later than each October 1 during the Term of this Agreement, commencing October 1, 2024, demonstrating that (i) the Business Operations Requirement is being met; (ii) the Company owns the Property, including the Project; and (iii) the Employment Requirements are being met. The Company agrees to provide such supporting documentation as may be requested by the City as an accompaniment to the Annual Report.

4. Property Taxes. The Company agrees to ensure timely payment of all property taxes as they come due with respect to the Property with the completed Project thereon throughout the Term (as hereinafter defined) and to submit receipts, cancelled checks or certification based on public records as evidence of each such payment.

5. Default Provisions.

a. Events of Default. The following shall be “Events of Default” under this Agreement, and the term “Event of Default” shall mean, whenever it is used in this Agreement (unless otherwise provided), any one or more of the following events:

- (i) Failure by the Company to complete construction of the Project pursuant to the terms and conditions of this Agreement.
- (ii) Failure by the Company to maintain compliance with the Business Operations Requirement pursuant to the terms and conditions of this Agreement.

- (iii) Failure by the Company to maintain compliance with the Employment Requirements pursuant to the terms and conditions of this Agreement.
- (iv) Failure by the Company to maintain compliance with Section A.3 of this Agreement.
- (v) Failure by the Company to fully and timely remit payment of property taxes when due and owing.
- (vi) Failure by the Company to comply with any other material Sections of this Agreement.

Whenever any Event of Default described in this Agreement occurs, the City shall provide written notice to the Company describing the cause of the default and the steps that must be taken by the Company in order to cure the default. The Company shall have thirty (30) days after receipt of the notice to cure the default or to provide assurances satisfactory to City that the default will be cured as soon as reasonably possible. If the Company fails to cure the default or provide assurances, the City shall then have the right to:

- (i) Pursue any action available to it, at law or in equity, in order to enforce the terms of this Agreement.
- (ii) Withhold the Payments provided for under Section B.1 below.

B. City's Covenants

1. Payments. In recognition of the Company's obligations set out above, the City agrees to make twenty (20) annual economic development tax increment payments (the "Payments" and, individually each, a "Payment") to the Company during the Term of this Agreement, pursuant to Chapters 15A and 403 of the Code of Iowa, provided however that the aggregate, total amount of the Payments to be made in any fiscal year during the Term shall not exceed \$16,000. Further, the aggregate, total amount (the "Maximum Payment Total") of the Payments made under this Agreement during the Term (as hereinafter defined) shall not exceed \$160,000. All Payments under this Agreement shall be subject to annual appropriation by the City Council, as provided hereunder.

The Payments shall not constitute general obligations of the City, but shall be made solely and only from the unencumbered Incremental Property Tax Revenues (as hereinafter defined) received by the City from the Marshall County Treasurer which are attributable to the Urban Renewal Area. Incremental Property Tax Revenues are determined by: (1) determining the consolidated property tax levy (city, county, school, etc.) then in effect with respect to taxation of the property in the Urban Renewal Area; (2) subtracting (a) the debt service levies of all taxing jurisdictions, (b) the school district instructional support and physical plant and equipment levies and (c) any other levies which may be exempted from such calculation by action of the Iowa General Assembly; (3) multiplying the resulting modified consolidated levy rate times any incremental growth in the taxable valuation of the property situated in the Urban Renewal Area, as shown on the property tax rolls of Marshall County; and (4) deducting any property tax credits which shall be available with respect to the Property.

The Payments will be made on December 1 and June 1 of each fiscal year, beginning on December 1, 20[24], and continuing through and including June 1, 2034, or until such earlier date upon which total Payments equal to the Maximum Payment Total have been made.

2. Annual Appropriation. The Payments shall be subject to annual appropriation by the City Council. Prior to December 1 of each year during the Term of this Agreement, beginning December 1, 20[23], the City Council of the City shall consider the question of obligating for appropriation to the funding of the Payments due in the following fiscal year an amount of Incremental Property Tax Revenues to be collected in such following fiscal year equal to or less than \$16,000 (the “Appropriated Amount”).

In any given fiscal year, if the City Council determines to not obligate the then-considered Appropriated Amount, then the City will be under no obligation to fund the Payments scheduled to become due in the following fiscal year, and the Company will have no rights whatsoever to compel the City to make such Payments, to seek damages relative thereto, or to compel the funding of such Payments in future fiscal years. A determination by the City Council to not obligate funds for any particular fiscal year’s Payments shall not render this Agreement null and void, provided however that no Payment shall be made after June 1, 2034.

3. Payment Amounts. The aggregate Payments to be made in a fiscal year shall not exceed an amount equal to the corresponding Appropriated Amount (for example, for the Payments due on December 1, 20[24] and on June 1, 20[25], the aggregate maximum amount of such Payments would be determined by the Appropriated Amount determined for certification by December 1, 2023).

In addition, no Payment shall exceed the amount of unencumbered Incremental Property Tax Revenues (excluding allocations of “back-fill” or “make-up” payments from the State of Iowa for property tax credits or roll-back) received by the City from the Marshall County Treasurer attributable to the taxable valuation of the property situated in the Urban Renewal Area.

4. Certification of Payment Obligation. In any given fiscal year, if the City Council determines to obligate the then-considered Appropriated Amount, as set forth in Section B.2 above, then the City Clerk will certify by December 1 of each such year to the Marshall County Auditor an amount equal to the most recently obligated Appropriated Amount.

C. Administrative Provisions

1. Amendment and Assignment. This Agreement may not be amended or assigned by either party without the prior written consent of the other party. However, the City hereby gives its permission that the Company’s rights to receive the Payments hereunder may be assigned by the Company to a private lender, as security on a borrowing to be done in connection with the carrying out of the Project, without further action on the part of the City.

2. Succession. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of the parties.

3. Choice of Law. This Agreement shall be deemed to be a contract made under the laws of the State of Iowa and for all purposes shall be governed by and construed in accordance with laws of the State of Iowa.

4 Term. The term (the “Term”) of this Agreement shall commence on the Commencement Date and end on the date on which the last Payment is made by the City to the Company under Section B.1 above.

The City and the Company have caused this Agreement to be signed in their names and on their behalf by their duly authorized officers, all as of the day and date written above.

CITY OF MARSHALLTOWN, IOWA

By _____
Mayor

Attest:

City Clerk

BETTY'S PROPERTIES, LLC

By: _____
Its: _____

EXHIBIT A – REAL PROPERTY DESCRIPTION:

Certain real property situated in the City of Marshalltown, Marshall County, State of Iowa bearing Marshall County Property Tax Parcel Identification Numbers 8418-26-379-010, 8418-26-379-011 and 8418-26-379-009.

EXHIBIT B – SITE PLAN:

MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor Greer and the City Council
FROM: Jessica Kinser, City Administrator
DATE: March 9, 2023
RE: Development Agreement- Betty's Properties LLC

Strategic Plan:

- ☒ Strategy 1: Expand and improve development in the community.
- ☐ Strategy 2: Enhance Marshalltown's public image.
- ☐ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☐ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective: Invest in Downtown Redevelopment

Recommendation: To approve the resolution as proposed

Budget Impact: \$16,000/year of incremental taxes from Urban Renewal Area #4 for a period of 10 years or \$160,000 total impact

Description/Background:

211 West Main Street was the home of a dental office, which was demolished in 2018 just prior to the tornado. The land has now been purchased and a building permit issued in October for the construction of a new pharmacy. A last-minute issue with the appraisal put the project on hold, but the process to provide \$160,000 of incremental taxes over 10 years is underway. At the February 27th meeting, the City Council set the public hearing on the Urban Renewal Plan amendment to add the project. This resolution is to set a public hearing on the actual development agreement; both public hearings will occur on the March 27th agenda.

Part of this request is to also designate the final \$50,000 new construction grant for Downtown to this project, as it fits all the criteria for the funds. As a reminder, this incentive was created in 2019 by setting aside \$250,000 of Council-designated LOST to help incentivize new construction opportunities. Previous awards include Thompson True Value, Supermarket Villachuato, Marshalltown Lofts, and the Hopkins Building (elevator).

CITY COUNCIL

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



**RESOLUTION SETTING A PUBLIC HEARING FOR THE PROPOSED VACATION
OF THE EAST-WEST ALLEY NORTH OF 328 SOUTH 3RD AVENUE**

WHEREAS, the City of Marshalltown, Iowa, is the owner of a public right-of-way legally described as follows:

All that part of the East-West alley lying between Lots 6 & 7 in Block 2 of Anson's 2nd Addition to Marshall, Marshall County, Iowa; and

WHEREAS, the above-referenced alley is not required for any public purpose and no rights of private persons will be adversely affected by the proposed vacation; and

WHEREAS, upon vacation of this alley, it will be combined with parcel 8418-35-276-025 known locally as 328 S 3rd Avenue;

WHEREAS, the City of Marshalltown hereby proposes that the transfer of said portion of vacated alley shall be subject to easements for any installed utilities and all easements of record.

WHEREAS, the City Council of the City of Marshalltown, Iowa, find this vacation is 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. The City Clerk shall cause to be published the notice required by law, by publication once in the Marshalltown Times-Republican, a newspaper having general circulation in the City of Marshalltown, Iowa, the publication to be not less than four (4) days nor more than twenty (20) days prior to the date hereinafter fixed in the City Hall, 10 W State Street, Marshalltown, Iowa, on March 27, 2023, 5:30 pm to consider any and all comments filed with the City Clerk or made in open Council to the proposal for conveyance as herein contained and to take final action thereon.

Passed this 13th day of March 2023, and signed this _____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

**RESOLUTION ACCEPTING THE DESTINATION IOWA GRANT OF \$2 MILLION
FOR CREATIVE PLACEMAKING PROJECTS**

WHEREAS, the State of Iowa has created the Destination Iowa program to provide grants to projects which enhance tourism opportunities in Iowa, including a \$20 million set-aside for Creative Placemaking projects which focus on a specific area; and

WHEREAS, the City of Marshalltown applied for funding under the Creative Placemaking allocation in an amount of \$2,156,135 for four projects, including the following:

- Trail Bridge across Linn Creek
- Iowa River's Edge Trail Head
- Water Plaza
- Martha-Ellen Tye Theater Renovation, Phase 1; and

WHEREAS, the State of Iowa has awarded Marshalltown \$2 million for the four projects as part of the Destination Iowa program.

NOW, THEREFORE, BE IT RESOLVED BY CITY COUNCIL OF THE CITY OF MARSHALLTOWN, the Mayor is hereby directed to execute any contracts or other documents necessary to accept the \$2 million Destination Iowa Creative Placemaking grant.

Passed this 13th day of March 2023, and signed this _____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor Greer and the City Council
FROM: Jessica Kinser, City Administrator
DATE: March 10, 2023
RE: Destination Iowa Funding

Strategic Plan:

- ☐ Strategy 1: Expand and improve development in the community.
- ☒ Strategy 2: Enhance Marshalltown's public image.
- ☐ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☒ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective: Strategy 2: Identify creative placemaking opportunities in City projects; Identify public projects where aesthetics can be enhanced through functional improvements

Strategy 4: Partner with Trails Inc. for the building of the River's Edge Trail; Utilize the Arts & Culture Master Plan to partner with the Arts & Culture Alliance on projects and initiatives

Recommendation: To approve the resolution as proposed

Budget Impact: \$2 million grant

Description/Background:

The City applied for the Destination Iowa funding for the four projects noted in the resolution in late September, which had some fast moving timelines for the 4 projects noted. The next step will include receiving a contract from the State of Iowa for the funding, which has some fairly tight timelines, as these are ARPA funds. The resolution before you is to allow the Mayor to execute this contract when negotiated. The projects will not change, and we still need to figure out how the slightly lower allocation will work amongst the 4 projects, but we have an interest in getting additional time to complete the projects.

When the contract for the funding moves forward, we will bring forward contracts with Bolton & Menk for the planning and design of the City projects as well as a subrecipient agreement with the Fisher Governor Foundation for the Martha-Ellen Tye Theater project.

The following is the funding detail that was included in the grant application. We will be revisiting these numbers in the coming weeks, as we know the Water Plaza amount is larger and we know the Martha-Ellen Tye Playhouse is reduced.

CITY COUNCIL

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



Proposed Projects	Total Cost
<i>Signature Project(s)</i>	
Martha-Ellen Tye Playhouse	\$2,113,355
River's Edge Trailhead	\$1,263,390
Linn Creek Trail Bridge	\$1,108,350
Community Water Plaza	\$997,633
Total Signature Projects	\$5,482,728
<i>Supporting Project(s)</i>	
Creeside Estates	\$9,318,750
MEMBERS1st Credit Union	\$7,135,600
Total Cumulative Proposal	\$21,937,078

CITY COUNCIL

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



Office of the Governor of Iowa

Kim Reynolds

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DES MOINES -- Today, Gov. Kim Reynolds and the Iowa Economic Development Authority (IEDA) announced \$26.88 million in grant funding through the final round of Destination Iowa, a \$100 million investment in quality of life and tourism attractions. In recognition of the high interest in the program, Gov. Reynolds also announced an additional investment of \$15 million to fund Destination Iowa applications from rural communities that did not receive grants in previous rounds.

In all, Destination Iowa awards were granted to 46 projects totaling \$115 million that activated \$480,265,783 in total investment.

“Destination Iowa has inspired communities in all corners of the state to dream big about projects that will bolster quality of life and attract newcomers,” Gov.

Reynolds said. “The demand is so high, especially in rural areas, that I’ve extended the program to help more rural communities realize those dreams.”

IEDA opened the Destination Iowa program in May 2022 and accepted applications through December 31. Applications were scored based on eligibility, completeness, and the project’s ability to meet the program goal of creating transformational tourism attractions. Destination Iowa grants have been open to cities, counties, nonprofits and other organizations through four separate funds: Economically Significant Development, Outdoor Recreation, Tourism Attraction, and Creative Placemaking.

The seventh round of Destination Iowa funded the following 10 projects. For the additional \$15 million, IEDA reviewed applications already submitted by rural communities, defined as 30,000 residents or fewer that are not adjacent to communities of 30,000 or more residents.

Final awards made from the original \$100 million allocation:

The **Dubuque Art Museum** was awarded \$8,000,000 toward the construction of a new museum and a 10,000-square-foot outdoor sculpture garden. The award represents 20% of the total project investment of \$39,931,512.

The **Dickinson County Conservation Board** was awarded \$3,500,000 to develop the new Sherwood Forest Park on the former site of The Inn at Okoboji resort. The award represents 35% of the total project investment of \$10,013,197.

The **Blank Park Zoo** in Des Moines was awarded \$3,280,000 for major upgrades including a new Big Cat Conservation exhibit and an expanded seal and sea lion facility. The award represents 18% of the total project investment of \$18,000,000.

The **City of Cedar Rapids** was awarded \$3,000,000 toward the LightLine Loop project in the Czech Village and NewBo District. The award represents 16% of the

total project investment of \$19,255,775.

The **City of Dubuque** was awarded \$3,000,000 for the addition of an open-air amphitheater on Schmitt Island. The award represents 19% of the total project investment of \$15,442,961.

The **City of Marshalltown** was awarded \$2,000,000 for the Linn Creek District development and creative placemaking efforts. The award represents 32% of the total project investment of \$6,251,115.

Story County Conservation was awarded \$1,500,000 to pave a portion of the Heart of Iowa Nature Trail east of Ames, connecting to Nevada and Maxwell. This award represents 31% of the total project investment of \$4,819,000.

The **India Heritage & Cultural Center** was awarded \$900,000 toward expanding the Hindu Temple and Cultural Center near Madrid. The award represents 23% of the total project investment of \$3,976,023.

The **Putnam Museum and Science Center** in Davenport was awarded \$900,000 toward an expansion project. The award represents 23% of the total project investment of \$3,965,449.

The **African American Museum of Iowa** in Cedar Rapids was awarded \$800,000 toward major renovations at the museum and the reinstallation of the Dr. Martin Luther King, Jr.-inspired “Trumpet” sculpture and garden. The award represents 17% of the total project investment of \$4,827,339.

Awards made from the additional \$15 million:

The **Southeast Iowa Sports Commission** was awarded \$2,500,000 to develop the Ottumwa SportsPlex Development Project. The award represents 23% of the total project investment of \$10,737,449.

The **Midwest Old Settlers and Threshers Association** was awarded \$500,000 to improve and enhance existing campground facilities at the Midwest Old Settlers and Threshers Association grounds. The award represents 38% of the total project investment of \$1,312,525.

Jasper County Conservation was awarded \$550,000 for the Jasper County Conservation Environmental Education Center. The award represents 25% of the total project investment of \$2,204,509.

The **City of Denison** was awarded \$4,500,000 for the Crawford County Wellness and Recreation Center. The award represents 24% of the total project investment of \$18,643,000.

America's First Great Dam Foundation was awarded \$115,000 for the 1913 Hydro-Electric Turbine Visitor Center project in Keokuk. The award represents 38% of the total project investment of \$303,325.

Wapello County was awarded \$500,000 for improvements and enhancements to the Pioneer Ridge Park Campground. The award represents 40% of the total project investment of \$1,260,975.

The **Clayton County Conservation Board** was awarded \$345,000 to modernize and enhance the Osborne Welcome Center and Campground. The award represents 40% of the total project investment of \$862,500.

The **City of Treynor** was awarded \$800,000 for a multi-phase park and recreation project. The award represents 31% of the total project investment of \$2,577,455.

Jefferson County was awarded \$450,000 for improvements and enhancements to the Jefferson County Prairie Ridge Campground. The award represents 39% of the total project investment of \$1,166,430.

The **City of Dayton** and the **Dayton Community Club** were awarded \$800,000 for improvements to the Dayton Oak Park Trails Rodeo and Events Center. The

award represents 34% of the total project investment of \$2,372,703.

The **City of Keosauqua** was awarded \$300,000 for the Lower Des Moines Water Trail. The award represents 32% of the total project investment of \$950,249.

The **Stanton Community Foundation** and **Montgomery County** were awarded \$850,000 for the Stanton Area Trail Project. The award represents 35% of the total project investment of \$2,456,110.

Pearson Lakes Art Center in Okoboji was awarded \$185,000 for the Art Smart Children's Interactive Gallery project. The award represents 25% of the total project investment of \$749,303.

Osceola County Conservation Board was awarded \$200,000 to expand the Willow Creek Campground. The award represents 40% of the total project investment of \$500,000.

The **YMCA of Washington County** was awarded \$750,000 for an Indoor Aquatic Center. The award represents 10% of the total project investment of \$7,689,975.

Marshall County Conservation was awarded \$400,000 to improve and further develop the Green Castle Recreation Area Campground. The award represents 34% of the total project investment of \$1,160,000.

The **City of Muscatine** was awarded \$1,000,000 for the Muscatine Indoor Sports Complex. The award represents 25% of the total project investment of \$4,000,000.

The **City of Fort Madison** was awarded \$250,000 for the Fort Madison River Landing project. The award represents 11% of the total project investment of \$2,256,317.

Funded projects must be completed by June 30, 2026. For more information on the Destination Iowa program, visit iowaeda.com/destination-iowa/. Funding for this program has been made available through the federal American Rescue Plan Act.

Home

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Contact

Office of the Governor of Iowa

Kim Reynolds



State Capitol

1007 East Grand Ave.

Des Moines, IA 50319

Phone

(515) 281-5211

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**RESOLUTION APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT
AND COST FOR THE MARSHALLTOWN FACADE REHABILITATION PROJECT,
IN THE CITY OF MARSHALLTOWN, IOWA, BEING PROJECT NO. ECO21002**

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 Marshalltown Façade Rehabilitation Project, Project No. ECO21002, 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 ECO21002, being the Marshalltown Façade Rehabilitation Project in the City of Marshalltown, Iowa.

Passed this 13th day of March 2023, and signed this _____ day of March 2023.

CITY OF MARSHALLTOWN, IOWA

Joel T.S. Greer, Mayor

ATTEST:

Alicia Hunter, City Clerk

MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor, Council & City Administrator
FROM: Michelle Spohnheimer, Housing & Community Development Director
DATE: 02/27/23
RE: Resolution ordering construction for DTR project (ECO 21-002)

Strategic Plan:

- ☒ Strategy 1: Expand and improve development in the community.
- ☒ Strategy 2: Enhance Marshalltown's public image.
- ☐ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☐ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective:

Strategy 1: Invest in Downtown redevelopment. The improvements to the downtown participating buildings promote redevelopment of existing buildings

Strategy 2: Reduce blight and promote safety in neighborhoods. The downtown is a business neighborhood and the DTR grant is focused on blight remediation.

Recommendation: Staff is recommending approval of the resolution to order construction for the Downtown Revitalization Project – Façade Rehabilitation and begin the bid process. This is a rebid from 2022.

Budget Impact: The City previously allocated \$500,000 in matching funding for this project.

Description/Background: The City has been working with Region 6 on this project that would revitalize downtown through a public/private partnership. Improvements are proposed to be made to the following buildings:

13-15 S Center St
14-16-18 N Center St
1 W Main St
~~19 W Main St~~ (This property has been withdrawn from the original project)
21 W Main St
23 W Main St
25 W Main St
14 W Main St

This project was let in 2022 and due to the only bid coming in on August 16th, 2022 at \$1,867,250 for base + alternates which was \$629,750 over the architect's estimate – the bid was not awarded.

Plan preparation for this project was performed by RDG, an architectural firm. Plan and grant administration for this project is being performed by Region 6. The substantial completion date is June 30th, 2024.

CITY COUNCIL

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



We recommend the following bid timeline:

- Ordering construction at the February 27th, 2023 council meeting
- Pre-bid conference at 2:00 PM on March 9th, 2023
- Public Hearing at the March 13th, 2023 council meeting
- Receiving/Opening Bids at 2:00 PM, March 21st, 2023
- Awarding Bid at the April 10th, 2023 council meeting.

Attachments: Official Notice of Hearing & Letting

CITY COUNCIL

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



NOTICE TO BIDDERS AND NOTICE OF PUBLIC HEARING

Sealed bids for the Marshalltown Façade Rehabilitation project must be received and filed before **2:00 PM** local time on **March 21, 2023**, to the City Clerk at City Hall, 24 North Center Street, Marshalltown, Iowa. Bidders wishing to drop their bids off in person at City Hall should contact the City at 641-754-5701 to arrange for a time to transfer the bid. City Hall may have limited access to the public, but business operations are being conducted during the workweek. Staff will be available to assist bidders. Bids received after the deadline for submission of bids as stated herein shall not be considered and shall be returned to the late bidder unopened. The bidder shall hold the City harmless for failing to meet the deadline due to delayed delivery service.

The City intends to open, read aloud, and tabulate the sealed bids at 2:05 PM on March 21, 2023, in the City Hall, for further consideration by the City Council at a future meeting, scheduled at 5:30 PM on April 10, 2023. Consideration of the Award of contract would subsequently occur by action of the City Council at the same meeting, or at a later date and time announced at said meeting.

Notice is hereby given that a public hearing will be held by the City on the proposed contract documents (including the plans, specifications, and form of contract) and estimated construction cost for the Project at its regular meeting at 5:30 PM on March 13, 2023, in the Council Chambers at 10 West State Street. At the hearing, the City will receive and consider any objections made by any interested party, to the Plans and Specifications, proposed Form of Contract, and the Estimate of the Construction Cost for the project.

Work on the improvement shall commence within ten days of the issuance of a written Notice to Proceed. The Notice to Proceed will be issued upon approval of the contract by the Council and be completed as stated below.

The Work of the Project is defined by the Contract Documents and includes, but is not limited to, the following:

Facade Rehabilitation: Historic rehabilitation of existing brick and wood framed buildings. Rehabilitation will consist of exterior restoration and improvements, including but not limited to selective demolition; cleaning, repair, and repointing of stone and brick masonry; repair and replacement of doors, wood windows and storefronts; aluminum windows and storefronts; replacement of awnings and canopies; joint sealants; painting; lighting fixtures; roof replacement; and related construction.

The Work includes historic buildings being reviewed under Section 106 NHPA and HUD regulations for NEPA (24 CFR Part 58.5[b]). The Work will follow historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties.

Bids will be received for a single prime contract.

Bidding Documents may be examined at the offices of RDG Planning & Design, at plan rooms across the state and through the City of Marshalltown's website: <https://www.marshalltown-ia.gov/Bids.aspx>.

Bidders may obtain Bidding Documents at the office of the printer: Beeline and Blue, 2507 Ingersoll Avenue, Des Moines, Iowa, 50312, or by calling (515) 244-1611, from 8:00 AM until 5:00 PM, Monday through Friday, or through their on-line plan room at www.beelineandblue.com. Bidding Documents will be available February 28, 2023.

A Pre-Bid Conference will be held at **2:00 PM** on **March 9, 2023** at the site. Participation by General Contractors, Sub-Contractors and Suppliers is strongly encouraged, but is not mandatory. Please reach out to the point of contact below for the information if you wish to join.

Refer to other bidding requirements described in the Project Manual, Division 01 Section "Instructions to Bidders."

Each bidder shall accompany its bid with bid security as defined in Iowa Code Section 26.8, as security that the successful bidder will enter into a contract for the work bid upon and will furnish after the award of contract a corporate surety bond, in a form acceptable to the City, for the faithful performance of the contract, in an amount

equal to 100% of the amount of the contract. The bidder's security shall be in the amount fixed in the Instruction to Bidders, in the amount of five percent (5%) of the total bid and shall be in the form of a cashier's check or a certified check drawn on an FDIC insured bank in Iowa or on an FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn on a credit union in Iowa or chartered under the laws of the United States; or a bid bond on the form provided in the contract documents with corporate surety satisfactory to the City. The bid shall contain no condition except as provided in the specifications.

Performance and Payment Bond Requirement: 100% of contract amount.

No bid may be withdrawn for a period of 30 calendar days after the date of opening.

Award of contract is tentatively scheduled for **April 10, 2023**.

This project is funded, in part, by a Community Development Block Grant (CDBG). The requirements and provisions of the CDBG shall apply to this project, which include federal rules and regulations pertaining to labor relations such as the payment of "Davis-Bacon" prevailing wages.

Minority Owned and Female Owned Business participation is encouraged. Bidders shall make a good faith documented effort to encourage participation of minority owned and female owned businesses.

This project is sales tax exempt. The Owner will issue an exemption certificate for the purchase or use of building materials, supplies, and equipment that will be used in the performance of the construction contract.

By virtue of statutory authority, a preference will be given to products and provisions grown and coal produced within the state of Iowa.

Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

The project shall be substantially complete by **June 30, 2024**.

The City reserves the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

Point of Contact:

Michelle Spohnheimer, Housing & Community Development Director, phone: 641-754-5756, email: mspohnheimer@marshalltown-ia.gov

Owner:

City of Marshalltown
24 North Center Street
Marshalltown, Iowa 50158
Phone: 641-754-5701
www.marshalltown-ia.gov

Architect of Record:

RDG Planning & Design, Inc.
301 Grand Avenue
Des Moines, Iowa 50309
Phone: 515-288-3141
www.rdgusa.com

SECTION 3 LANGUAGE FOR PROCUREMENT DOCUMENTS

(This language is to be included in all procurement documents/ solicitations)

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

Section 3 Businesses are encourage to respond to this proposal. A Section 3 business is a business that is:

51% owned by Section 3 residents*

Whose permanent, full-time staff is comprised of at least 30% Section 3 residents*

Has committed 25% of the dollar amount of its subcontracts to Section 3 businesses

*A Section 3 resident is defined as a public housing resident or someone with a household income that is less than 80% of the area median income. Businesses that believe they meet the Section 3 criteria are encouraged to register as a Section 3 Business through HUD's website:

<https://portalapps.hud.gov/Sec3BusReg/BRegistry/RegisterBusiness>

Published by the order of the City of Marshalltown, Iowa, on this 3rd day of March, 2023.

Marshalltown, Iowa - Downtown Revitalization - Facades (2023)

Statement of Probable Construction Costs



RDG#: 3005.009.00

Due to uncertainty in the availability of construction labor & materials and the resulting impact on inflation and construction costs, the Architect cannot and does not warrant or represent that the Cost of the Work will be within the Owner's budget for the Work.

Building Name / Owner	Address / Historic Designation	Base Bid Construction Cost w/out contingency (rounded)	Alternates Construction Cost w/out contingency (rounded)	Base Bid only contingencies (rounded)
Tobacco Outlet	19 W Main			
		\$0		
Waleed	PRIORITY 1		\$0	\$0
Staging 2 Sell It	1 W Main			
		\$169,500		
Struebing	PRIORITY 1		\$183,000	\$30,500
Salon	14 N Center			
		\$32,000		
Struebing	Priority 1 Building		\$34,000	\$6,000
Vacant	16 N Center			
		\$31,000		
Struebing	Priority 1 Building		\$38,000	\$5,500
The Paw Spa	18 N Center			
		\$32,000		
Struebing	Priority 1 Building		\$41,500	\$6,000
Pentz Appliance	13 - 15 S Center			
		\$184,500		

Marshalltown, Iowa - Downtown Revitalization - Facades (2023)

Statement of Probable Construction Costs

Due to uncertainty in the availability of construction labor & materials and the resulting impact on inflation and construction costs, the Architect cannot and does not warrant or represent that the Cost of the Work will be within the Owner's budget for the Work.



RDG#: 3005.009.00

Building Name / Owner	Address / Historic Designation	Base Bid Construction Cost w/out contingency (rounded)	Alternates Construction Cost w/out contingency (rounded)	Base Bid only contingencies (rounded)
Tim & Dave	Priority 2 Building		\$261,500	\$33,000
Smokin G's BBQ	25 W Main	\$64,000		
Kim & Jerry	Priority 1 Building		\$43,500	\$11,500
Vacant	23 W Main	\$102,000		
City	Priority 1 Building		\$60,500	\$18,500
Vacant	21 W Main	\$82,000		
City	Priority 1 Building		\$130,000	\$15,000
Stepping Stones	14 W Main	\$81,500		
Mindy U	Priority 2 Building		\$16,000	\$14,500
sub totals		\$778,500	\$808,000	\$140,500
total base bid + alternates			\$1,586,500	
total base bid + contingency				\$919,000
total base bid + alternates + contingency				\$1,727,000

CONSTRUCTION DOCUMENTS

RDG PROJECT NUMBER: 3005.009.00

ISSUE DATE: FEBRUARY 20, 2023

DRAWING INDEX:

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GENERAL SYMBOLS LEGEND

	DETAIL NUMBER SHEET NUMBER
	BUILDING SECTION NUMBER SHEET NUMBER
	SECTION NUMBER SHEET NUMBER
	ELEVATION NUMBER SHEET NUMBER
	AWNING NUMBER
	DOOR MARK
	REVISION MARK
	WINDOW MARK

MATERIAL LEGEND

	ALUMINUM PANEL		PAINT
	BATT INSULATION		PLASTER
	BRICK		PLYWOOD
	CLEAN MASONRY		REPOINT MASONRY
	FINISH WOOD		RESET MASONRY
	GYPSUM BOARD		SPANDREL GLASS OR DECORATIVE FILM OVERLAY
	NEW MATERIAL		STUCCO REMOVAL

ABBREVIATIONS

ALUM	ALUMINUM
BOD	BASIS OF DESIGN
DIA	DIAMETER
DTL	DETAIL
EXST	EXISTING
EXT	EXTERIOR
FT	FOOT
GA	GAUGE
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
HT	HEIGHT
IMP	INSULATED METAL PANEL
INT	INTERIOR
MAX	MAXIMUM
MIN	MINIMUM
PT	PAINT
SIM	SIMILAR
TBD	TO BE DETERMINED
TYP	TYPICAL
WD	WOOD

CONSTRUCTION DOCUMENTS

MARSHALLTOWN FACADE REHABILITATION



ARCHITECT
RDG Planning & Design
301 Grand Avenue
Des Moines, Iowa 50309-1718
Phone: 515.288.3141
www.rdgusa.com



MARSHALLTOWN
MORE THAN EVER

REV	DATE	DESCRIPTION
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ISSUED: FEBRUARY 20, 2023

RDG PROJ. NO: 3005.009.00

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MARSHALLTOWN
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AND CHANGE DOCUMENTS REMAIN THE
OFFICIAL CONSTRUCTION DOCUMENTS.

MATERIALS AND
LEGEND

A00.01

ARCHITECTURAL GENERAL NOTES

- 1GENERAL
- 1.1

WHEN DRAWINGS AND SPECIFICATIONS ARE NOT IN AGREEMENT, THE BIDDER SHALL REQUEST WRITTEN CLARIFICATION PRIOR TO BIDDING AND CONSTRUCTION. IF NOT CLARIFIED PRIOR TO BIDDING, THE FOLLOWING PRECEDENCE SHALL BE USED TO DETERMINE SCOPE OF THE BID: SIZE/QUANTITY CONTROLLED BY DRAWINGS, MATERIAL QUALITY CONTROLLED BY SPECIFICATION. FINAL INTERPRETATION MUST BE ISSUED BY THE ARCHITECT/ENGINEER PRIOR TO MATERIAL FABRICATION OR CONSTRUCTION.
- 1.2

CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS PRIOR TO MATERIAL FABRICATION AND CONSTRUCTION.
- 1.3

SYMBOLS AND PATTERNS USED ON THE ARCHITECTURAL DRAWINGS ARE SHOWN ON A00.01.
- 1.4

DIMENSIONS ARE NOMINAL, ROUNDED TO THE NEAREST INCH, FINISH FACE TO FINISH FACE, UNLESS NOTED OTHERWISE.
- 1.5

INTERIOR WOOD AND GYPSUM BOARD STOREFRONT SURFACES ARE NOT TO BE PRIMED OR PAINTED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. FUTURE PAINTING BY THE "BUILDING OWNER". WOOD AND HOLLOW METAL DOORS AND FRAMES ARE TO BE PRIMED AND PAINTED ON BOTH SIDES BY THE CONTRACTOR UNLESS NOTED
- 1.6

ALL PAINT COLORS REFERENCED ARE "SHERWIN-WILLIAMS (SW), UNLESS NOTED OTHERWISE.
- 1.7

THE TERM "GLASS" AND "GLAZING" ARE SYNONYMOUS, UNLESS NOTED OTHERWISE
- 1.8

PAINT AND REPOINT SCOPE TO INCLUDE ANY RETURNS TO FACE OF BUILDING (I.E. DEEP WINDOW JAMBS OR PILASTERS).
- 1.9

PREP AND PAINT SURFACE BY REMOVING PEELING PAINT DOWN TO SOUND WOOD OR PAINT, UNLESS NOTED OTHERWISE. SOUND PAINT MAY REMAIN.
- 1.10

ALL CHRISTMAS LIGHTS TO REMAIN, IF ANY; COORDINATION REQUIRED WHEN ADDING PARAPET CAP.
- 1.11

SQUARE FOOTAGES ARE APPROXIMATE AND INTENDED ONLY FOR CONVENIENCE.
- 1.12

METAL CORNICE, WINDOW HOODS AND SILLS REPAIR SCOPE: INCLUDES THE REPAIR OF EXISTING HISTORIC METAL CORNICE. REMOVE EXISTING PAINTS AND COATINGS. REMOVE BIRD NESTS. REMOVE AND REINSTALL EXISTING ELECTRICAL COMPONENTS INCLUDING EXTERIOR CHRISTMAS LIGHTS, IF ANY. REATTACH LOOSE COMPONENTS. INCLUDE UP TO 10% REMOVAL AND REATTACHMENT OF LOOSE COMPONENTS WITH REPLACEMENT OF DETERIORATED WOOD SUPPORTING CORNICE. SEAL JOINTS AT TOP OF CORNICE AND OTHER STRATEGIC LOCATIONS TO PREVENT WATER INFILTRATION BUT ALLOW DRAINAGE AT BOTTOM OF CORNICE. PREP AND PAINT METAL CORNICE. ARCHITECT WILL FURNISH DETAILED PAINT SCHEME FOR EACH BUILDING CORNICE, UNFORESEEN CONDITIONS OF CORNICE COMPONENTS MAY RESULT IN ADDITIONAL COST. ANY UNFORSEEN CONDITIONS OF DAMAGE OR MISSING PIECES SHALL BE RESOLVED BY CHANGE ORDER.
- 1.13

CAP ELECTRICAL SCOPE: INCLUDES ABANDONMENT OF EXISTING ELECTRICAL WIRING AT EXISTING OR FORMER ELECTRICAL CONTROLS, POWER, OR EQUIPMENT LOCATION. TERMINATE WIRING IN EXISTING (OR PROVIDE NEW) JUNCTION BOX WITH BLANK SUITABLE FOR THAT LOCATION. PROVIDE WIRE CONNECTORS AT END OF WIRING.
- 2WINDOWS
- 2.1

CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND WINDOW, GLASS, DOOR, FRAME AND STOREFRONT DIMENSIONS PRIOR TO SUBMITTALS AND RE-VERIFY PRIOR TO ORDERING MATERIALS.
- 2.2

SCOPE OF EXISTING WOOD WINDOWS AND FRAME REPAIRS: SEE PROJECT MANUAL SECTION 08 01 52.61 AND WINDOW SCHEDULE. SEE DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE.
- 2.3

LOCATIONS SHOWN TO RECEIVE NEW WINDOWS SHALL ALSO RECEIVE NEW WINDOW FRAMES AND TRIM, UNLESS NOTED OTHERWISE.
- 2.4

PAINTING NOTES APPLY TO BOTH WINDOWS AND STORM WINDOWS.
- 3DOORS
- 3.1

CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND WINDOW, GLASS, DOOR, FRAME AND STOREFRONT DIMENSIONS PRIOR TO SUBMITTALS AND RE-VERIFY PRIOR TO ORDERING MATERIALS.
- 3.2

DOOR HANDING TO MATCH EXISTING UNLESS NOTED OTHERWISE.
- 3.3

LOCATIONS SHOWN TO RECEIVE NEW DOORS SHALL ALSO RECEIVE NEW DOOR FRAMES AND TRIM, UNLESS NOTED OTHERWISE.

ARCHITECTURAL GENERAL NOTES

- 4INTERIOR
- 4.1

NEW WALL, DOOR, AND WINDOW SYSTEMS ARE TO BE SEALED AND TRIMMED WITH WOOD TRIM ON THE INTERIOR. TRIM TO MATCH EXISTING UNLESS NOTED OTHERWISE.
- 4.2

THE OWNER OF EACH BUILDING IS RESPONSIBLE FOR ALL INTERIOR FINISHES AND HOW THEY TERMINATE AT THE NEW STOREFRONT WALL TYPICALLY, UNLESS NOTED OTHERWISE.
- 5STOREFRONT
- 5.1

SUPPORT THE EXISTING STEEL LINTELS AND MASONRY ABOVE WHEN REMOVING STOREFRONT INFILL. RETAIN ANY ORIGINAL STEEL COLUMNS OR SUPPORT THAT MAY BE HIDDEN IN THE EXISTING CONSTRUCTION. NOTIFY ARCHITECT AND PROVIDE PHOTOGRAPHS AT THE END OF DEMOLITION.
- 5.2

STOREFRONTS SHOWN TO BE REMOVED AND REPLACED WITH NEW STOREFRONT CONSTRUCTION MAY CONTAIN EXISTING ELECTRICAL AND/OR MECHANICAL LINES. ANY APPARENT AND OBVIOUS EXISTING LINES SHALL BE RE-INCORPORATED INTO THE NEW CONSTRUCTION AT THE GENERAL EXISTING LOCATIONS, UNLESS NOTED OTHERWISE. DEAD OR ABANDONED LINES MAY BE CAPPED AT THE WALL, WITH THE OWNER'S PERMISSION. UNKNOWN AND CONCEALED LINES WILL BE ADDRESSED WITH A CHANGE ORDER.
- 5.3

STOREFRONT REPAIR: SCOPE INCLUDES THE REPAIR OF EXISTING HISTORIC WOOD STOREFRONT, WINDOW FRAMES, SASHES, PANELS, AND TRIM. SCOPE INCLUDES THE REPAIR OF EXISTING IRON AND STEEL COLUMNS AND EXPOSED STEEL LINTELS AND BEAMS. REMOVE EXISTING PAINTS AND COATINGS. REMOVE AND REINSTALL OR PROTECT EXISTING AUXILLARY COMPONENTS INCLUDING ELECTRICAL OUTLETS, CONDUIT AND ELECTRICAL BOXES, PIPING, MAILBOXES AND OTHER COMPONENTS. REMOVE ABANDONED AND UNUSED COMPONENTS INCLUDING ANCHORS AS DIRECTED BY ARCHITECT, AND FILL RESULTING HOLES. FILL ALL HOLES AND CRACKS IN WOOD COMPONENTS. TREAT DRY WEATHERED WOOD IN PREPARATION FOR PAINTING WITH PRESERVATION TREATMENT. FILL SIGNIFICANT CRACKS AND CHECKS WITH WOOD CONSOLIDANT AND WOOD PATCHING COMPOUND. INCLUDE UP TO 10% REPLACEMENT OF HEAVILY DAMAGED WOOD TRIM, WITH PROFILES TO MATCH EXISTING. REATTACH LOOSE TRIM. FILL ALL HOLES AND CRACKS IN IRON WITH EPOXY STRUCTURAL ADHESIVE, REMOVE SURFACE RUST. PREP AND PAINT WOOD AND IRON STOREFRONT. ARCHITECT WILL FURNISH DETAILED PAINT SCHEME FOR EACH BUILDING AS NECESSARY.
- 5.4

BRONZE STOREFRONT REPAIR: SCOPE INCLUDES REPAIR OF EXISTING HISTORIC (MID 20TH CENTURY) STOREFRONT, WINDOW FRAMES, STOREFRONT GLAZING SUPPORTS AND GLAZING. REMOVE AND REINSTALL GLAZING STOPS AT PERIMETER OF GLASS (CAREFULLY LABEL COMPONENTS DURING REMOVAL.) REPLACE GLAZING AS INDICATED. REINSTALL STOPS TO ACCOMODATE NEW GLAZING THICKNESS AS NECESSARY. PROVIDE NEW FASTENERS COMPATIBLE WITH STOREFRONT MATERIALS. SEAL JOINTS AT STRATEGIC LOCATIONS TO PREVENT WATER INFILTRATION BUT ALLOW DRAINAGE.
- 6AWNING
- 6.1

VERIFY FINAL LOCATIONS OF AWNINGS WITH ARCHITECT PRIOR TO FABRICATION AND INSTALLATION. LOCATIONS TO BE NOTED IN SHOP DRAWING SUBMITTALS.
- 6.2

AWNING SIZES ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY ON SITE PRIOR TO ORDERING.
- 6.3

EXISTING AWNINGS SHOWN TO REMAIN SHALL BE REMOVED AND REINSTALLED IN ORDER TO PAINT FACADE.
- 6.4

ALL AWNING COMPONENTS SHALL BE INSTALLED AT LEAST 6'-8" ABOVE THE SIDEWALK OR FLOOR
- 7SIGNAGE
- 7.1

VERIFY FINAL LOCATIONS OF SIGNAGE WITH ARCHITECT PRIOR TO INSTALLATION.
- 7.2

ARCHITECT WILL PROVIDE DIGITAL FILES OF LOGOS AND TEXT AS REQUIRED FOR SIGNAGE TO CONTRACTOR FOR THEIR USE.
- 7.3

SIGNAGE IS FOR ILLUSTRATION ONLY; ACTUAL GRAPHICS MAY VARY.



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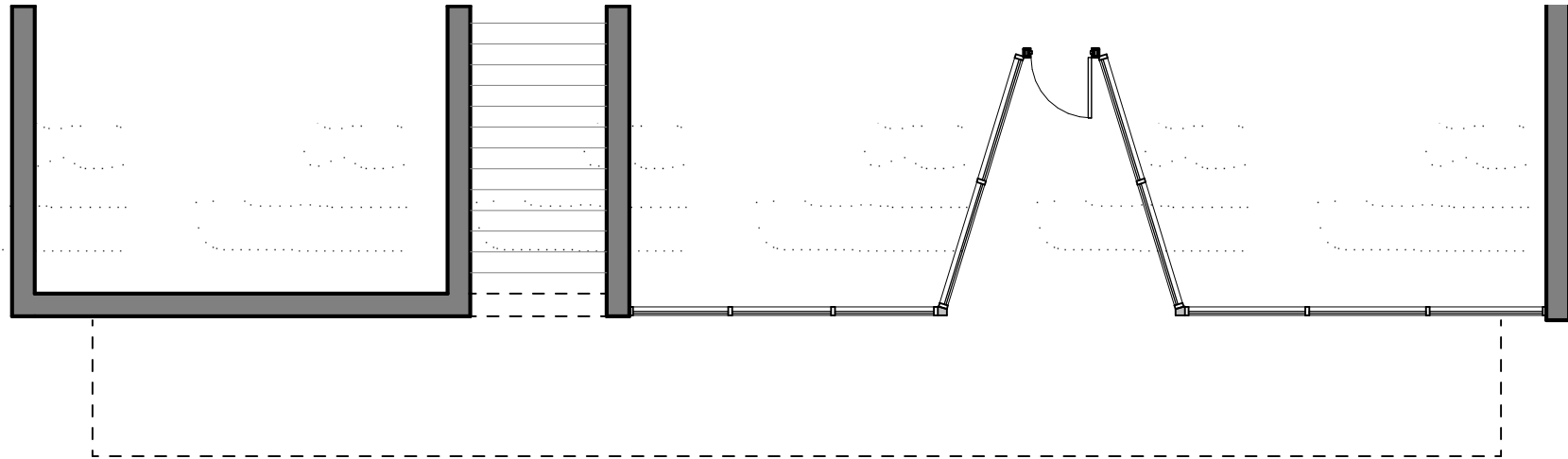
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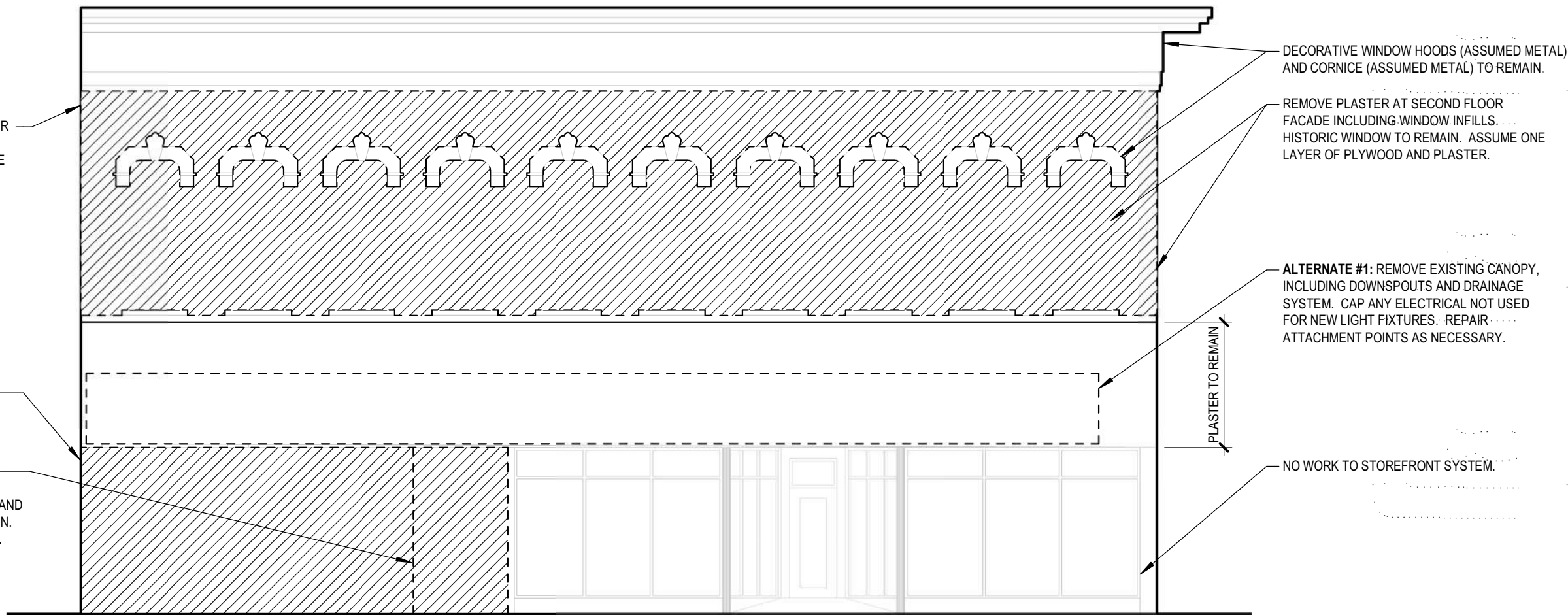
ARCHITECTURAL
NOTES

A00.02

C1 BUILDING 1: 13-15 SOUTH CENTER STREET - DEMOLITION - PLAN
1/8" = 1'-0"



BUILDING 1 DOOR (N.T.S.)



A1 BUILDING 1: 13-15 SOUTH CENTER STREET - DEMOLITION
1/8" = 1'-0"

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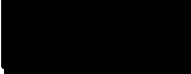
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BUILDING 1 (13-15
SOUTH CENTER)
DEMOLITION

A05.01a

MATERIAL LEGEND	
AWNING	
	"PATTERN TBD" - SUNBRELLA MODEL "TBD"
PAINT COLORS	
	"COLOR TBD" - SHERWIN WILLIAMS "SW TBD"
	"COLOR TBD" - SHERWIN WILLIAMS "SW TBD"
	"COLOR TBD" - SHERWIN WILLIAMS "SW TBD"

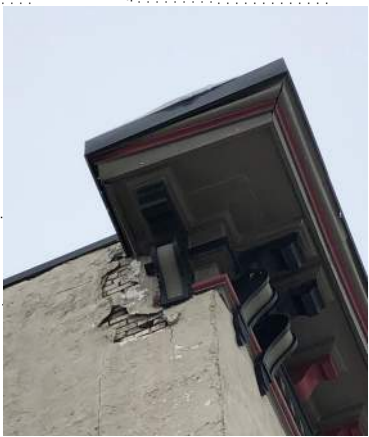
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THIRD FLOOR ("MEZZANINE")

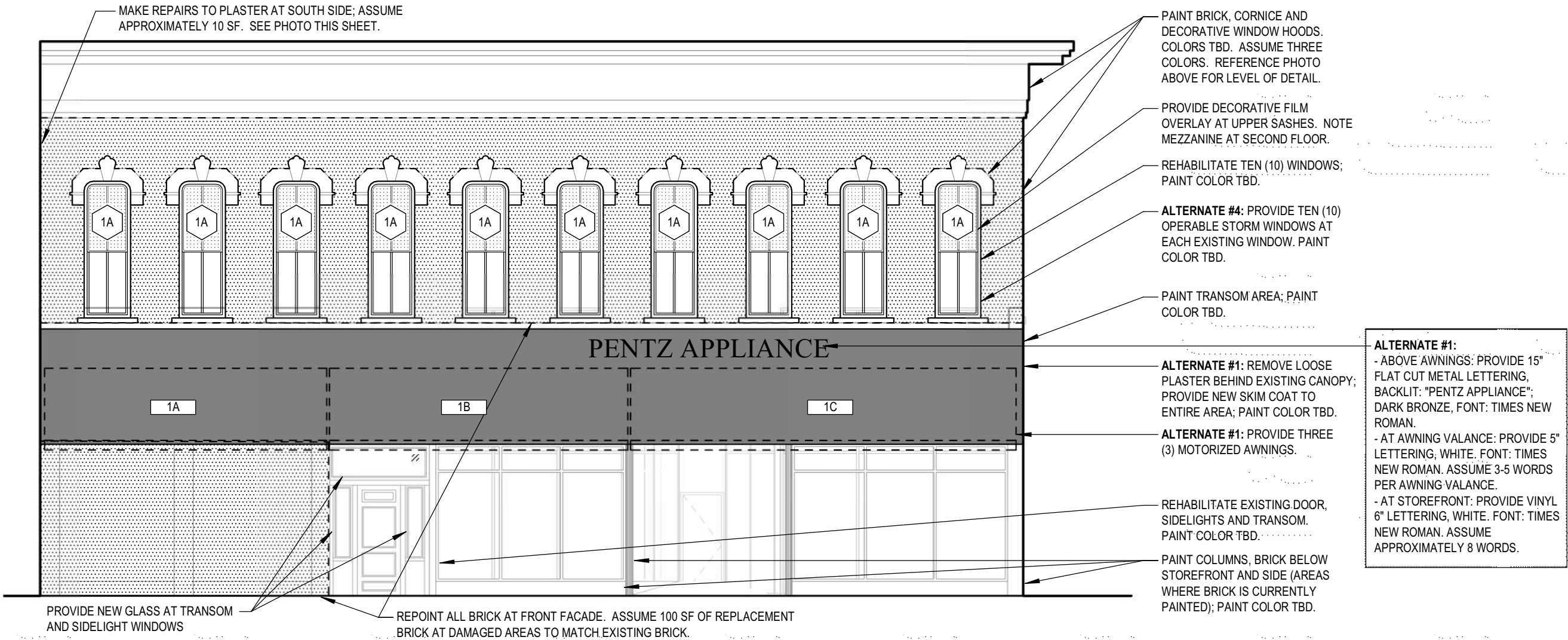


SECOND FLOOR



SOUTH SIDE (N.T.S.)

INTERIOR WINDOW CONDITIONS AT EAST FACADE - BUILDING #1 (N.T.S.)



A1 BUILDING 1: 13-15 SOUTH CENTER STREET - IMPROVEMENTS
1/8" = 1'-0"

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BUILDING 1 (13-15
SOUTH CENTER)
IMPROVEMENTS

A05.01b



GHOST SIGN EXISTING CONDITION (N.T.S.)

ALTERNATE #2: REMOVE STUCCO/ PLASTER THIS AREA, INCLUDING AT FORMER WINDOW LOCATION; NOTE LOCATIONS OF ORIGINAL WINDOWS; REMOVE INFILL AT WINDOW OPENINGS. (ASSUME ONE LAYER OF PLYWOOD AND TWO LAYERS OF PLASTERS.) NOTE: ONLY ONE WINDOW IS VISIBLE FROM INTERIOR.

PROTECT GHOST SIGNS DURING WORK.

ALTERNATE #2

NO WORK

A1

BUILDING 1: 13-15 SOUTH CENTER STREET - NORTH ELEVATION - DEMO

1/8" = 1'-0"

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BUILDING 1 (13-15
SOUTH CENTER)
DEMOLITION

A05.01c

ALTERNATE #2:
REHABILITATE SIX (6)
WINDOWS. PROVIDE
STORM WINDOWS WITH
DECORATIVE FILM
OVERLAY AT UPPER
SASHES. NOTE
MEZZANINE AT SECOND
FLOOR.

ALTERNATE #2; PROVIDE
IMP BLANK AT SINGLE
WINDOW SASH;
COORDINATE WITH
EXISTING VENT.
ARCHITECT TO SELECT
COLOR FROM
MANUFACTURER'S
STANDARD COLORS.

ALTERNATE #2:
REPOINT 800 SF OF
MASONRY THIS
FACADE; AREAS AS
DIRECTED BY
ARCHITECT. ASSUME
400 SF AT EACH LEVEL.

NOTE THESE WINDOWS NOT VISIBLE FROM INTERIOR

APPROX. 90'-0"

NO WORK

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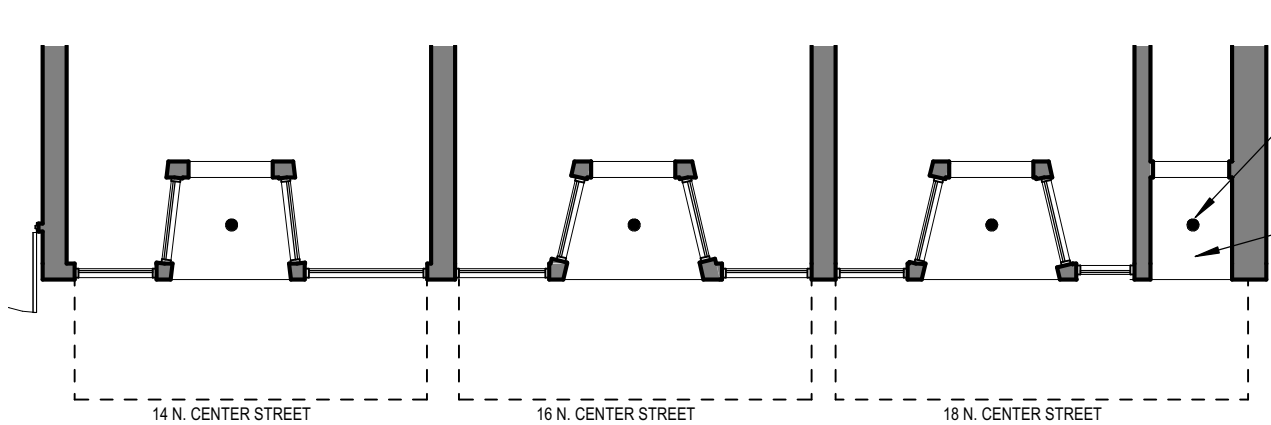
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**BUILDING 1 (13-15
SOUTH CENTER)
IMPROVEMENTS**

A05.01d

A1 BUILDING 1: 13-15 S. CENTER STREET - IMPROVEMENTS - NORTH SIDE
1/8" = 1'-0"

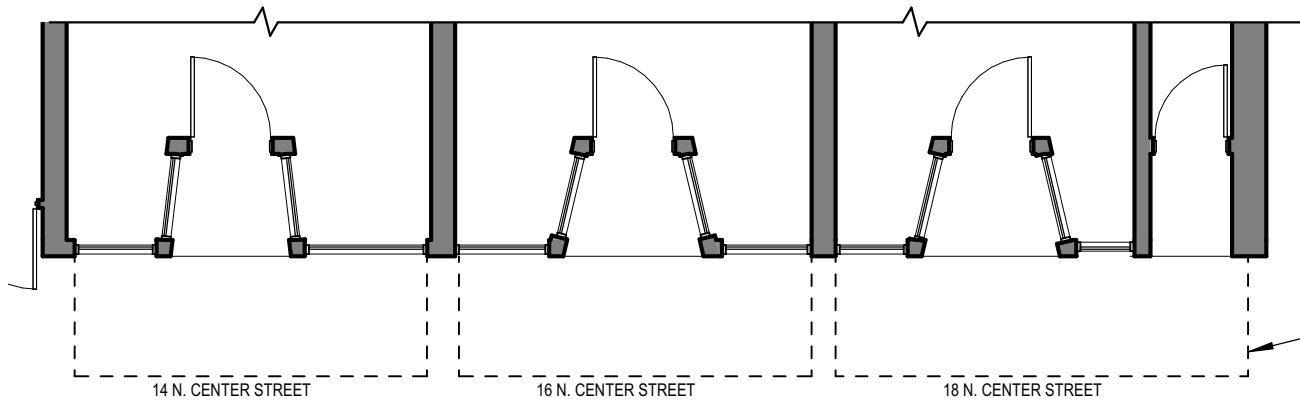


ALTERNATE #3: PROVIDE FOUR (4) CEILING MOUNT LIGHT FIXTURES; ONE AT EACH ENTRY. CENTER IN CEILING. DESIGN HOUSE JELLY JAR MODEL NO. 587238.

PAINT CEILING ENTRIES AT EACH DOOR. PAINT COLOR TO MATCH NEW STOREFRONT COLOR.

ROUTE POWER TO EXISTING ELECTRICAL PANEL. PROVIDE ELECTRONIC TIMER SWITCH (LEVITON LTB12-1LZ, OR EQUAL). INSTALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

B1 BUILDING 2: 14-16-18 N. CENTER STREET - REFLECTED CEILING PLAN
1/8" = 1'-0"



NEW AWNINGS; SEE SHEET A05.02b.

A1 BUILDING 2: 14-16-18 NORHT CENTER STREET - IMPROVEMENTS - PLAN
1/8" = 1'-0"

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BUILDING 2
(14-16-18 NORTH
CENTER) FLOOR
PLANS

A05.02a

MATERIAL LEGEND	
AWNING	
	2-14: TBD
	2-16: TBD
	2-18: TBD
PAINT COLORS	
	TBD
	TBD

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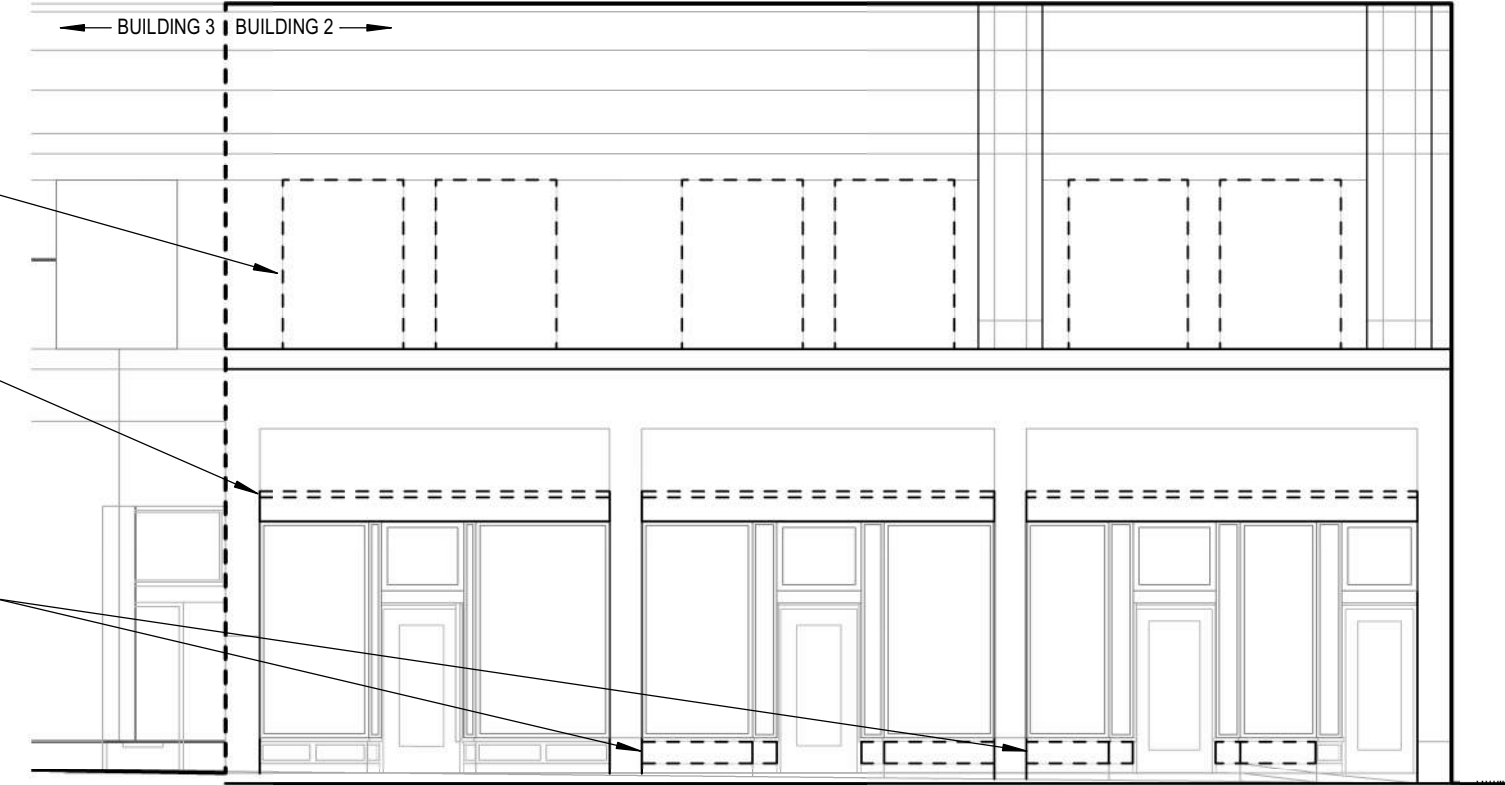
TYPICAL INTERIOR (2ND FLOOR) CONDITIONS AT BUILDINGS #2 AND #3.

INTERIOR WINDOW CONDITIONS (N.T.S.)

REMOVE PLYWOOD INFILL AT SIX (6) WINDOW OPENINGS.

ALTERNATE #1: REMOVE AWNING COVERS AT ALL STOREFRONTS.

ALTERNATE #3: REMOVE INFILL MATERIAL AT TWO STOREFRONTS.



C3 BUILDING 2: 14-16-18 NORTH CENTER STREET - DEMOLITION
1/8" = 1'-0"

PAINT CORNICE (ASSUME METAL); COLOR TBD.

BASE BID: PERFORM MINOR REPAIRS TO SIX (6) WINDOWS, PROVIDE STORM WINDOWS; PAINT COLOR TBD.

ALTERNATE #4: PERFORM FULL REHABILITATION AS NOTED ON SHEET A10.01.

REPOINT STONE COURSES; ALTERNATE #2: CLEAN STONE.

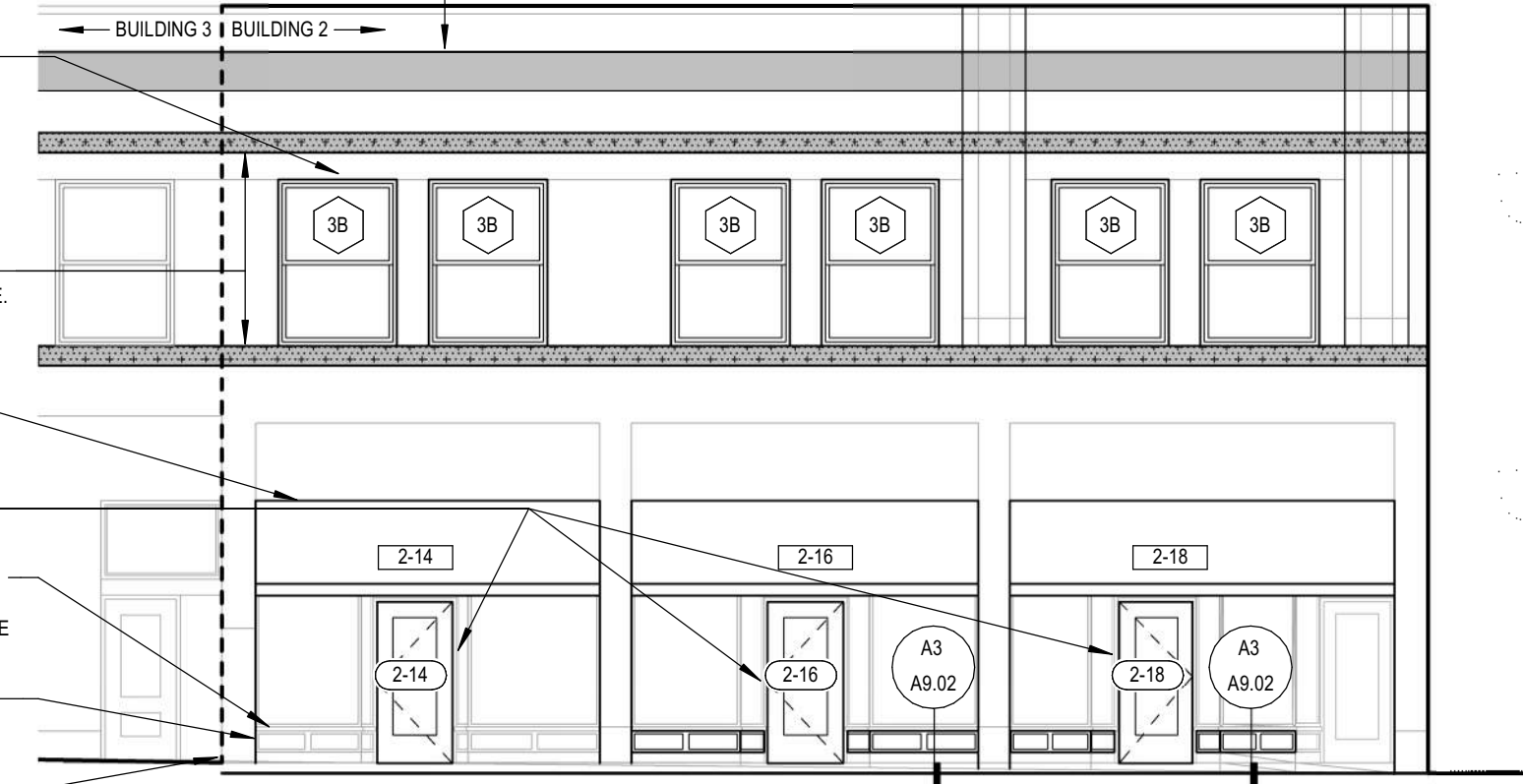
ALTERNATE #1: PROVIDE THREE (3) AWNINGS.

REHABILITATE THREE (3) DOORS, INCLUDING TRANSOMS.

PREP AND PAINT ALL STOREFRONTS, INCLUDING FOUR (4) DOORS; COLORS TBD. ASSUME FOUR COLORS (ONE PER STOREFRONT AREA). REMOVE WIRE SCREENS; CLEAN, PAINT AND REINSTALL.

ALTERNATE #3: MAKE REPAIRS TO THREE STOREFRONTS; SEE DETAIL A3/A09.02 FOR STOREFRONTS AT 16 AND 18 N. CENTER.

EPOXY PATCH CRACKS AT CAST STONE FOUNDATION AT THIS BUILDING (THREE CRACKS).



A3 BUILDING 2: 14-16-18 NORTH CENTER STREET - IMPROVEMENTS
1/8" = 1'-0"

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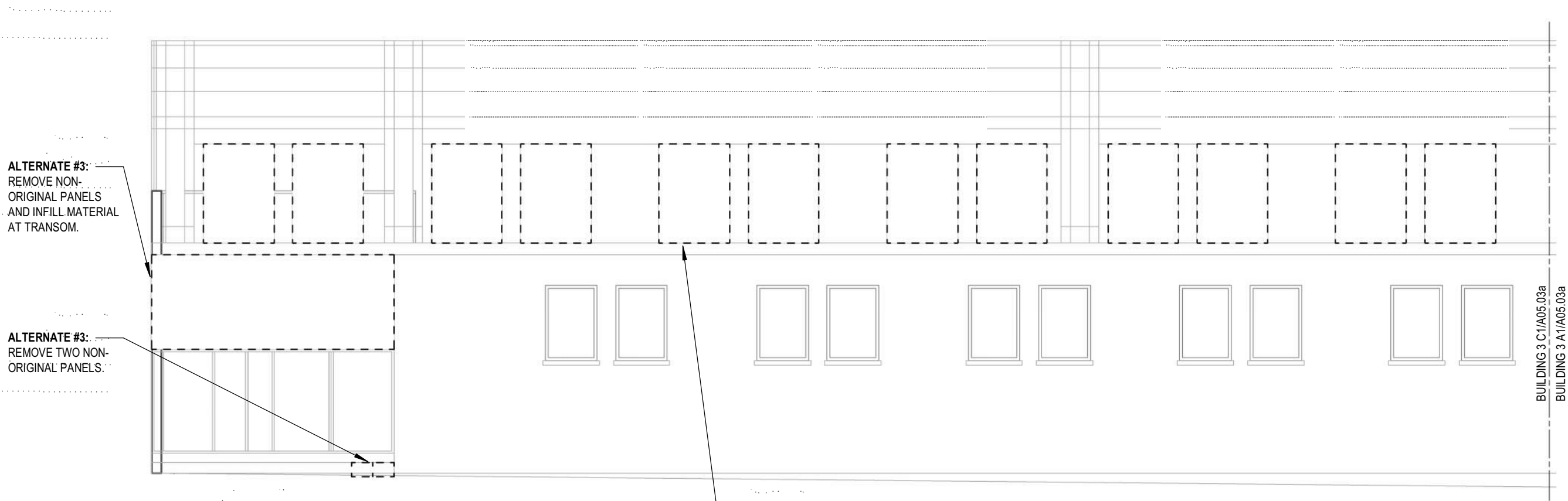
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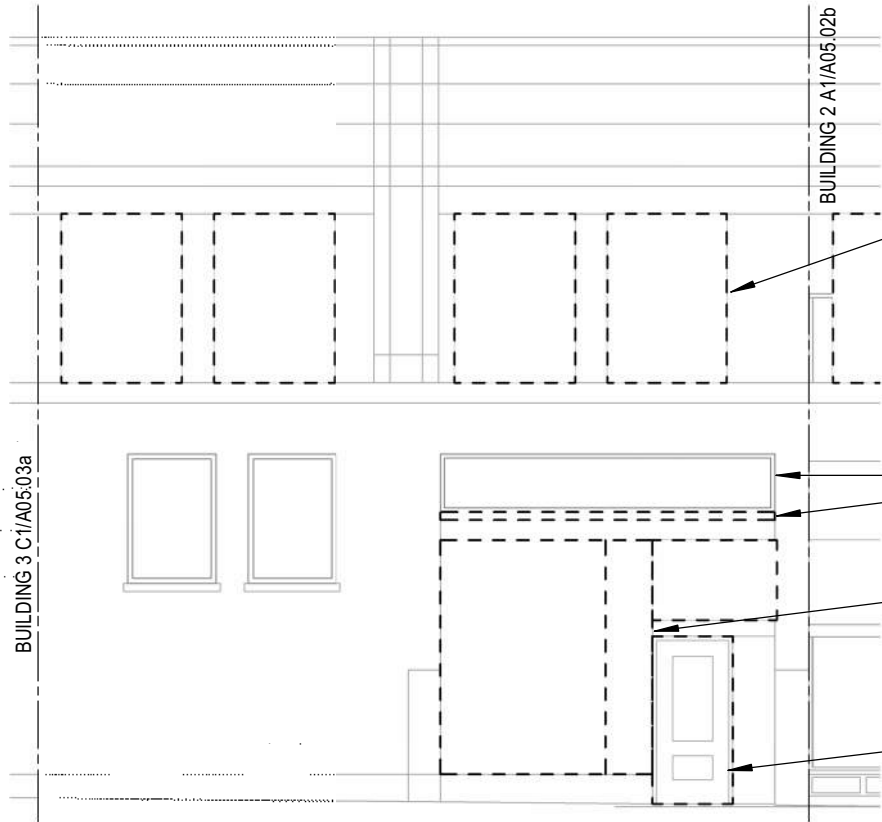
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BUILDING 2
(14-16-18 NORTH CENTER)

A05.02b



C1 BUILDING 3: 1 WEST MAIN STREET - EAST ELEVATION - DEMO
1/8" = 1'-0"



A1 BUILDING 3: 1 WEST MAIN STREET - EAST ELEVATION - DEMO
1/8" = 1'-0"

REMOVE PLYWOOD INFILL AT ALL SECOND FLOOR WINDOWS. (QTY: 22)

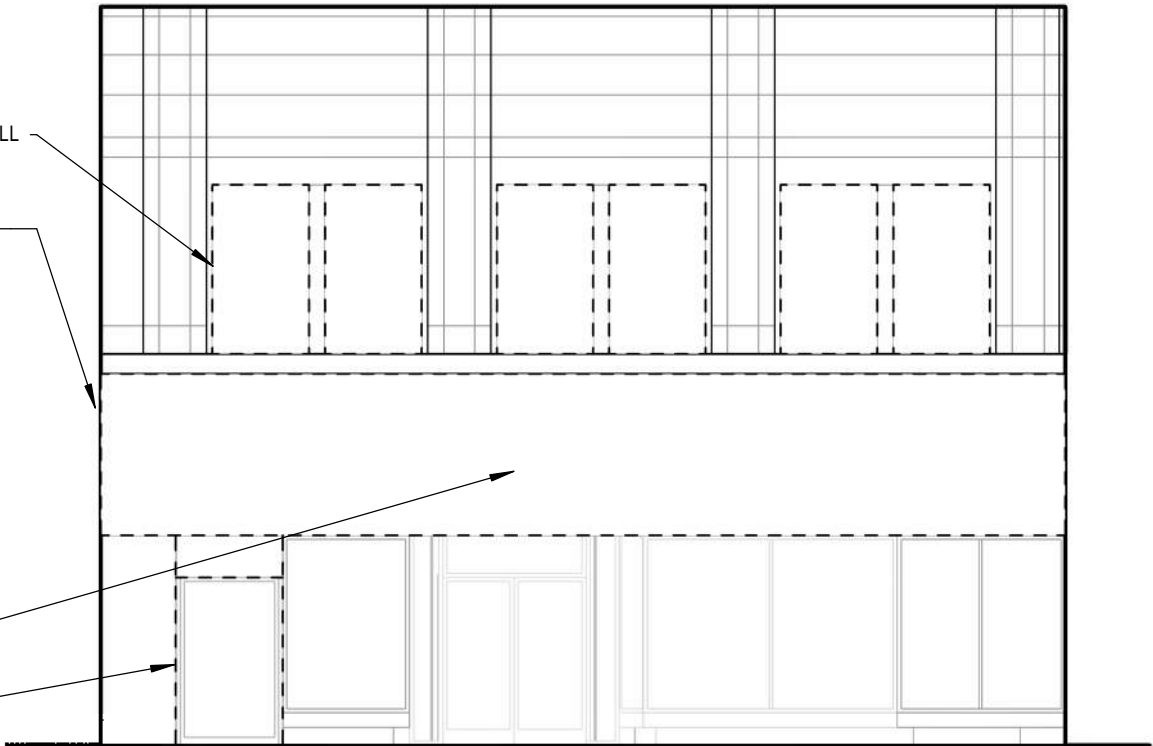
ALTERNATE #3:
REMOVE NON-ORIGINAL PANELS AND INFILL MATERIAL AND SPEAKERS AT TRANSOM; SALVAGE TWO PANELS FOR REUSE.

REMOVE AWNING COVER; REATTACH LOOSE TRIM.

ALTERNATE #4:
REMOVE PANELING.

REMOVE AND SALVAGE SIGN.

ALTERNATE #4:
REMOVE DOORS AND PANELING AT TRANSOMS.



A3 BUILDING 3: 1 WEST MAIN STREET - SOUTH ELEVATION - DEMO
1/8" = 1'-0"

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BUILDING 3 (1
WEST MAIN)
DEMOLITION

A05.03a

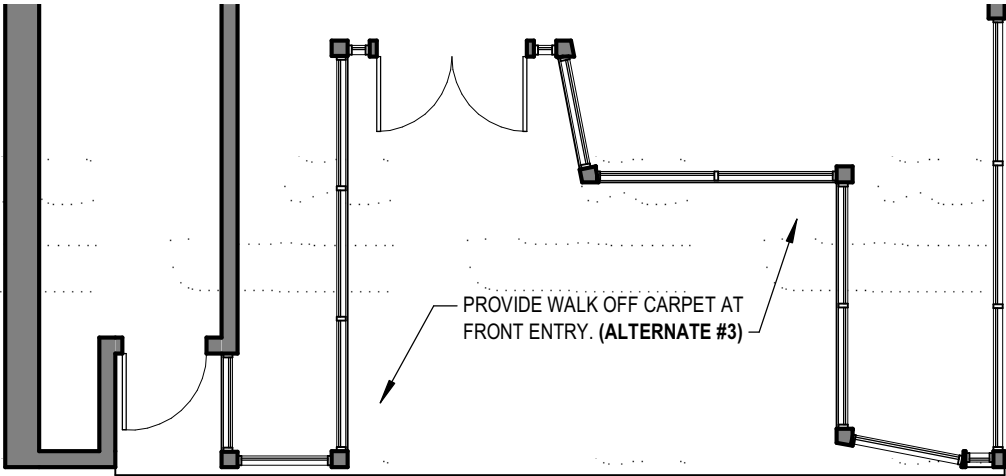
MATERIAL LEGEND	
DOOR	
	DOOR 3A: CLEAR ANODIZED ALUMINUM
WALK OFF CARPET	
	B.O.D.: MILIKEN OBEX GRID - VINYL CLOSED
PAINT COLORS	
	"SNOWBOUND" - SHERWIN WILLIAMS "SW 6258"
	TBD

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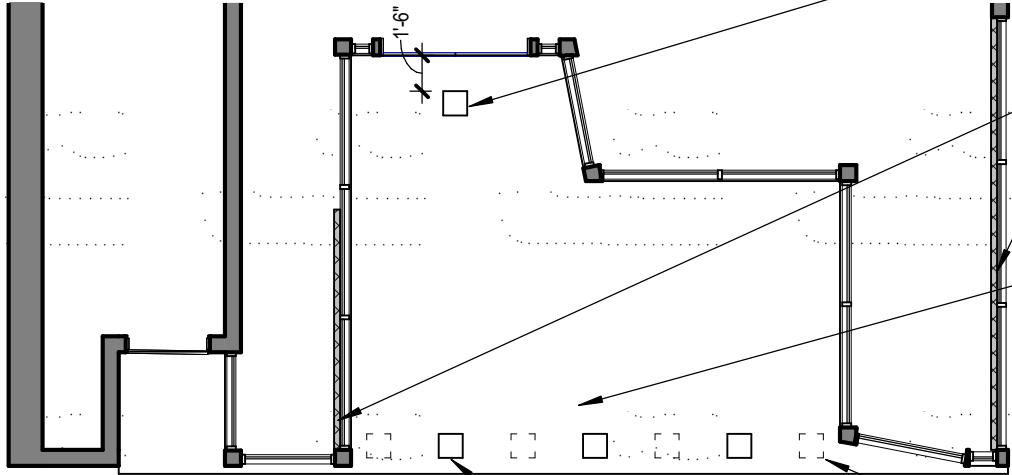
TYPICAL CONDITIONS AT BUILDING #2 AND #3.

INTERIOR WINDOW CONDITIONS (N.T.S.)

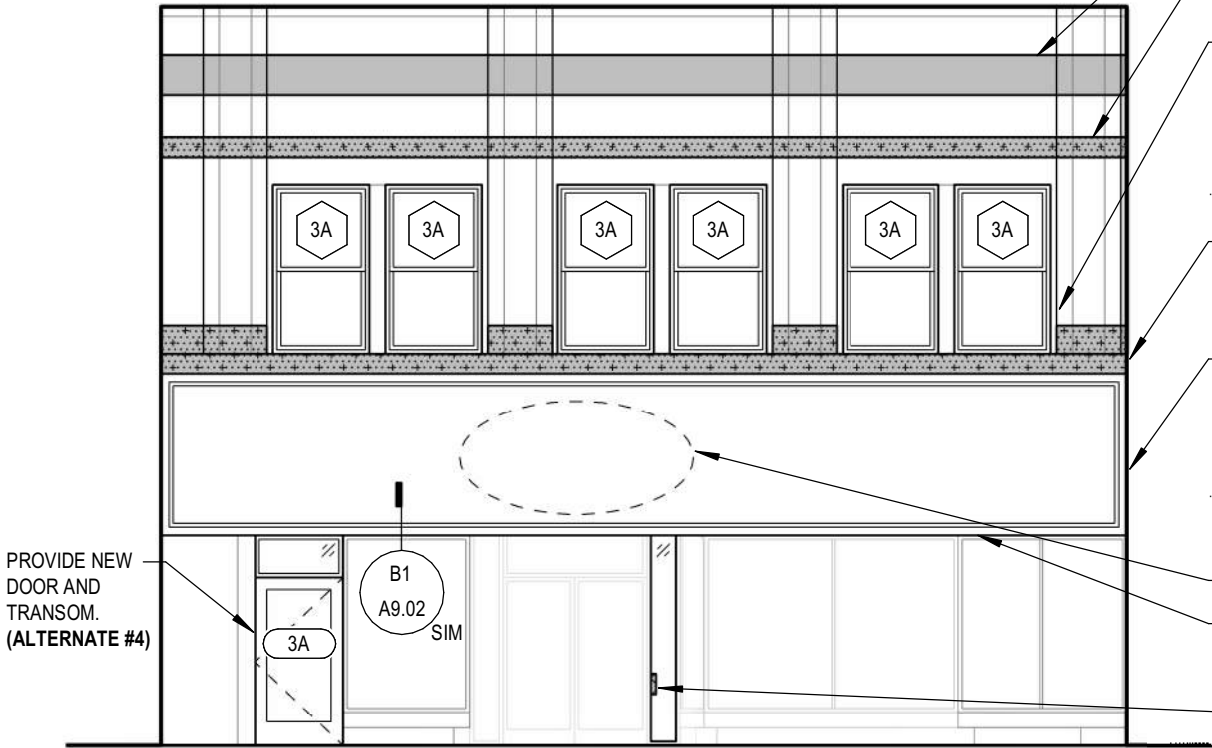


A1 BUILDING 3: 1 WEST MAIN STREET - IMPROVEMENTS - PLAN
1/8" = 1'-0"

ROUTE POWER TO EXISTING ELECTRICAL PANEL. PROVIDE ELECTRONIC TIMER SWITCH (LEVITON LTB12-1LZ, OR EQUAL). INSTALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.



C3 BUILDING 3: 1 WEST MAIN STREET - REFLECTED CEILING PLAN
1/8" = 1'-0"



A3 BUILDING 3: 1 WEST MAIN STREET - SOUTH ELEVATION - IMPROVEMENTS
1/8" = 1'-0"

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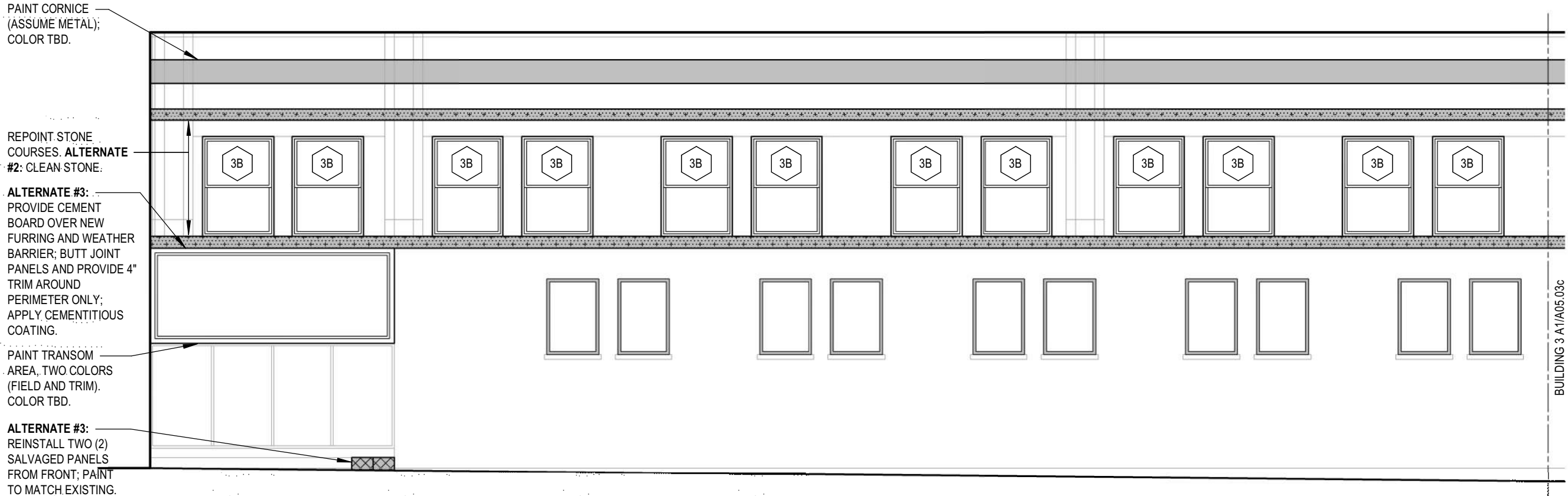
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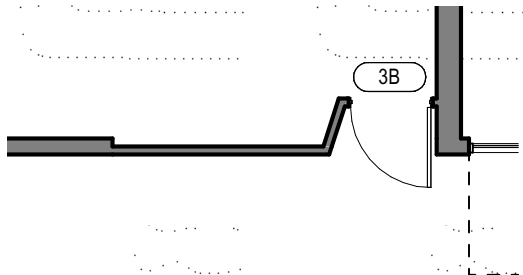
BUILDING 3 (1
WEST MAIN)
IMPROVEMENTS

A05.03b



BUILDING 3 A1/A05.03c

C1 BUILDING 2: 1 W. MAIN STREET - EAST ELEVATION - IMPROVEMENTS
1/8" = 1'-0"



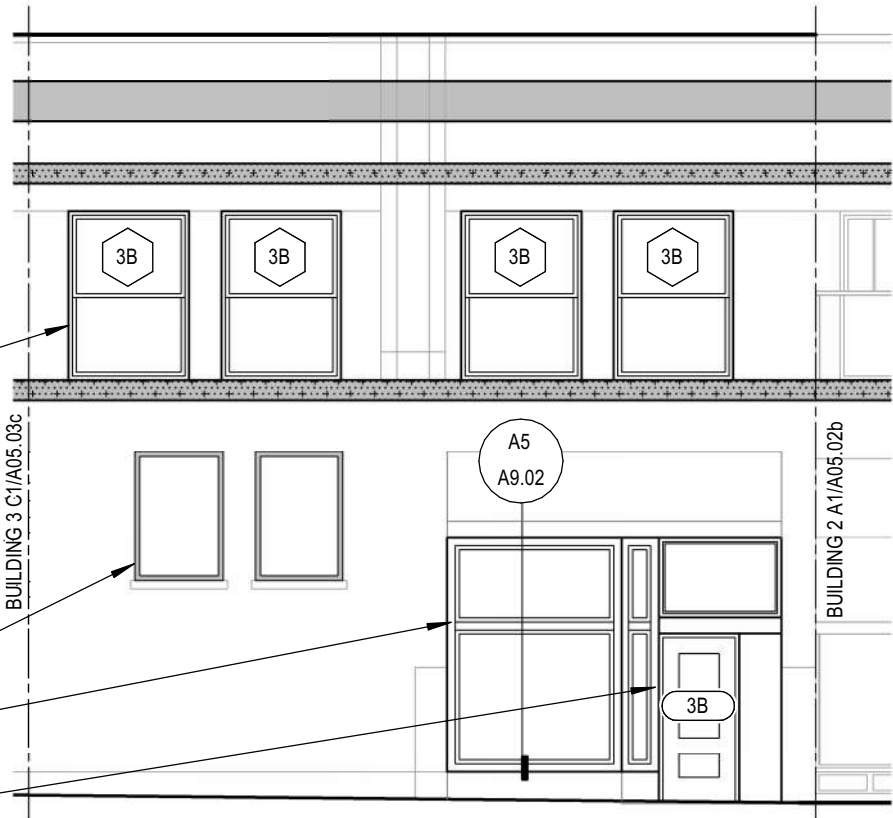
A1 BUILDING 3: 1 W. MAIN STREET - EAST ELEVATION
1/8" = 1'-0"

BASE BID: PERFORM MINOR REPAIRS TO SIXTEEN (16) WINDOWS, PROVIDE STORM WINDOWS; PAINT COLOR TBD.
ALTERNATE #4: PERFORM FULL REHABILITATION AS NOTED ON SHEET A10.01.

PREP AND PAINT TWELVE (12) WINDOW FRAMES; COLOR TBD.

ALTERNATE #4: PROVIDE CEMENT BOARD SIDING AND TRIM; PAINT TBD.

ALTERNATE #4: PROVIDE DOOR, REHAB TRANSOM. PAINT COLOR TBD.



A3 BUILDING 2: 1 W. MAIN - EAST ELEVATION - IMPROVEMENTS
1/8" = 1'-0"

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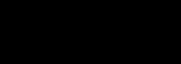
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BUILDING 3 (1
WEST MAIN)
IMPROVEMENTS

A05.03c

MATERIAL LEGEND	
AWNING	
	"MORELAND TAUPE" - SUNBRELLA MODEL "4880"
DOOR AND WINDOW COLORS	
	WINDOWS: "BROWN" - (B.O.D.: PELLA ALUMINUM-CLAD)
PAINT COLORS	
	"TRICORN BLACK" - SHERWIN WILLIAMS "SW 6258"

NOTE: DUE TO VARIATIONS IN PRINTERS AND RESOLUTION SETTINGS, THE SAMPLES SHOWN HERE ARE FOR REFERENCE ONLY. FOR A HIGHER QUALITY MATCH REFERENCE ACTUAL SAMPLES.

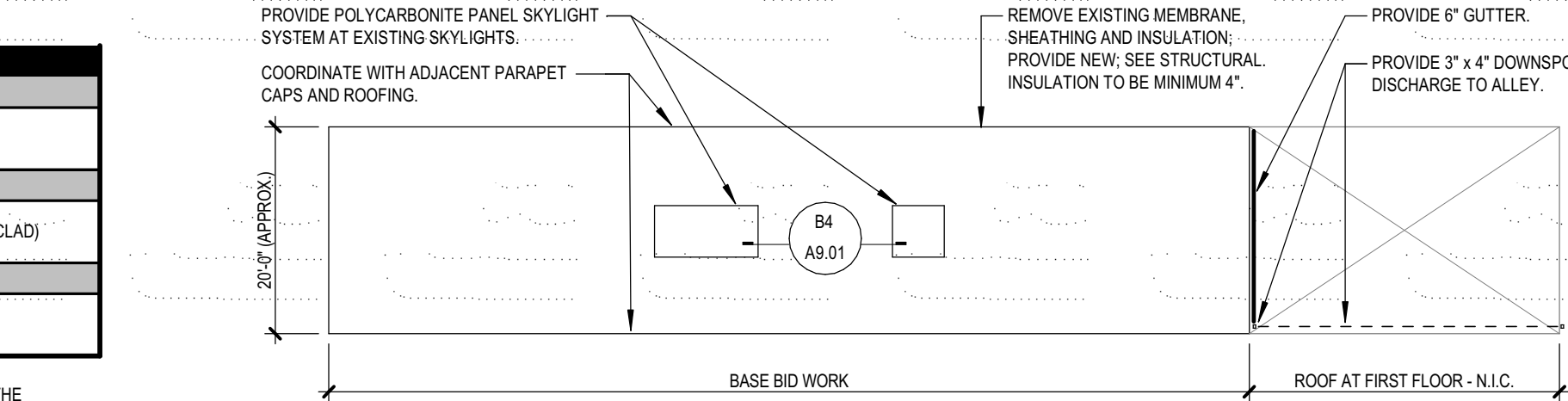


SKYLIGHT AT BUILDING #5

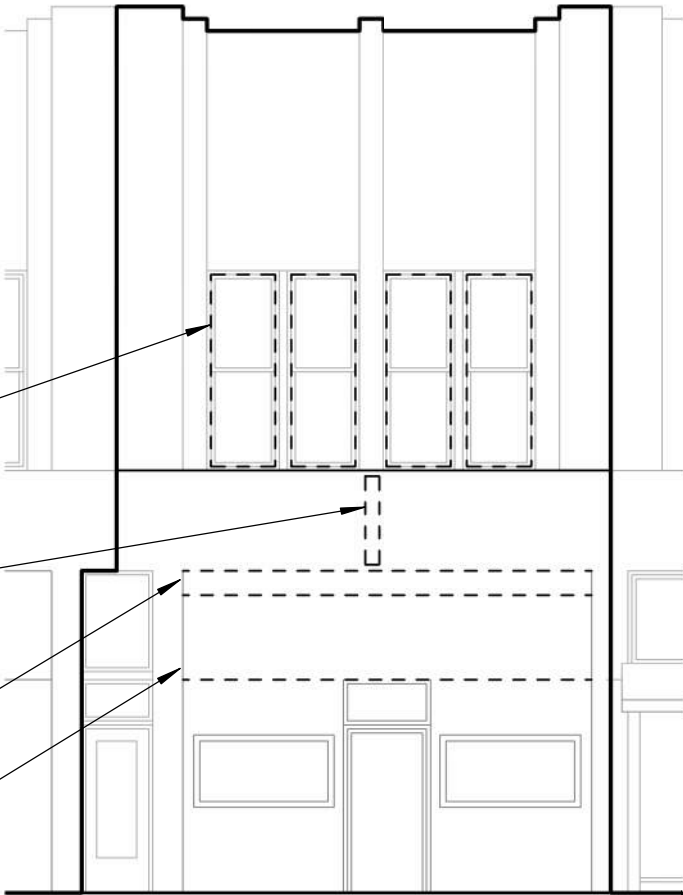


TYPICAL CONDITIONS AT BUILDING #5.

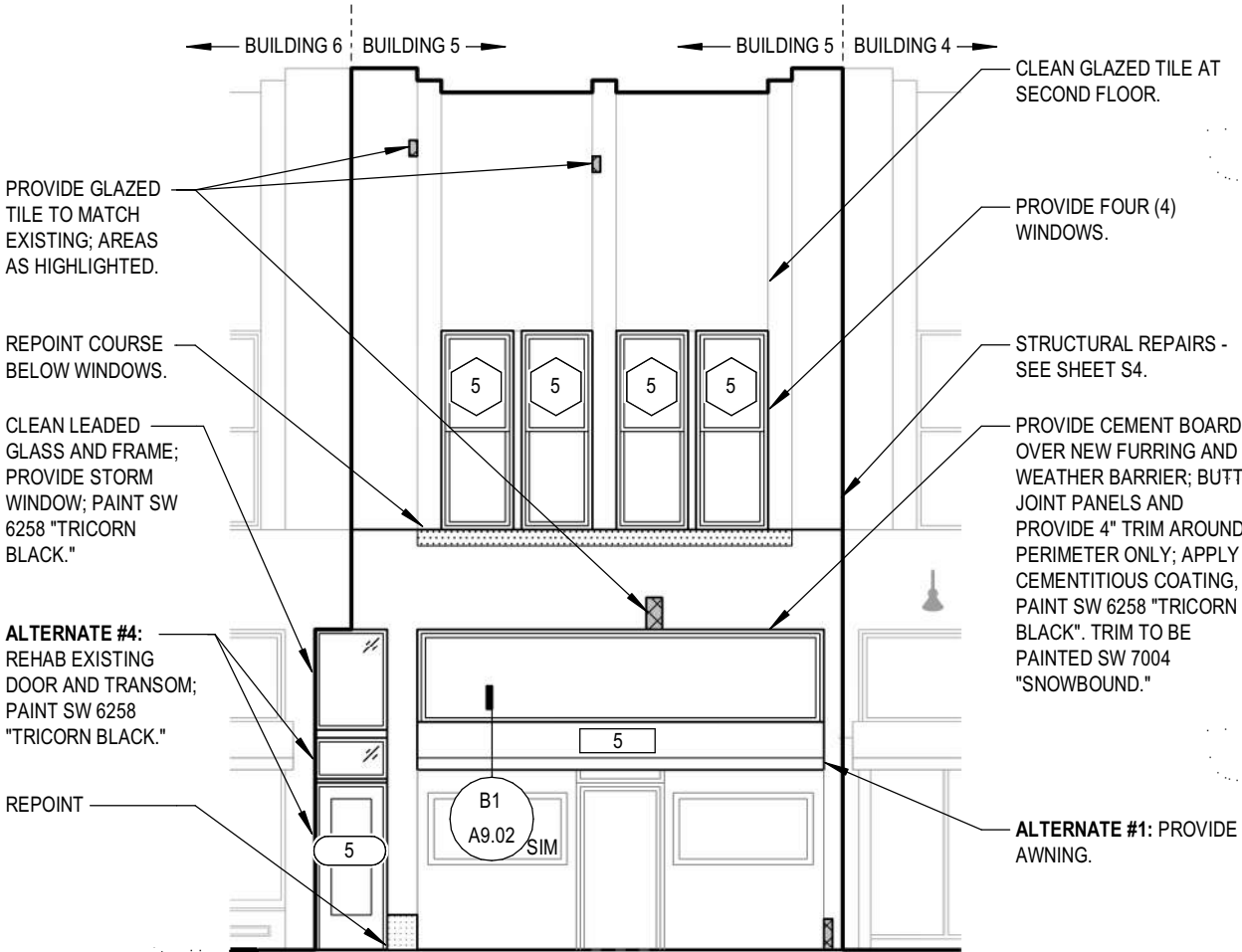
INTERIOR WINDOW CONDITIONS (N.T.S.)



C3 BUILDING 5: 21 WEST MAIN STREET - ROOF PLAN
1/16" = 1'-0"



A2 BUILDING 5: 21 WEST MAIN - DEMO
1/8" = 1'-0"



A4 BUILDING 5: 21 WEST MAIN - IMPROVEMENTS
1/8" = 1'-0"



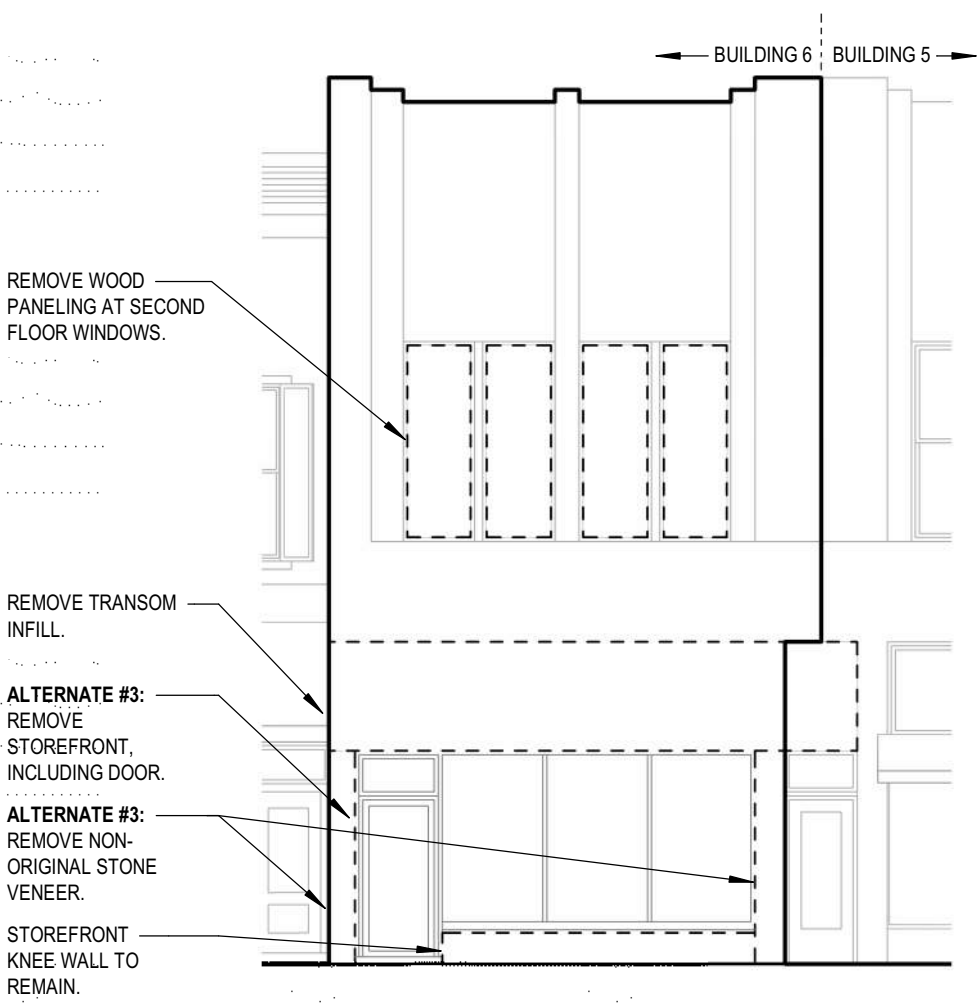
MATERIAL LEGEND	
AWNING	
	"BLACK/TAUPE FANCY" - SUNBRELLA MODEL "4946"
DOOR AND WINDOW COLORS	
	WINDOWS: "BROWN" - (B.O.D.: PELLA ALUMINUM-CLAD)
	STOREFRONT/DOOR: "ANODIZED ALUMINUM"
PAINT COLORS	
	"TRICORN BLACK" - SHERWIN WILLIAMS "SW 6258"

NOTE: DUE TO VARIATIONS IN PRINTERS AND RESOLUTION SETTINGS, THE SAMPLES SHOWN HERE ARE FOR REFERENCE ONLY. FOR A HIGHER QUALITY MATCH REFERENCE ACTUAL SAMPLES.



TYPICAL CONDITIONS AT BUILDING #6.

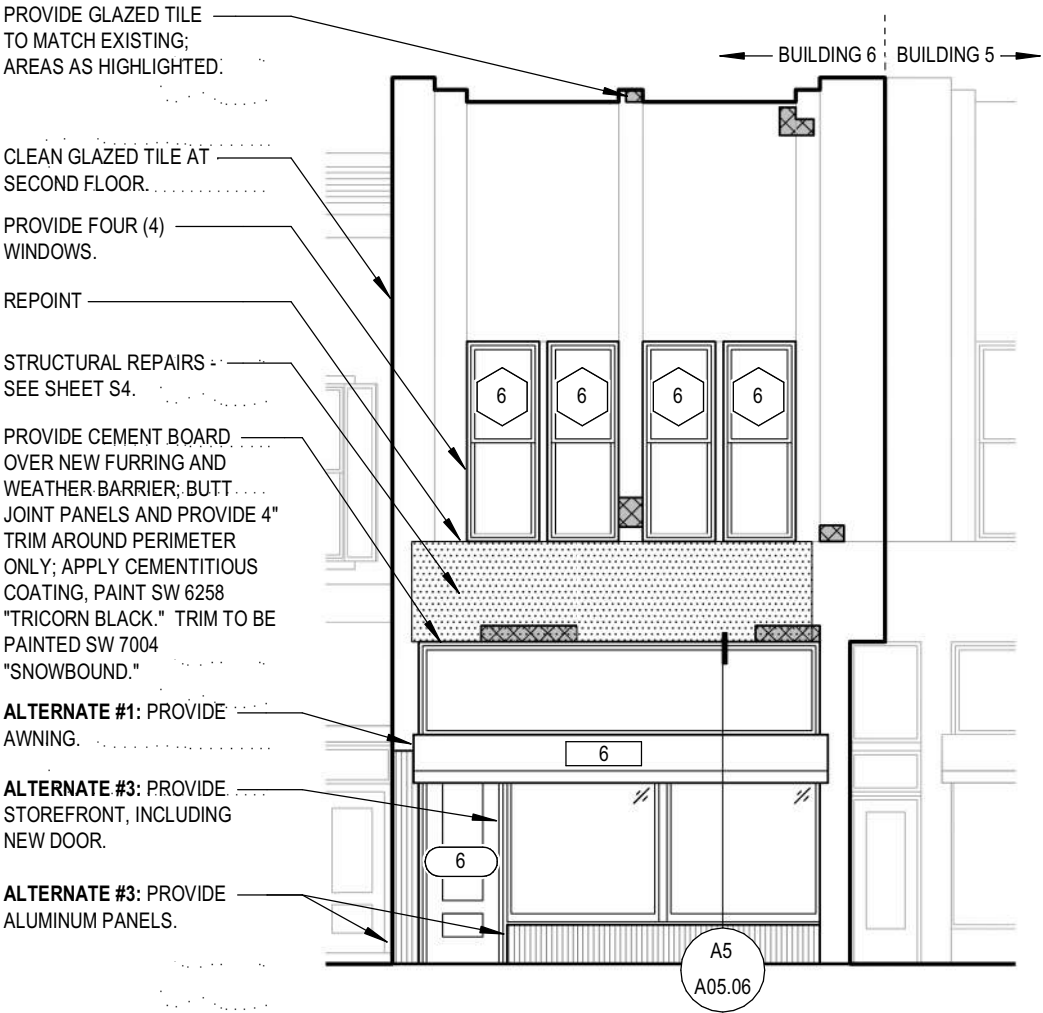
INTERIOR WINDOW CONDITIONS (N.T.S.)



A1

BUILDING 6: 23 W. MAIN STREET - DEMO

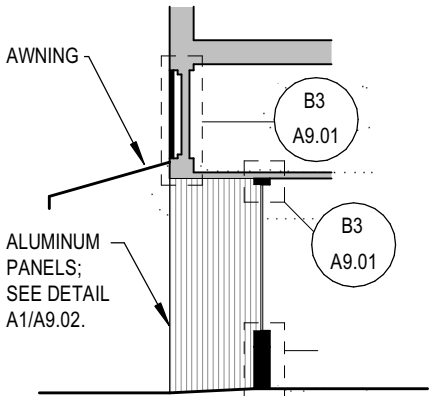
1/8" = 1'-0"



A3

BUILDING 6: 23 W. MAIN STREET - IMPROVEMENTS

1/8" = 1'-0"



A5

SECTION A

1/8" = 1'-0"

MARSHALLTOWN FACADE REHABILITATION

CONSTRUCTION DOCUMENTS



ARCHITECT
RDG Planning & Design
301 Grand Avenue
Des Moines, Iowa 50309-1718
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www.rdgusa.com



MARSHALLTOWN
MORE THAN EVER

REV DATE DESCRIPTION

ISSUED: FEBRUARY 20, 2023

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BUILDING 6 (23
WEST MAIN)

A05.06



TYPICAL CONDITIONS AT BUILDING #7.

INTERIOR WINDOW CONDITIONS (N.T.S.)



A1 BUILDING 7: 25 WEST MAIN STREET - EXISTING
1/8" = 1'-0"

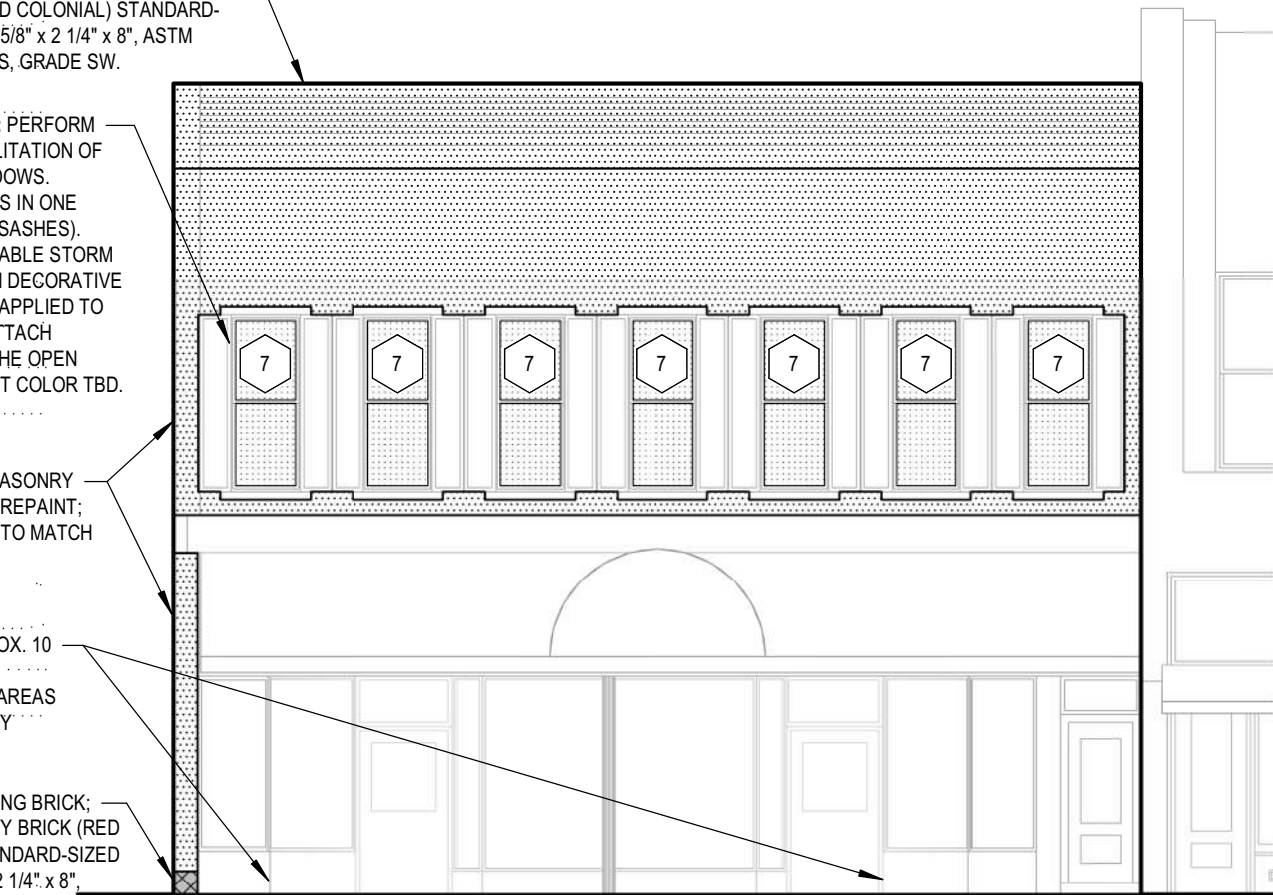
REPLACE MISSING OR DAMAGED BRICK (ASSUME APPROX. 20 SF); AREAS AS DIRECTED BY ARCHITECT. BOD: SIOUX CITY BRICK (RED COLONIAL) STANDARD-SIZED BRICK, 3 5/8" x 2 1/4" x 8", ASTM C-216, TYPE FBS, GRADE SW.

ALTERNATE #4: PERFORM MINOR REHABILITATION OF SEVEN (7) WINDOWS. REPLACE GLASS IN ONE WINDOW (TWO SASHES). PROVIDE OPERABLE STORM WINDOWS WITH DECORATIVE FILM OVERLAY APPLIED TO GLAZING. REATTACH SHUTTERS IN THE OPEN POSITION. PAINT COLOR TBD.

REPOINT ALL MASONRY AT BUILDING 7; REPAINT; PAINT COLORS TO MATCH EXISTING.

REPOINT APPROX. 10 LF AT LOWER STOREFRONT; AREAS AS DIRECTED BY ARCHITECT.

REPLACE MISSING BRICK; BOD: SIOUX CITY BRICK (RED COLONIAL) STANDARD-SIZED BRICK, 3 5/8" x 2 1/4" x 8", ASTM C-216, TYPE FBS, GRADE SW.



A3 BUILDING 7: 25 WEST MAIN STREET - IMPROVEMENTS
1/8" = 1'-0"

CONSTRUCTION DOCUMENTS

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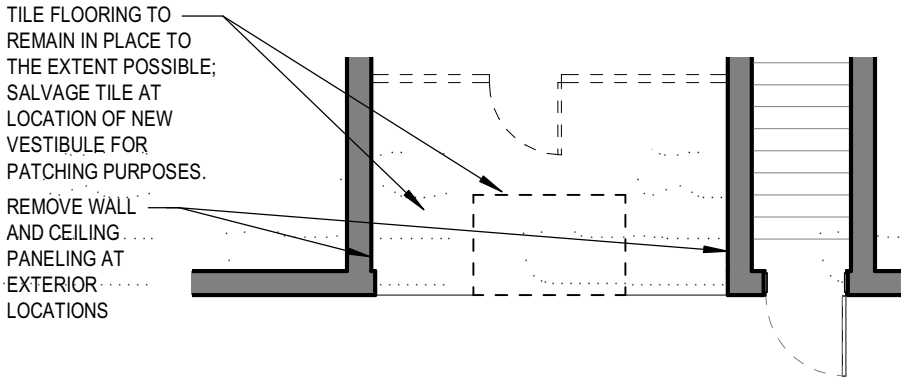
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BUILDING 7 (25 WEST MAIN)

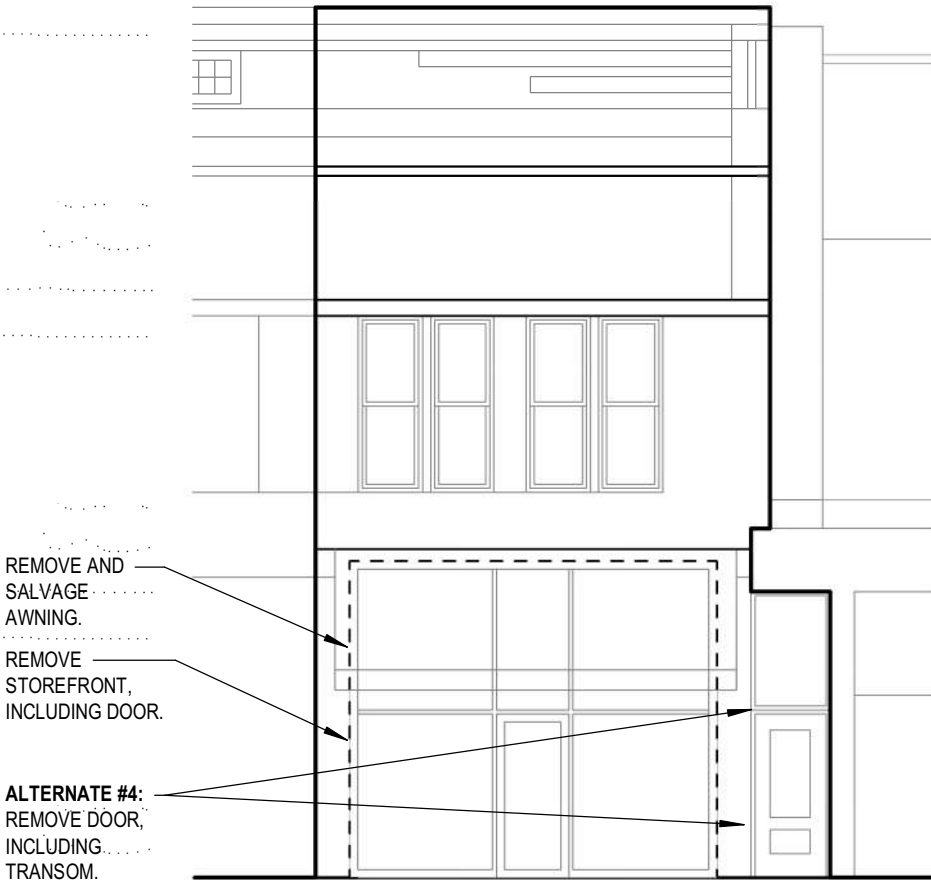
A05.07

MATERIAL LEGEND	
PAINT COLORS	
	"LIBRARY PEWTER" - SHERWIN WILLIAMS "SW 0038"
	"SNOWBOUND" - SHERWIN WILLIAMS "SW 7004"

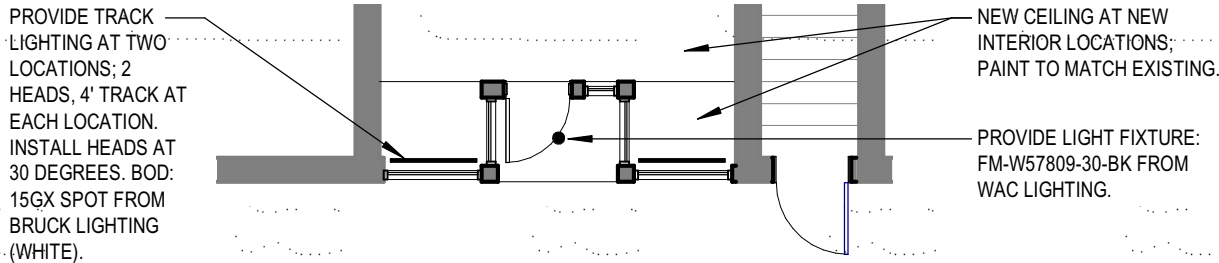
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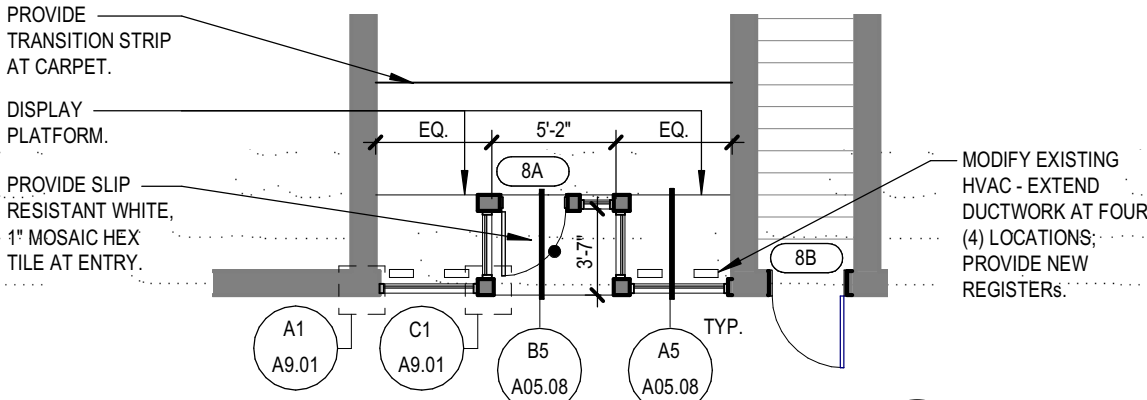
C1 BUILDING 8: 14 W. MAIN STREET - DEMO PLAN
1/8" = 1'-0"



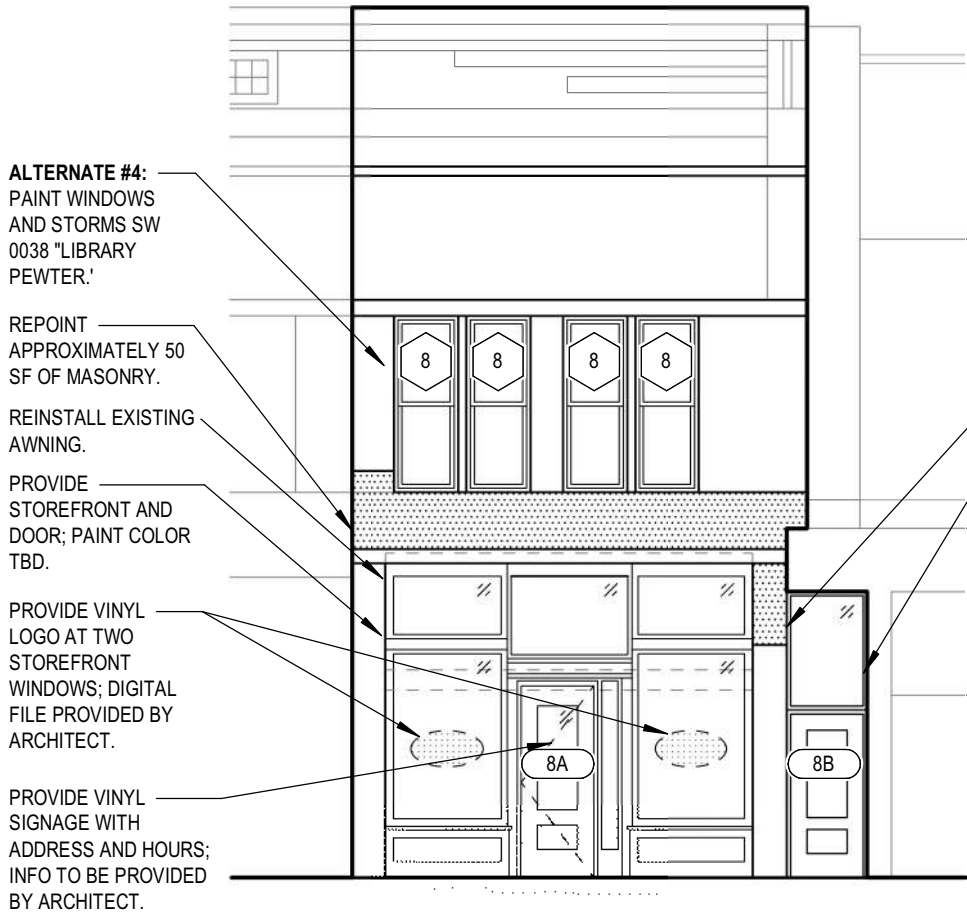
A1 BUILDING 8: 14 W. MAIN STREET - DEMO
1/8" = 1'-0"



D3 BUILDING 8: 14 W. MAIN STREET - CEILING PLAN
1/8" = 1'-0"



C3 BUILDING 8: 14 W. MAIN STREET - IMPROVEMENTS
1/8" = 1'-0"



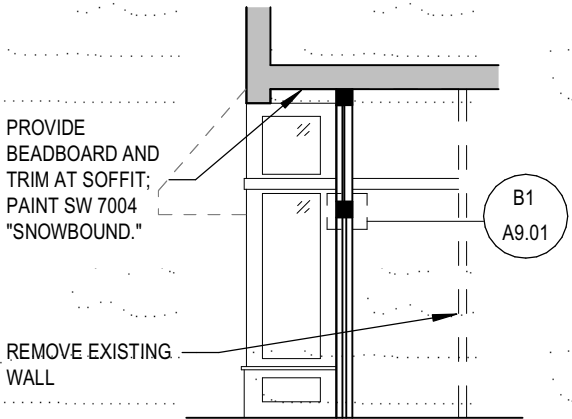
A3 BUILDING 8: 14 W. MAIN STREET - IMPROVEMENTS
1/8" = 1'-0"

ROUTE POWER TO EXISTING ELECTRICAL PANEL. PROVIDE ELECTRONIC TIMER SWITCH (LEVITON LTB12-1LZ, OR EQUAL). INSTALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

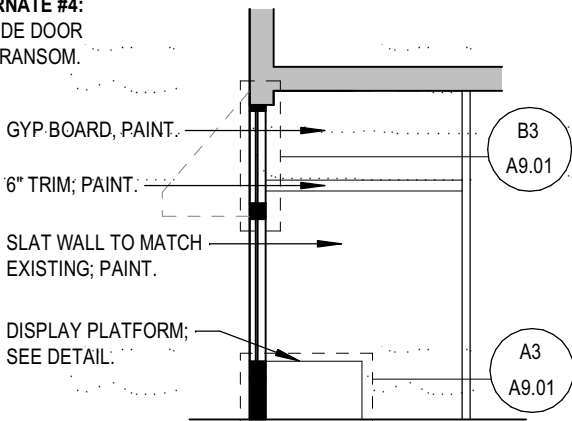


BASEMENT CONDITIONS AT HVAC LOCATIONS.

BUILDING #8 BASEMENT (N.T.S.)



B5 SECTION B
1/8" = 1'-0"



A5 SECTION A
1/8" = 1'-0"

CONSTRUCTION DOCUMENTS

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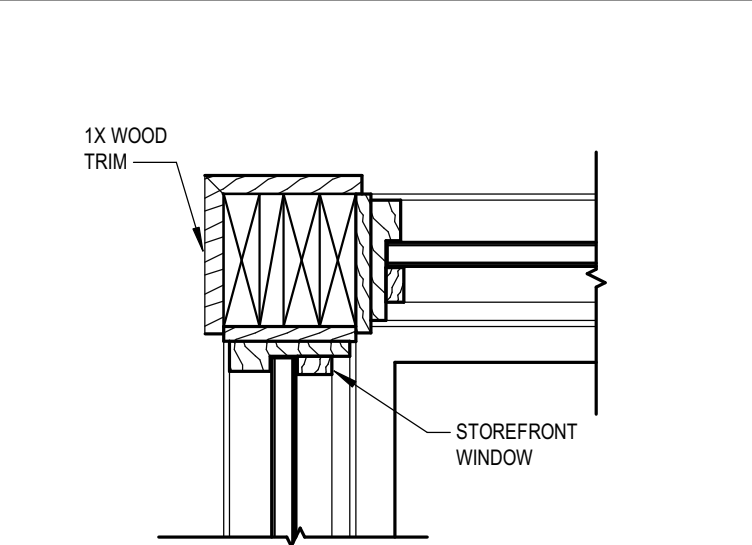
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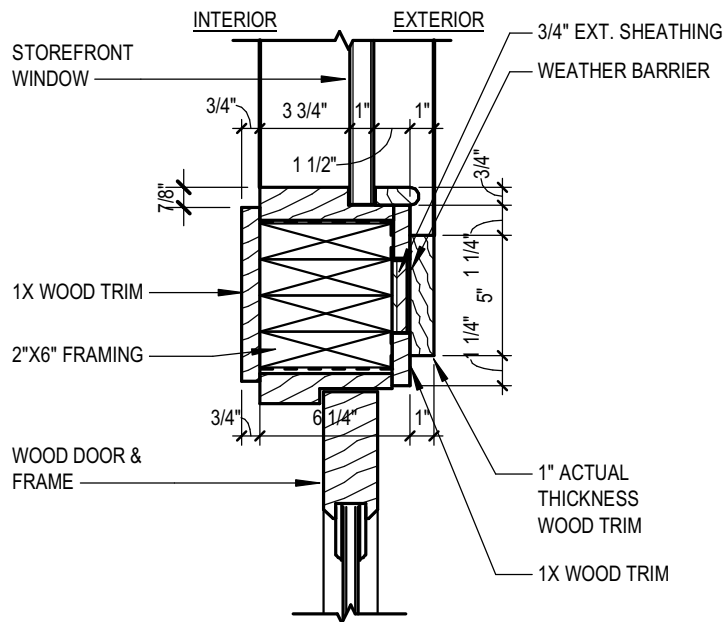
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BUILDING 8 (14 WEST MAIN)

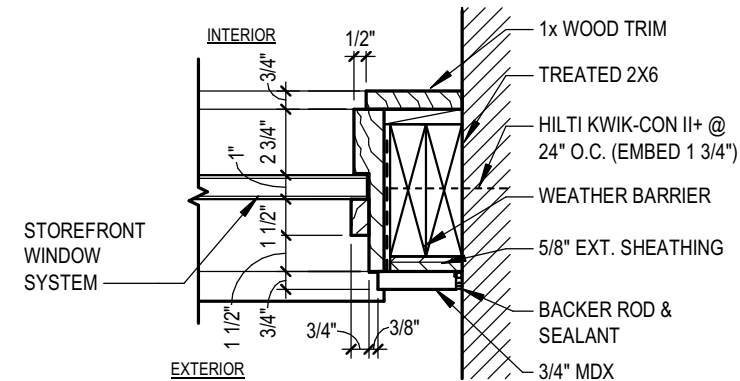
A05.08



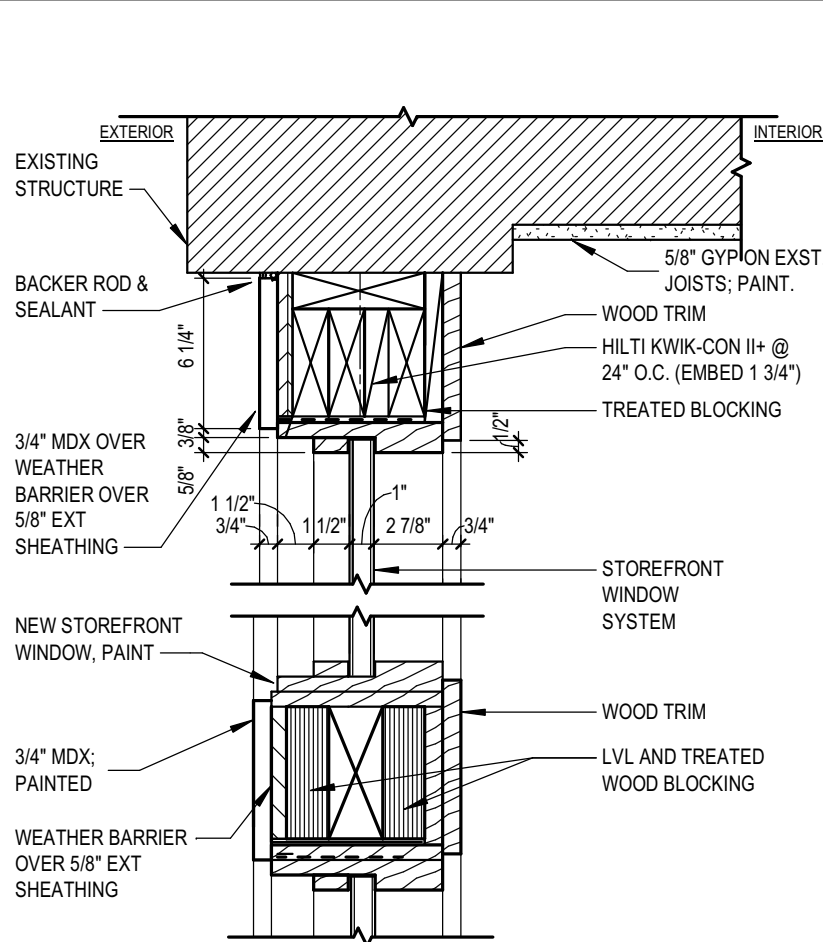
C1 STOREFRONT CORNER DETAIL
1 1/2" = 1'-0"



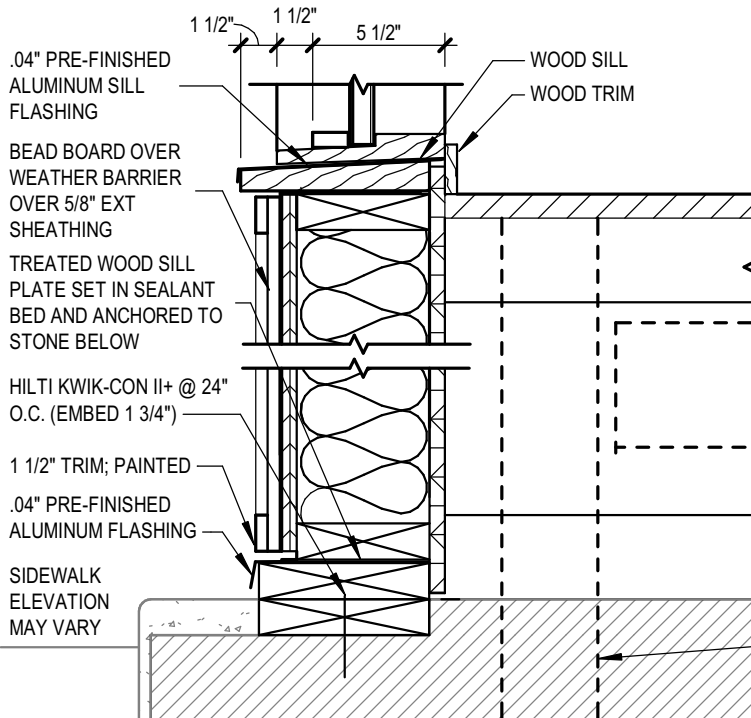
B1 STOREFRONT DOOR TRANSOM DETAIL
1 1/2" = 1'-0"



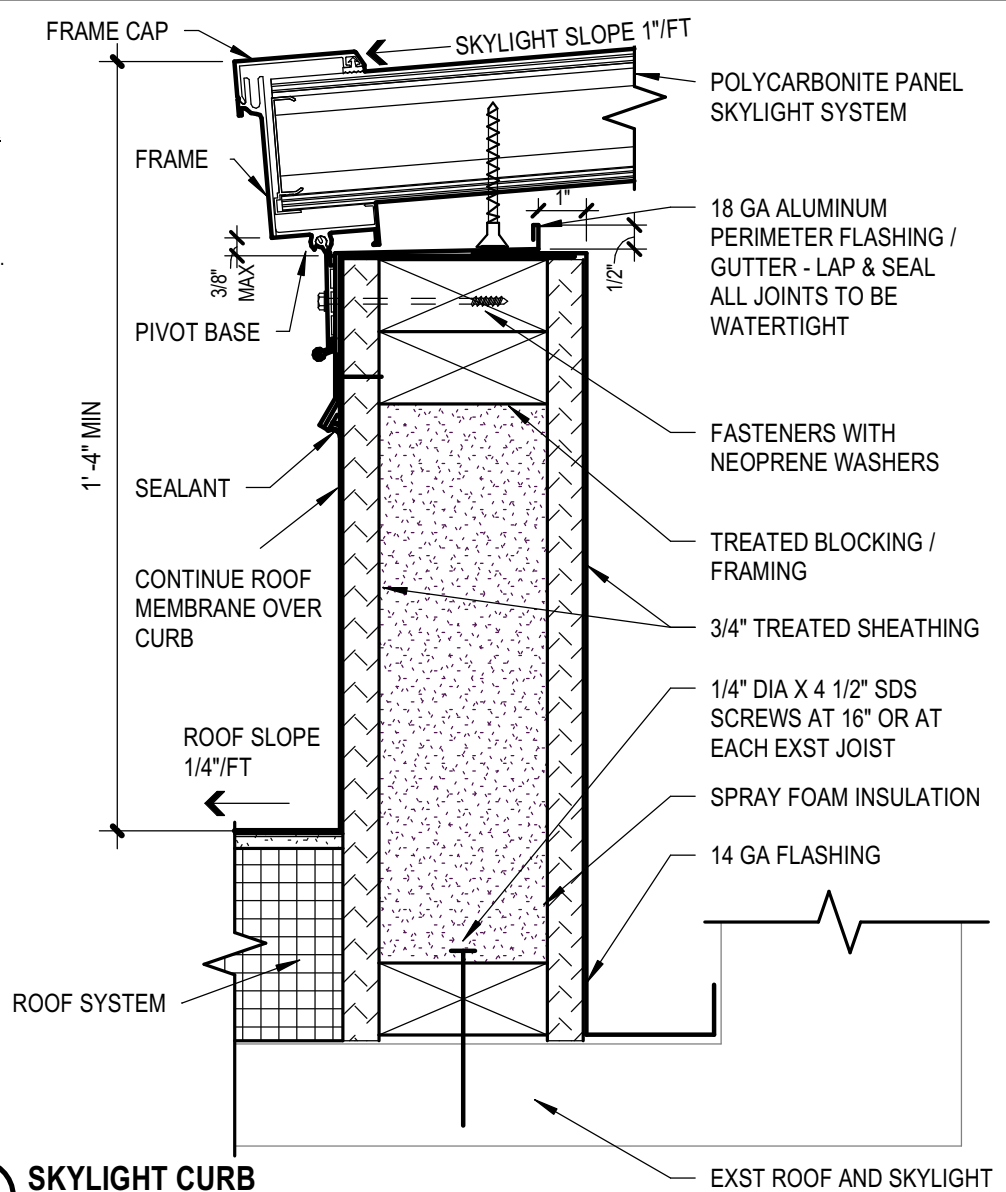
A1 STOREFRONT JAMB DETAIL
1 1/2" = 1'-0"



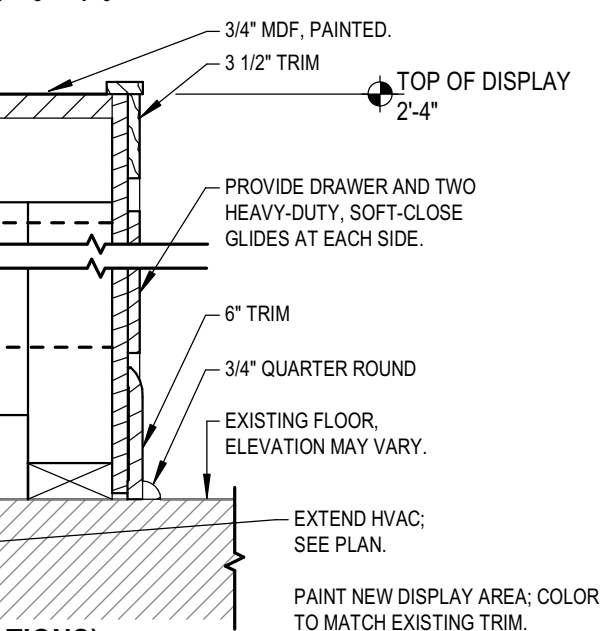
B3 STOREFRONT HEAD AND TRANSOM DETAIL
1 1/2" = 1'-0"



A3 STOREFRONT SILL DETAIL AT BUILDING #8 (TWO LOCATIONS)
1 1/2" = 1'-0"



B4 SKYLIGHT CURB
3" = 1'-0"



CONSTRUCTION DOCUMENTS

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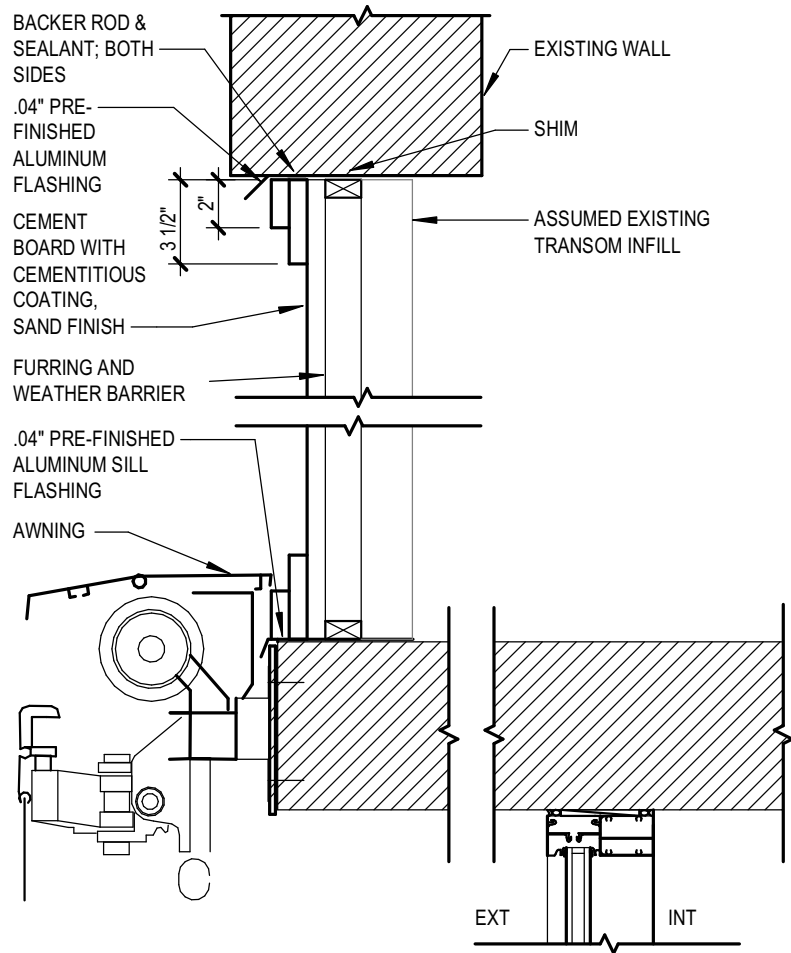
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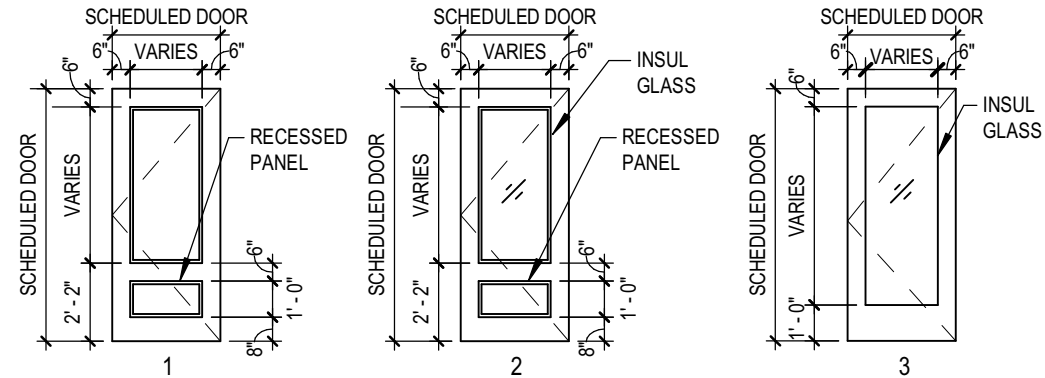
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EXTERIOR
DETAILS

A9.01

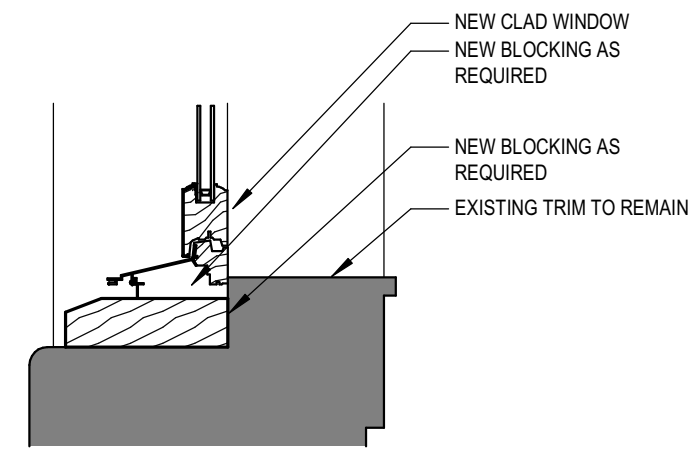


DOOR SCHEDULE										
MARK	ADDRESS	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR MATERIAL	FRAME MATERIAL	TRANSOM	SIDELIGHT	REPAIR CLASS	COMMENTS
1	13-15 S. CENTER STREET			EXST	WD	WD	Y	Y	3	PROVIDE INSULATED GLAZING.
2-14	14 N. CENTER STREET	3'-4"	6'-10"	EXST	WD	WD	Y	N	2	
2-16	16 N. CENTER STREET	3'-4"	6'-10"	EXST	WD	WD	Y	N	2	
2-18	18 N. CENTER STREET	3'-4"	6'-10"	EXST	WD	WD	Y	N	2	
3A	1 W. MAIN STREET	3'-4"	7'-0"	3	ALUM	ALUM	Y	N	N/A	PROVIDE DECORATIVE FILM OVERLAY AT GLAZING.
3B	1 W. MAIN STREET	3'-6"	6'-8"	1	ALUM	ALUM	Y	N	N/A	REHAB TRANSOM.
5	21 W. MAIN STREET	3'-0"	7'-0"	EXST	WD	WD	Y	N	2	
6	23 W. MAIN STREET	3'-6"	7'-0"	3	ALUM	ALUM	Y	N	N/A	
8A	14 W. MAIN STREET	3'-0"	7'-0"	2	WD	WD	Y	Y	N/A	
8B	14 W. MAIN STREET	2'-11"	7'-0"	2	WD	WD	Y	N	N/A	



WINDOW SCHEDULE										
MARK	ADDRESS	QTY	OPENING WIDTH	OPENING HEIGHT	MATERIAL	REPAIR	NEW	STORM WINDOWS	REPAIR CLASS	NOTES
1A	13-15 N. CENTER STREET	10	2'-10"	8'-6"	EXST. WD	Y	N	Y	3	STORMS ARE ALTERNATE #4.
1B	13-15 N. CENTER STREET	6	2'-10"	8'-6"	EXST. WD	Y	N	Y	3	PROVIDE NEW TRIM TO MATCH EXISTING TRIM AT WINDOWS 1A, PAINT.
3A	1 W. MAIN STREET	6	3'-10"	6'-6"	EXST. WD	Y	N	Y	SEE NOTE	BASE BID: MINOR REPAIR (CLASS 1). ALTERNATE #4: FULL REHABILITATION (CLASS 3).
3B	1 W. MAIN STREET and 14-16-18 N. CENTER STREET	22	4'-10"	6'-6"	EXST. WD	Y	N	Y	SEE NOTE	BASE BID: MINOR REPAIR (CLASS 1). ALTERNATE #4: FULL REHABILITATION (CLASS 3).
5	21 and 23 W. MAIN STREET	8	2'-8"	7'-8"	ALUM-CLAD	N/A	Y	N	N/A	
7	25 W. MAIN STREET	7	2'-8"	7'-1"	EXST. WD	Y	N	Y	1	REPAIR ONE WINDOW; SEE SHEET A05.07.
8	14 W. MAIN STREET	4	2'-8"	7'-2"	EXST. WD	N	N	EXIST.	N/A	PAINT ONLY.

C4 ALUMINUM CLAD WINDOW
1 1/2" = 1'-0"

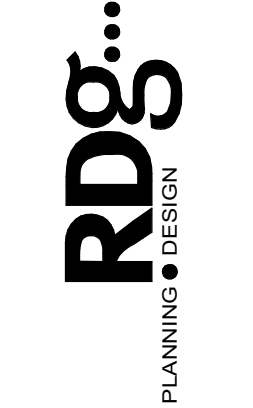


MARSHALLTOWN FACADE REHABILITATION

CONSTRUCTION DOCUMENTS



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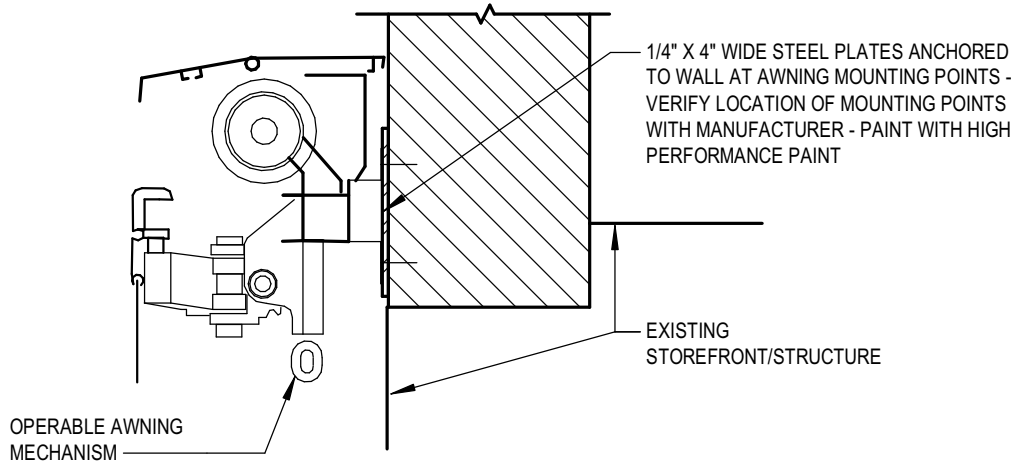
DOOR AND WINDOW SCHEDULES

A10.01

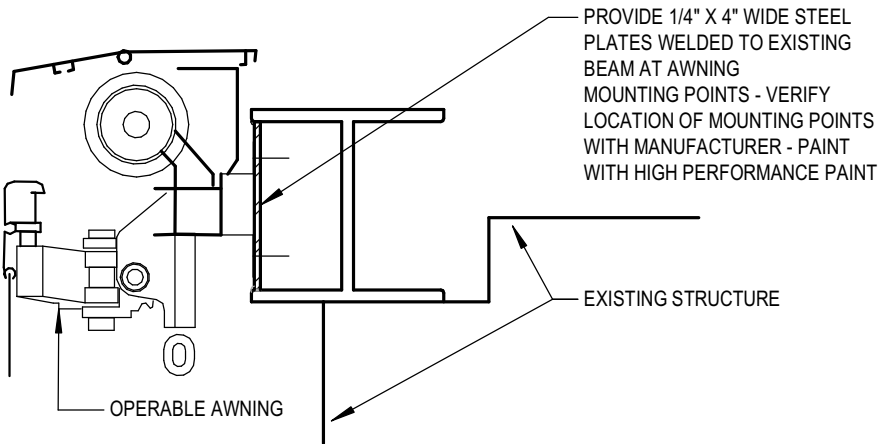
AWNING SCHEDULE

MARK	ADDRESS	QTY	AWNING DIM 'A'	AWNING DIM 'B'	AWNING DIM 'C'	AWNING DIM 'D'	VALANCE STYLE	PATTERN	MODEL NO.	TYPE	COMMENTS
1A	13-15 CENTER STREET	1	19'-8"	5'-0"	5'-0"	8"	STRAIGHT	TBD	TBD	OPERABLE, DROP ARM	PROVIDE WORDS ON SOLID COLOR VALANCE; SEE SHEET A05.01b. ALTERNATE 1.
1B	13-15 CENTER STREET	1	21'-0"	5'-0"	5'-0"	8"	STRAIGHT	TBD	TBD	OPERABLE, DROP ARM	PROVIDE WORDS ON SOLID COLOR VALANCE; SEE SHEET A05.01b. ALTERNATE 1.
1C	13-15 S. CENTER STREET	1	27'-0"	5'-0"	5'-0"	8"	STRAIGHT	TBD	TBD	OPERABLE, DROP ARM	PROVIDE WORDS ON SOLID COLOR VALANCE; SEE SHEET A05.01b. ALTERNATE 1.
2-14	14 N. CENTER STREET	1	14'-8"	5'-0"	5'-0"	6"	WAVY	TBD	TBD	OPERABLE, DROP ARM	ALTERNATE 1.
2-16	16 N. CENTER STREET	1	14'-8"	5'-0"	5'-0"	6"	WAVY	TBD	TBD	OPERABLE, DROP ARM	ALTERNATE 1.
2-18	18 N. CENTER STREET	1	16'-3"	5'-0"	5'-0"	6"	WAVY	TBD	TBD	OPERABLE, DROP ARM	ALTERNATE 1.
4	19 W. MAIN STREET	1	19'-0"	2'-0"	5'-0"	6"	STRAIGHT	COOPER BLACK	4988	OPERABLE, SELF-SUPPORTING ARM	ALTERNATE 1.
5	21 W. MAIN STREET	1	17'-0"	2'-0"	5'-0"	6"	STRAIGHT	MORELAND TAUPE	4880	OPERABLE, SELF-SUPPORTING ARM	ALTERNATE 1.
6	23 W. MAIN STREET	1	17'-0"	2'-0"	5'-0"	6"	STRAIGHT	BLACK/TAUPE FANCY	4946	OPERABLE, SELF-SUPPORTING ARM	ALTERNATE 1.

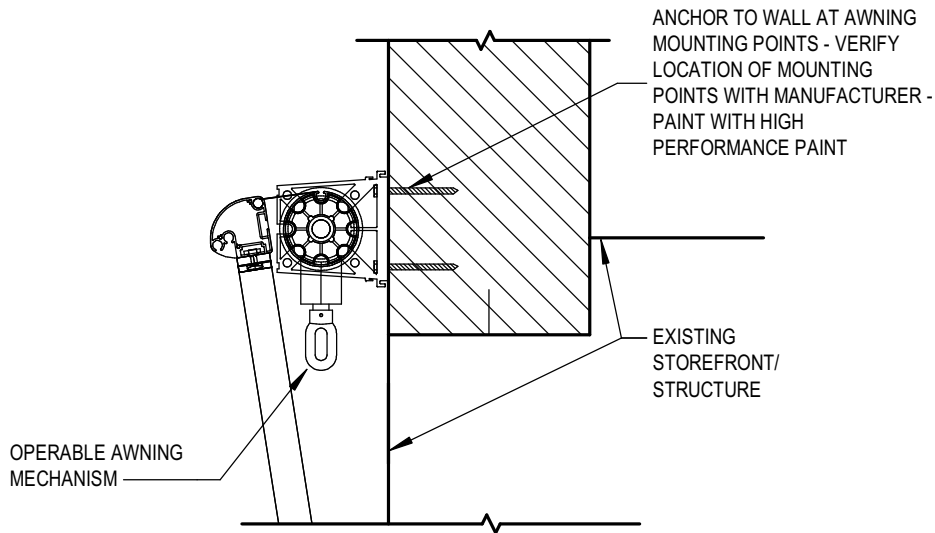
- NOTES:
- CONTRACTOR SHALL VERIFY AWNING DIMENSIONS PRIOR TO SUBMITTALS AND RE-VERIFY PRIOR TO ORDERING MATERIALS. AWNING DIMENSIONS ARE APPROXIMATE ONLY AND SHOULD BE VERIFIED ON SITE.
 - CONTRACTOR TO PROVIDE BLOCKING AS REQUIRED FOR INSTALLATION OF AWNINGS. PROVIDE FLASHING AS REQUIRED; BLOCKING TO BE PAINTED ON ALL SIDES. COLOR TO MATCH TRANSOM AREA UNLESS NOTED OTHERWISE.
 - ALL AWNING COMPONENTS SHALL BE INSTALLED AT LEAST 6'-8" ABOVE THE SIDEWALK OR FLOOR.



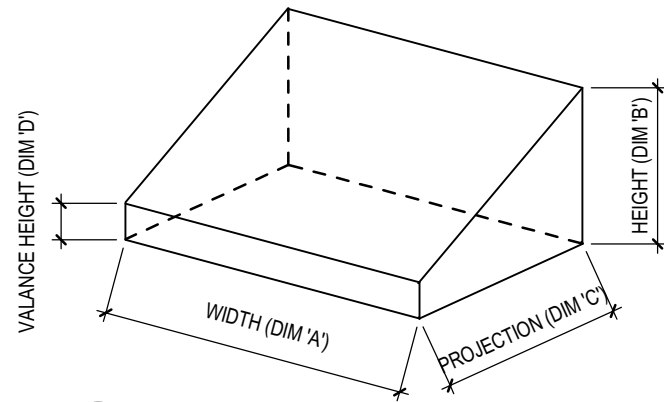
B1 STOREFRONT HEAD | SELF-SUPPORTING OPERABLE AWNING
1 1/2" = 1'-0"



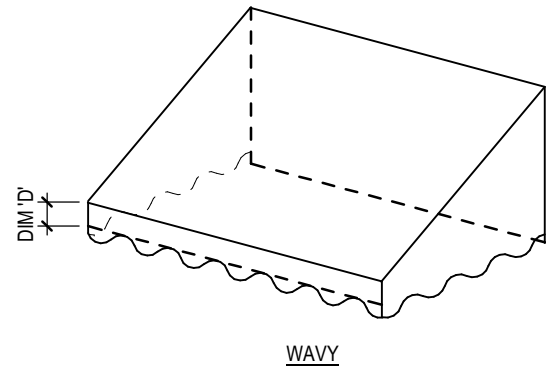
A1 STOREFRONT HEAD DETAIL W/ AWNING
1 1/2" = 1'-0"



A3 STOREFRONT HEAD | DROP ARM OPERABLE AWNING
1 1/2" = 1'-0"

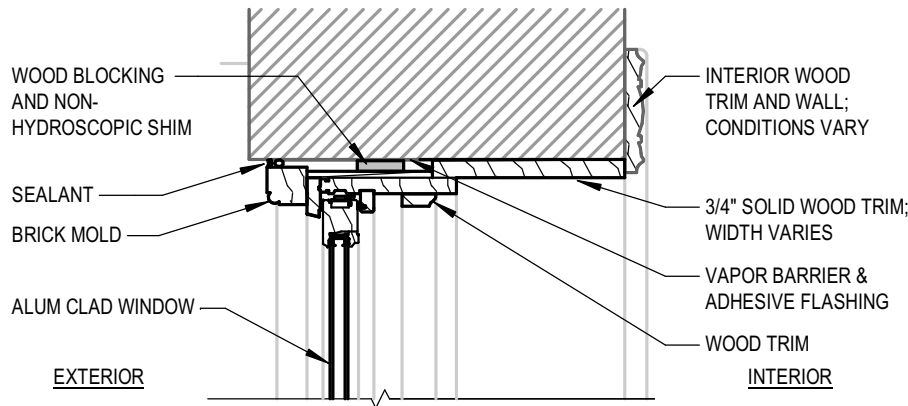


B5 AWNING AXON
1/4" = 1'-0"

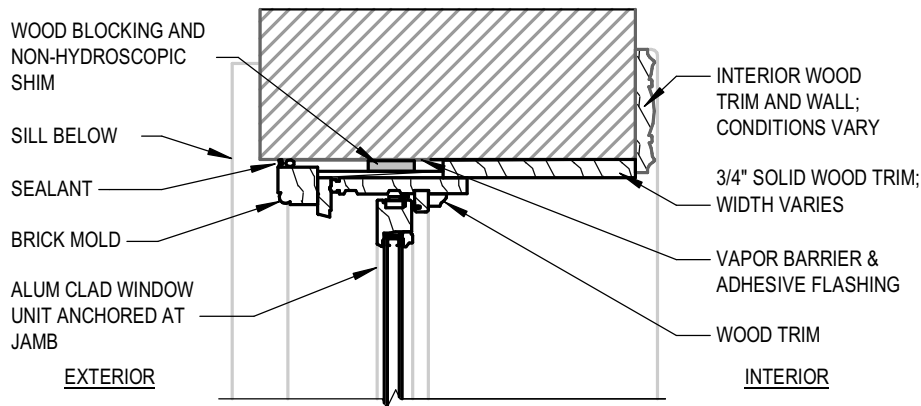


A5 VALANCE STYLE - WAVY
1/4" = 1'-0"

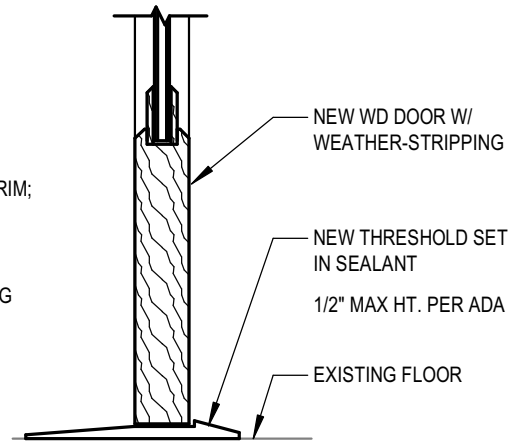




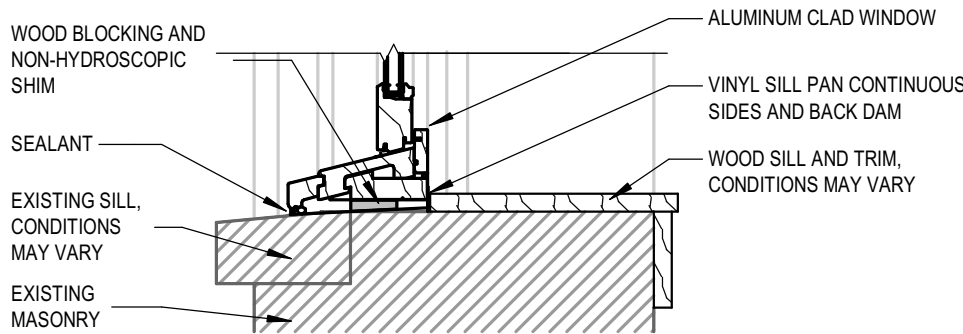
B1 WINDOW DETAIL HEAD
1 1/2" = 1'-0"



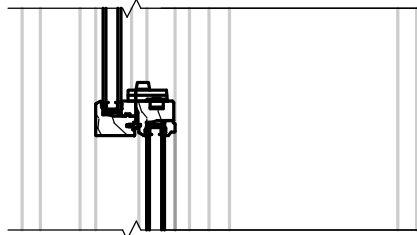
B2 WINDOW DETAIL JAMB
1 1/2" = 1'-0"



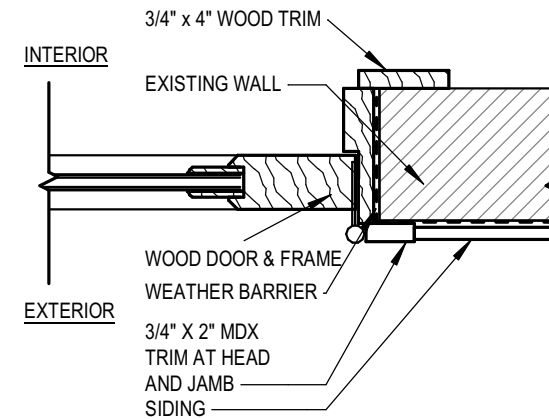
B3 WOOD DOOR THRESHOLD
1 1/2" = 1'-0"



A1 WINDOW DETAIL SILL
1 1/2" = 1'-0"



A2 WINDOW DETAIL MEETING RAIL
1 1/2" = 1'-0"



NOTE: DOOR SWING MAY VARY.

A3 WOOD DOOR JAMB DETAIL (HEAD SIM)
1 1/2" = 1'-0"

CONSTRUCTION DOCUMENTS

MARSHALLTOWN FACADE REHABILITATION



ARCHITECT
RDG Planning & Design
301 Grand Avenue
Des Moines, Iowa 50309-1718
Phone: 515.288.3141
www.rdgusa.com



MARSHALLTOWN
MORE THAN EVER

REV	DATE	DESCRIPTION
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ISSUED:	FEBRUARY 20, 2023	
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RDG PROJ. NO: 3005.009.00

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MARSHALLTOWN
FACADE REHABILITATION

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DETAILS

A10.03

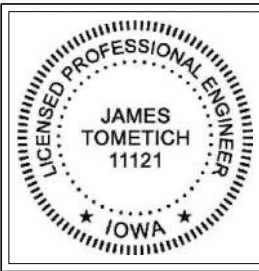
STRUCTURAL REPAIRS

MARSHALLTOWN, IOWA



KEY PLAN

SCALE: N.T.S.

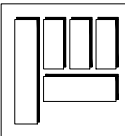


I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.
THIS NOTICE COVERS DRAWINGS S1/S4

SIGNATURE: _____
NAME: JAMES E. TOMETICH, P.E.
DATE: **7 July 2022** 11121

MY REGISTRATION EXPIRES ON 31-DECEMBER-2022

TOMETICH ENGINEERING, INC.
10501 Buena Vista Court Urbandale, IA 50322
(p) 515.280.8022 (f) 515.727.9124
<http://www.tometichengineering.com>



STRUCTURAL REPAIRS
AT 21 & 23 W MAIN STREET
MARSHALLTOWN, IOWA

ISSUE / REVISION		Date
No.	Description	
	FOR APPROVAL	07-07-2022

DATE: 07-07-2022
FILE: U22-097-A
ENG: L.J.L. DSN: C.J.A.

FOR APPROVAL

S1

DESIGN CODES & LOADS:

THE STRUCTURAL DESIGN OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE "2018 INTERNATIONAL BUILDING CODE" (IBC), "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (ASCE/SEI 7-16), AND APPLICABLE REFERENCED STANDARDS. ALL LOADS REQUIRED FOR DESIGN BY OTHERS AND NOT LISTED BELOW SHALL BE IN ACCORDANCE WITH THESE REQUIREMENTS.

OCCUPANCY CATEGORY: "II"

ROOF LIVE LOADS:
GROUND SNOW Pg = 30 psf
EXPOSURE FACTOR Ce = 1.0
IMPORTANCE FACTOR I = 1.0
THERMAL FACTOR Ct = 1.0
MINIMUM ROOF SNOW LOAD Pf = 25 psf
*DRIFTING & UNBALANCED LOADS SHALL BE IN ACCORDANCE WITH ASCE/SEI 7 CALCULATED WITH Pf AND Pg SPECIFIED

FLOOR LIVE LOADS:
RESIDENTIAL/APARTMENTS 40 psf

WIND LOADS:
ULTIMATE WIND SPEED (3 SEC GUST) 115 MPH
IMPORTANCE FACTOR I = 1.0
EXPOSURE CATEGORY B
INTERNAL PRESSURE COEFFICIENT ± 0.18

SEISMIC LOADS:
SITE CLASS D
DESIGN CATEGORY B
IMPORTANCE FACTOR I = 1.0

CONSTRUCTION PROCEDURES & SAFETY REQUIREMENTS:

COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL LAWS, INCLUDING THE OCCUPANTIAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT THERETO.

THE STRUCTURAL CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION, UNLESS NOTED OR INDICATED OTHERWISE.

ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED.

PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKERS AND ALL OTHER PERSONS DURING CONSTRUCTION. PROVIDE ALL NECESSARY MEASURES TO AVOID EXCESSIVE STRESSES AND TO HOLD THE STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND HOISTS, GUYING, ETC...

SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES.

OBSERVATION VISITS TO THE SITE BY STRUCTURAL ENGINEER'S FIELD REPRESENTATIVES SHALL NOT INCLUDE ABOVE NOTED ITEMS.

STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED ACCORDING TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION'S "STEEL CONSTRUCTION MANUAL (AISC 325)" AND "SPECIFICATIONS FOR STEEL BUILDINGS (AISC 360)" UNLESS NOTED OTHERWISE.

HIGH STRENGTH BOLTING SHALL CONFORM TO RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.

WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE" (AWS D1.1) CURRENT EDITION.

ALL STRUCTURAL STEEL SHALL MEET THE MATERIAL REQUIREMENTS AS SHOWN BELOW:
WIDE FLANGE SECTIONS Fy = 50 ksi ASTM A992
CHANNELS PLATES & ANGLES Fy = 36 ksi ASTM A36
STRUCTURAL PIPE Fy = 35 ksi ASTM A53, GRADE B
STRUCTURAL TUBE - RECTANGULAR Fy = 46 ksi ASTM A500, GRADE B
STRUCTURAL TUBE - ROUND Fy = 42 ksi ASTM A500, GRADE B
HIGH STRENGTH BOLTS ASTM A325, TYPE 1
ANCHOR RODS Fy = 36 ksi ASTM F1554

ALL SHOP CONNECTIONS SHALL BE WELDED, AND FIELD CONNECTIONS SHALL BE BOLTED, UNLESS NOTED OTHERWISE.

BOLTED CONNECTIONS SHALL BE SNUG TIGHTENED JOINTS WITH BEARING TYPE THREAD CONDITIONS (TYPE N) MINIMUM SIZE OF BOLTS SHALL BE 3/4" DIAMETER, AND EACH CONNECTION SHALL HAVE MINIMUM OF 2 BOLTS, WITH ONE HARDENED WASHER PER BOLT. SHORT-SLOTTED HOLES TO ACCOUNT FOR FIELD TOLERANCE IS ACCEPTABLE, EXCEPT @ MOMENT CONNECTIONS & OTHER LOCATIONS IDENTIFIED.

WHEN STEEL BEAM CONNECTIONS ARE NOT DETAILED, PROVIDE CONNECTIONS CAPABLE OF SUPPORTING THE REACTIONS INDICATED OR 50% OF THE ALLOWABLE UNIFORM LOAD AS SHOWN IN AISC "MAXIMUM UNIFORM LOAD TABLES". REACTIONS, WHEN SHOWN, ARE SERVICE LEVEL LOADS.

UNLESS NUMBER OF BOLTS IS SPECIFICALLY CALLED OUT, DETAILS OF BOLTED CONNECTIONS ARE NOT INTENDED TO SHOW EXACT NUMBER OF BOLTS, BUT ARE INTENDED TO BE SYMBOLIC ONLY. PROVIDE NUMBER OF BOLTS TO SUPPORT REQUIRED REACTION.

ALL WELDING TO BE DONE BY AWS CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN WELDS BEING PERFORMED. ALL ELECTRODES SHALL BE E70 SERIES UNLESS NOTED OTHERWISE.

SEQUENCE WELDS TO AVOID DISTORTION OF MEMBERS. DO NOT WELD OR BOLT UNTIL MEMBER IS PROPERLY ALIGNED AND SECURED IN ITS FINAL POSITION.

WELDS NOT OTHERWISE NOTED SHALL BE 3/16" CONTINUOUS FILLET WELDS. PARTIAL AND/ OR FULL PENETRATION WELDS SHALL BE FULLY DETAILED ON SHOP DRAWINGS.

APPROVED AND DESIGNED OPENINGS IN STEEL MEMBERS SHALL BE SHOWN ON SHOP DRAWINGS. CUTTING OR BURNING HOLES IN FIELD IS NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

PROVIDE STEEL EMBED PLATES FOR CONNECTION OF STEEL JOISTS, BEAMS, AND MISCELLANEOUS MEMBERS TO CAST-IN-PLACE CONCRETE AS DETAILED. ALL STEEL HEADED STUD ANCHORS SHALL BE IN ACCORDANCE WITH ASTM A108 & AWS D1.1.

PROVIDE BEARING PLATES FOR ALL STEEL JOISTS, BEAMS OR COLUMNS BEARING ON CONCRETE OR MASONRY WALLS. BEAR BEAMS FOR A MINIMUM OF 8" AND ANCHOR TO WALL WITH (2) 5/8" DIA. x 12" ANCHOR RODS UNLESS DETAILED OTHERWISE.

FASTEN STRUCTURAL STEEL MEMBERS TO MASONRY WITH EXPANSION ANCHORS OR ADHESIVE ANCHORS AT GROUTED CELLS AND ADHESIVE ANCHORS WITH SCREEN TUBES AT NON-GROUTED CELLS.

PROVIDE ONE COAT OF SHOP APPLIED RUST INHIBITIVE PRIMER TO ALL STRUCTURAL MEMBERS. DO NOT PAINT SURFACES TO BE GALVANIZED, FIELD WELDED, EMBEDDED IN CONCRETE OR MASONRY, CONTACT SURFACES OF FRICTION CONNECTIONS, AND SURFACES TO RECEIVE SPRAY ON FIREPROOFING.

ALL STRUCTURAL STEEL LOCATED IN EXTERIOR WALLS OR PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.

WOOD FRAMING:

ALL WOOD CONSTRUCTION TO BE DONE ACCORDING TO CHAPTER 23 OF THE IBC AND NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS 2018).

WALL STUD FRAMING: PROVIDE LUMBER AND MATERIALS MEETING OR EXCEEDING THE FOLLOWING STANDARDS OF QUALITY AND MINIMUM BASE DESIGN VALUES: VISUALLY GRADED DOUGLAS FIR-LARCH OR SPRUCE-PINE-FIR NO. 2 OR BETTER.
875 psi EXTREME FIBER STRESS IN BENDING (SINGLE): Fb
1,150 psi COMPRESSION PARALLEL TO GRAIN: Fc
1,400,000 psi MODULUS OF ELASTICITY: E

SAWN LUMBER HEADERS, BEAMS, AND JOISTS: PROVIDE LUMBER AND MATERIALS MEETING OR EXCEEDING THE FOLLOWING STANDARDS OF QUALITY AND MINIMUM BASE DESIGN VALUES:

VISUALLY GRADED DOUGLAS FIR-LARCH NO. 2 OR BETTER
900 psi EXTREME FIBER STRESS IN BENDING: Fb
1,350 psi COMPRESSION PARALLEL TO GRAIN: Fc
1,600,000 psi MODULUS OF ELASTICITY: E

ALL HEADERS, BEAMS, AND JOISTS SHALL BE FREE FROM SPLITS, CHECKS AND SHAKES.

PRESERVATIVE PRESSURE TREATED FRAMING LUMBER: PROVIDE LUMBER AND MATERIALS MEETING OR EXCEEDING THE FOLLOWING STANDARDS OF QUALITY AND MINIMUM BASE DESIGN VALUES: VISUALLY GRADED SOUTHERN PINE NO. 2 OR BETTER:

975 psi EXTREME FIBER STRESS IN BENDING (SINGLE): Fb
1,450 psi COMPRESSION PARALLEL TO GRAIN: Fc
1,600,000 psi MODULUS OF ELASTICITY: E

ALL PRESERVATIVE PRESSURE TREATED LUMBER SHALL CONFORM TO AWPA STANDARDS.

LAMINATED VENEER LUMBER (LVL) HEADERS AND BEAMS: PROVIDE LUMBER AND MATERIALS MEETING OR EXCEEDING THE FOLLOWING STANDARDS OF QUALITY AND MINIMUM BASE DESIGN VALUES:

2,600 psi FLEXURAL STRESS: Fb
2,510 psi COMPRESSION PARALLEL TO GRAIN: Fc
1,900,000 psi MODULUS OF ELASTICITY: E
118,750 psi SHEAR MODULUS OF ELASTICITY: G

ALL FASTENERS TO BE GALVANIZED IN AREAS DIRECTLY EXPOSED TO EXTERIOR ELEMENTS OR PRESERVATIVE PRESSURE TREATED MATERIAL.

ALL NAILED AND GLUED MEMBERS TO BE IN CLEAN AND DRY CONDITION PRIOR TO GLUING. ADHESIVE SHALL COMPLY WITH ANSI/AITC A190.1-1983.

PLYWOOD AND BUILT UP BEAMS TO BE IN COMPLIANCE WITH IBC STD.#25-18.

ALL WOOD FRAMING MEMBERS TO HAVE A MOISTURE CONTENT NOT TO EXCEED 19%.

ALL ROOF AND WALL SHEATHING TO BE 5/8" APA RATED UNLESS NOTED OTHERWISE.

SHEATHING ON WALLS TO HAVE STAGGERED VERTICAL JOINTS.

ALL MANUFACTURED FLOOR JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

PROVIDE SOLID WOOD BLOCKING IN FLOOR SYSTEM WHERE CONCENTRATED LOADS OCCUR SO AS TO TRANSFER LOAD TO FRAMED WALL, BEAM, HEADER, OR FOUNDATION WALL BELOW.

NAILS AND STAPLES SHALL CONFORM TO REQUIREMENTS OF ASTM F 1667.

CONNECTIONS AND FASTENERS: NUMBER AND SIZE SHALL NOT BE LESS THAN THAT SET FORTH IN TABLE 2304.10.1 OF THE IBC

ALL LAG SCREW CONNECTIONS TO BE PRE-DRILLED.

ALL GIRDERS, BEAMS, AND HEADERS TO BE SUPPORTED BY A MIN. OF 3 STUDS (2 CRIPPLE, 1 KING)

ALL MULTI-PLY MEMBERS ARE TO BE CONNECTED TOGETHER ACCORDING TO MANUFACTURER'S SPECIFICATIONS TO ACT AS ONE SOLID MEMBER.

PREFABRICATED WOOD TRUSSES:

ALL TRUSS DESIGN TO BE DONE ACCORDING TO CHAPTER 23 OF THE IBC.

DESIGN TRUSSES UNDER THE DIRECT PERSONAL SUPERVISION OF A PROFESSIONAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

DESIGN TRUSSES FOR THE FOLLOWING LOADS:

TOP CHORD LIVE = 30 PSF*
TOP CHORD DEAD = 10 PSF
BOTTOM CHORD DEAD = 10 PSF
*DRIFTING & UNBALANCED LOADS SHALL BE IN ACCORDANCE WITH ASCE/SEI 7 OR AS SHOWN ON DRAWINGS.

TRUSS LAYOUT IS SCHEMATIC ONLY. TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN (INCLUDING SPACING) OF ALL TRUSSES AND SHALL SUBMIT SHOP DRAWING (SEALED BY A REGISTERED ENGINEER) FOR APPROVAL BY BUILDER.

ROOF SHEATHING: APA RATED SHEATHING EXP 1, 24/0 SPAN RATING.

FLOOR SHEATHING: 3/4" T&G APA RATED FLOOR SHEATHING, 24"O.C. SPAN RATING (GLUE AND NAIL TO FLOOR FRAMING MEMBERS.)

ALL CONNECTOR PLATES SHALL BE IN COMPLIANCE WITH THE TRUSS PLATE INSTITUTE SPECIFICATION TPI-91.

DO NOT SUSPEND MECHANICAL OR ELECTRICAL ITEMS FROM LOWER CHORD OF TRUSS.

WIND CLIPS TO BE SIMPSON "H-2.5" TYPE HURRICANE CLIPS. UNLESS REQ'D OTHERWISE BY PROJECT ENGINEER OR MANUFACTURER.

PROVIDE WOOD TRUSSES ABLE TO SUSTAIN THE STATED LOADS FOR THE SPANS, PROFILES AND ARRANGEMENT SHOWN ON DRAWINGS.

FLOOR TRUSS TO BE PRESENT UNDER INTERIOR PARTITION WALLS.

SERVICEABILITY: TRUSS DEFLECTIONS SHALL NOT EXCEED THE LIMITATIONS OF SECTION 1604.3.1 OF THE IBC. UNLESS NOTED OTHERWISE ON DRAWINGS.

HISTORIC BRICK MASONRY:

MASONRY WORK SHALL BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1) UNLESS NOTED OTHERWISE. ALL WALLS SHALL BE BRACED IN ACCORDANCE WITH "STANDARD PRACTICE FOR BRACING WALLS UNDER CONSTRUCTION."

BRICK & MORTAR OF EXISTING STRUCTURE SHALL BE TESTED FOR BRICK TYPE, AGGREGATE SIZE, TEXTURE, GRADATION, AND COLOR TO MATCH BOTH PHYSICALLY AND VISUALLY WITH THE EXISTING BUILDING.

MATCH SIZE, TEXTURE, AND GRADATION OF EXISTING MORTAR SAND AS CLOSELY AS POSSIBLE. BLEND SEVERAL SANDS, IF NECESSARY, TO ACHIEVE SUITABLE MATCH.

MASONRY COMPONENTS SHALL CONFORM TO THE FOLLOWING:

REINFORCING BARS ASTM 615, GR. 50
MORTAR FOR BRICK LAYING (TYPE N: APPROX. PROPORTIONS = 1 CEMENT + 1 LIME + 6 SAND, U.N.O.) ASTM C270
MORTAR FOR RE-POINTING (TYPE O: APPROX. PROPORTIONS = 1 CEMENT + 2 LIME + 9 SAND, U.N.O.) ASTM C270
LIME PUTTY WHERE REQUIRED (APPROXIMATE PROPORTIONS = 0 CEMENT + 1 LIME + 3 SAND, U.N.O.) ASTM C5
POTABLE WATER ASTME C1602

PROVIDE CONTROL JOINTS AND EXPANSION JOINTS AS INDICATED ON ARCHITECTURAL DRAWINGS. WHERE JOINTS ARE NOT SHOWN, CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS PER ACI 530 AND 530.1 TO ARCHITECT FOR APPROVAL.

PROVIDE FLASHING, WEEPS, AND OTHER ITEMS TO BE BUILT INTEGRAL WITH THE WORK AS INDICATED ON ARCHITECTURAL DRAWINGS.

PROVIDE BRICK TIES TO ANCHOR MASONRY VENEER TO BACKUP MATERIALS AT NOT MORE THAN 16" ON CENTER EA. WAY

REFER TO LINTEL NOTES FOR CONCRETE MASONRY UNIT LINTELS AND REINFORCING.

CLEAN EXISTING BRICK FACE WITH:
PROSOCO VANATROL (OR SIMILAR), FOR SOFT AND/OR LIGHT COLORED BRICK AND MORTAR.
PROSOCO 600 (OR SIMILAR), FOR HARD AND DARK COLORED BRICK AND MORTAR.

SEAL FACE OF BRICK w/ BREATHABLE SEALANT. OPTIONS INCLUDE:

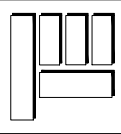
PROSOCO SILOXANE
SHERWIN WILLIAMS HB150
PROSOCO BREATHABLE MASONRY COATING II ASTM D1653
SHERWIN WILLIAMS SHERLASTIC ELASTOMERIC ASTM D1653

WATER REPELLENT SEALANTS NOT INTENDED TO BE USED IN LIEU OF WEEP HOLES/SCREENS. WEEPS STILL REQUIRED.

A TEST PANEL OF THE BUILDING IN AN INCONSPICUOUS LOCATION IS RECOMMENDED TO VERIFY APPEARANCE.

TOMETICH ENGINEERING, INC.

10501 Buena Vista Court Urbandale, IA 50322
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http://www.tometichengineering.com



STRUCTURAL REPAIRS

AT 21 & 23 W MAIN STREET
MARSHALLTOWN, IOWA

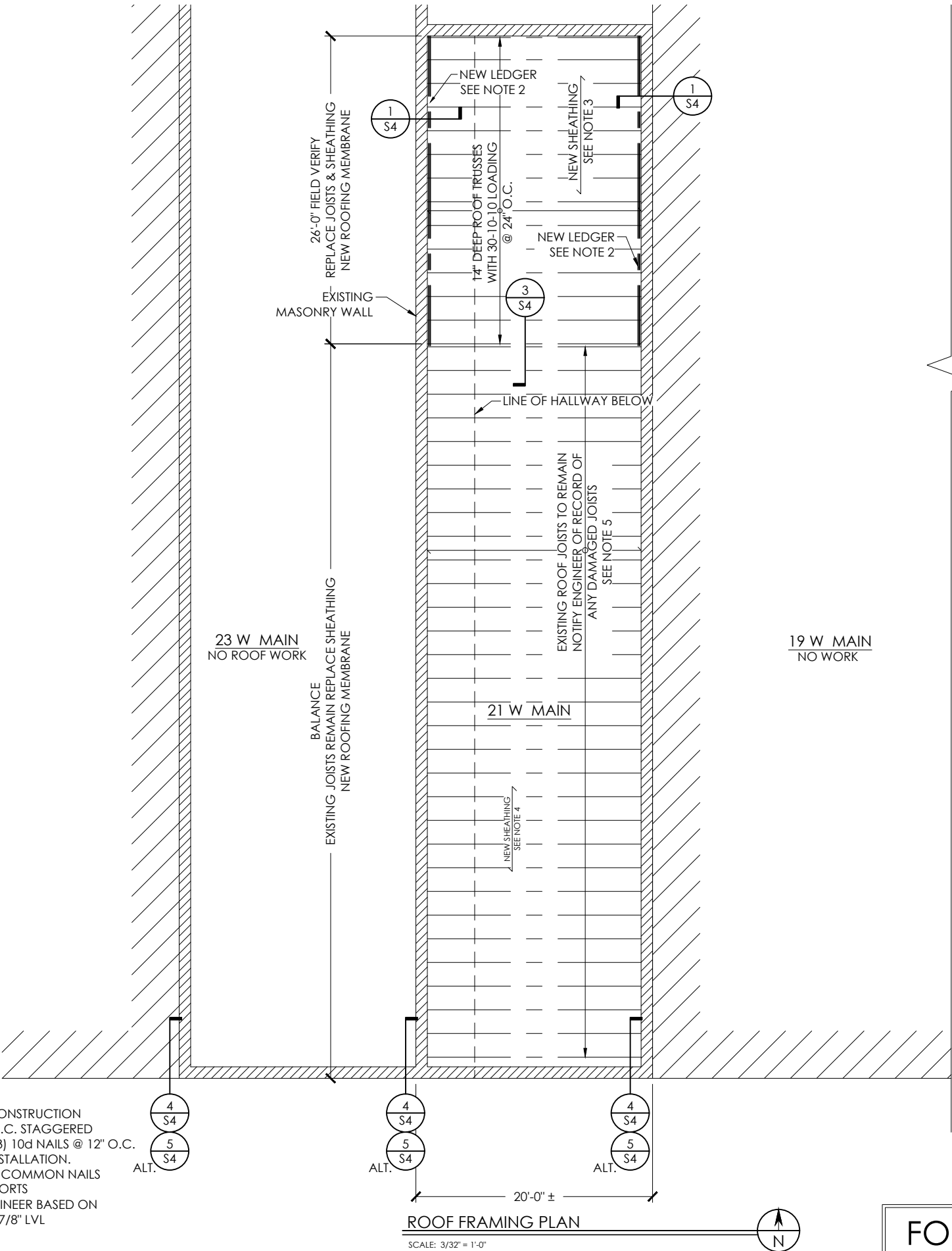
ISSUE / REVISION		No.	Description	Date
			FOR APPROVAL	07-07-2022

DATE: 07-07-2022
FILE: U22-097-A
ENG: L.J.L DSN: C.J.A.

FOR APPROVAL

S2

- NOTES:
1. GENERAL CONTRACTOR VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION
 2. (2) 2x12 TREATED LEDGER w/ 3/4" Ø EPOXY ANCHORS @ 16" O.C. STAGGERED (HIT-HY 270 EPOXY w/ 9" EMBED). FASTEN PLYS TOGETHER w/ (3) 10d NAILS @ 12" O.C.
 3. GROUT ANY VOIDS FULL THAT ARE FOUND DURING LEDGER INSTALLATION.
 4. 5/8" PLYWOOD SHEATHING NAILED TO ROOF FRAMING w/ 8d COMMON NAILS 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS
 5. PRELIMINARY REPAIR PROCEDURE (TO BE CONFIRMED BY ENGINEER BASED ON OBSERVED DAMAGES): SISTER DAMAGED JOISTS w/ 1 3/4"x11 7/8" LVL FASTEN w/ (3) SDW22500 SCREWS @ 16" O.C.



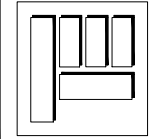
ROOF FRAMING PLAN

SCALE: 3/32" = 1'-0"

FOR APPROVAL

ISSUE / REVISION		No.	Description	Date
FOR APPROVAL				07-07-2022

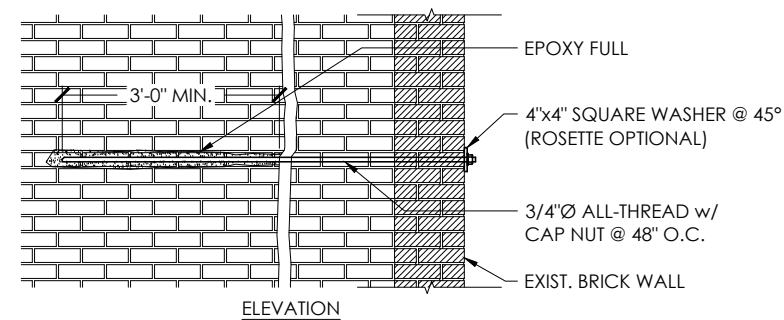
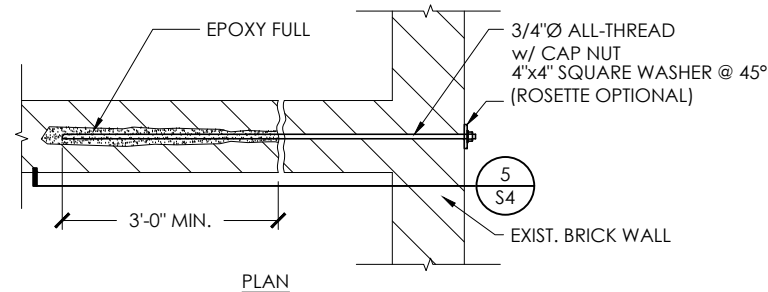
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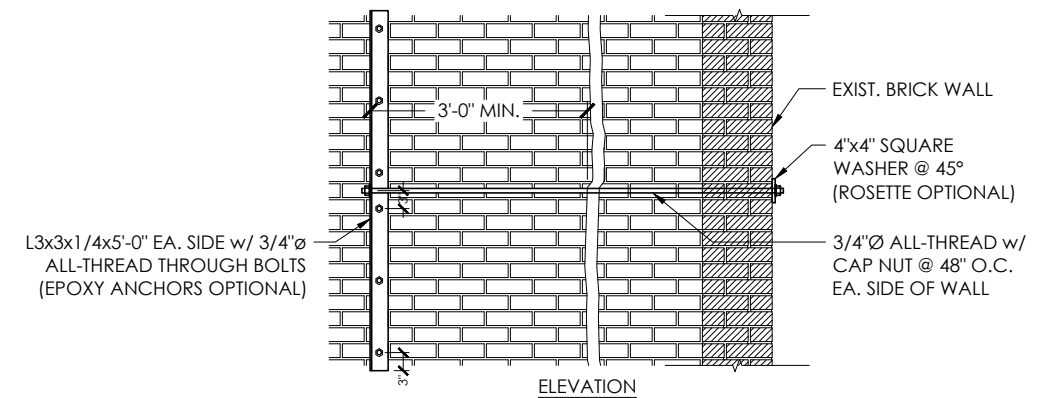
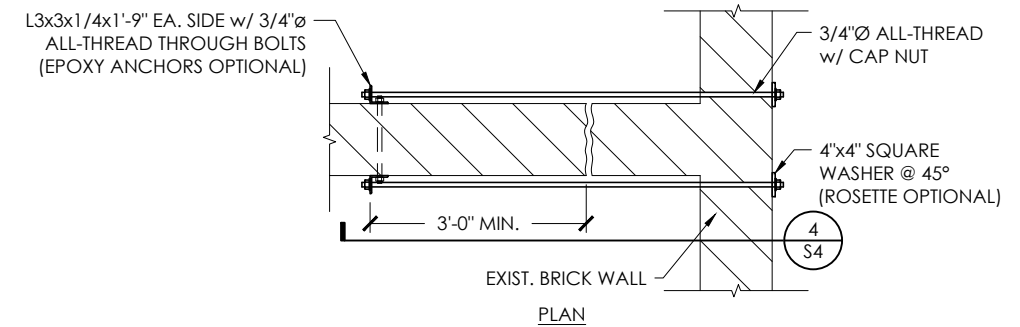
S3



MASONRY WALL STABILIZATION @ ADJOINING WALL OPTION 2

SCALE: 3/8" = 1'-0"

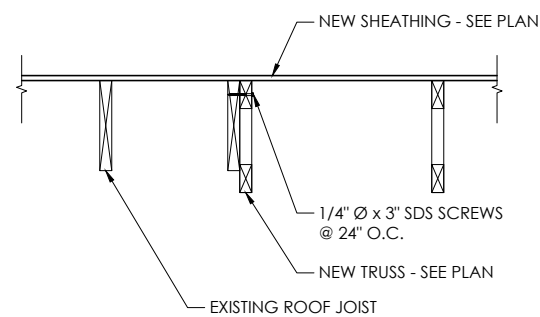
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S4



MASONRY WALL STABILIZATION @ ADJOINING WALL OPTION 1

SCALE: 3/8" = 1'-0"

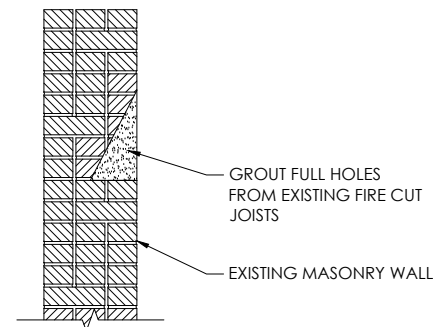
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S4



ROOF JOINT DETAIL

SCALE: 1/2" = 1'-0"

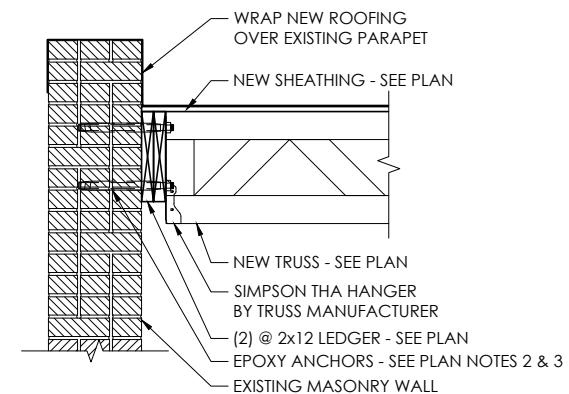
3
S4



EXISTING JOIST HOLE INFILL

SCALE: 1/2" = 1'-0"

2
S4



NEW TRUSS BEARING DETAIL

SCALE: 1/2" = 1'-0"

1
S4

FOR APPROVAL

STRUCTURAL REPAIRS
AT 21 & 23 W MAIN STREET
MARSHALLTOWN, IOWA

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S4

Marshalltown, Iowa

Façade Rehabilitation

Downtown Revitalization



Date: February 20, 2023
RDG Project No.: 3005.009.00

SECTION 00 01 01 – PROJECT TITLE PAGE

PROJECT:	Marshalltown, Iowa Façade Rehabilitation Downtown Revitalization
RDG Project No.:	3005.009.00
OWNER:	City of Marshalltown 24 North Center Street Marshalltown, IA 50158 641-754-5701 www.marshalltown-ia.gov
DATE:	February 20, 2023
ARCHITECT:	RDG Planning & Design, Inc. 301 Grand Avenue Des Moines, Iowa 50309-1718 515-288-3141 www.rdgusa.com
Point of Contact:	Scotney Fenton, AIA sfenton@rdgusa.com 515-309-3223

END OF DOCUMENT 00 01 01

SECTION 00 01 10 – TABLE OF CONTENTS

Prepared By Section No. Section Title

PROCUREMENT AND CONTRACTING DOCUMENTS GROUP

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	00 31 26	EXISTING ASBESTOS INFORMATION
ARCH	00 41 13	BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)
	00 45 13	DOL BIDDER STATUS FORM 309-6001 (09-15)
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		AIA DOCUMENT A101 EXHIBIT A – INSURANCE AND BONDS
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SPECIFICATIONS GROUP

GENERAL REQUIREMENTS SUBGROUP

DIVISION 01 GENERAL REQUIREMENTS

ARCH	01 10 00	SUMMARY
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ARCH	01 23 00	ALTERNATES
ARCH	01 25 00	SUBSTITUTION PROCEDURES
ARCH	01 26 00	CONTRACT MODIFICATION PROCEDURES
ARCH	01 29 00	PAYMENT PROCEDURES

ARCH	01 31 00	PROJECT MANAGEMENT AND COORDINATION
ARCH	01 32 00	CONSTRUCTION PROGRESS DOCUMENTATION
ARCH	01 32 33	PHOTOGRAPHIC DOCUMENTATION
ARCH	01 33 00	SUBMITTAL PROCEDURES
ARCH	01 33 01	ELECTRONIC FILE AGREEMENT
ARCH	01 35 91	HISTORIC TREATMENT PROCEDURES
ARCH	01 40 00	QUALITY REQUIREMENTS
ARCH	01 42 00	REFERENCES
ARCH	01 50 00	TEMPORARY FACILITIES AND CONTROLS
ARCH	01 60 00	PRODUCT REQUIREMENTS
ARCH	01 73 00	EXECUTION
ARCH	01 74 19	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
ARCH	01 77 00	CLOSEOUT PROCEDURES
ARCH	01 77 19	CLOSEOUT REQUIREMENTS
ARCH	01 78 23	OPERATION AND MAINTENANCE DATA
ARCH	01 78 39	PROJECT RECORD DOCUMENTS

FACILITY CONSTRUCTION SUBGROUP

DIVISION 02 EXISTING CONDITIONS

ARCH	02 41 19	SELECTIVE DEMOLITION
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DIVISION 03 CONCRETE

NOT APPLICABLE

DIVISION 04 MASONRY

ARCH	04 01 20	MAINTENANCE OF UNIT MASONRY
ARCH	04 01 40	MAINTENANCE OF STONE ASSEMBLIES
ARCH	04 03 21	CONSERVATION OF HISTORIC TERRA COTTA MASONRY
ARCH	04 03 42	CONSERVATION OF HISTORIC STONE MASONRY

DIVISION 05 METALS

ARCH	05 50 00	METAL FABRICATIONS
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DIVISION 06 WOOD, PLASTICS, AND COMPOSITES

ARCH	06 03 12	HISTORIC WOOD REPAIR
ARCH	06 05 65	SLATWALL PANELING
ARCH	06 10 00	ROUGH CARPENTRY
ARCH	06 16 00	SHEATHING
ARCH	06 20 13	FINISH CARPENTRY
ARCH	06 40 23	INTERIOR ARCHITECTURAL WOODWORK

DIVISION 07 THERMAL AND MOISTURE PROTECTION

ARCH	07 01 50	PREPARATION FOR REROOFING
ARCH	07 19 00	WATER REPELLENTS
ARCH	07 21 00	THERMAL INSULATION
ARCH	07 24 19	EXTERIOR INSULATION AND FINISH SYSTEM
ARCH	07 25 00	WEATHER BARRIERS
ARCH	07 42 13	FORMED METAL WALL PANELS
ARCH	07 46 46	FIBER-CEMENT SIDING
ARCH	07 53 23	EPDM ROOFING
ARCH	07 62 00	SHEET METAL FLASHINGS AND TRIM
ARCH	07 92 00	JOINT SEALANTS

DIVISION 08 OPENINGS

ARCH	08 03 14	HISTORIC TREATMENT OF WOOD DOORS
ARCH	08 03 52	HISTORIC TREATMENT OF WOOD WINDOWS
ARCH	08 14 33	STILE AND RAIL WOOD DOORS
ARCH	08 41 13	ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
ARCH	08 45 23	FIBERGLASS SANDWICH PANEL ASSEMBLIES
ARCH	08 52 13	ALUMINUM CLAD WOOD WINDOWS
ARCH	08 71 00	DOOR HARDWARE
ARCH	08 80 00	GLAZING
ARCH	08 81 13	DECORATIVE GLASS GLAZING
ARCH	08 87 13	SOLAR CONTROL FILMS

DIVISION 09 FINISHES

ARCH	09 01 20	MAINTENANCE OF PLASTER AND STUCCO
ARCH	09 24 23	PORTLAND CEMENT STUCCO
ARCH	09 30 13	CERAMIC TILING
ARCH	09 91 00	PAINTS AND COATINGS

DIVISION 10 SPECIALTIES

ARCH	10 73 13	AWNINGS
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DIVISION 11 EQUIPMENT

NOT APPLICABLE

DIVISION 12 FURNISHINGS

NOT APPLICABLE

DIVISION 13 SPECIAL CONSTRUCTION

NOT APPLICABLE

DIVISION 14 CONVEYING EQUIPMENT

NOT APPLICABLE

FACILITY SERVICES SUBGROUP

DIVISION 21 FIRE SUPPRESSION

NOT APPLICABLE

DIVISION 22 PLUMBING

NOT APPLICABLE

DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

NOT APPLICABLE

DIVISION 25 INTEGRATED AUTOMATION

NOT APPLICABLE

DIVISION 26 ELECTRICAL

NOT APPLICABLE

DIVISION 27 COMMUNICATIONS

NOT APPLICABLE

DIVISION 28 ELECTRONIC SAFETY AND SECURITY

NOT APPLICABLE

SITE AND INFRASTRUCTURE SUBGROUP

DIVISION 31 EARTHWORK

NOT APPLICABLE

DIVISION 32 EXTERIOR IMPROVEMENTS

NOT APPLICABLE

DIVISION 33 UTILITIES

NOT APPLICABLE

DIVISION 34 TRANSPORTATION

NOT APPLICABLE

DIVISION 35 WATERWAY AND MARINE CONSTRUCTION

NOT APPLICABLE

PROCESS EQUIPMENTSUBGROUP

DIVISION 40 PROCESS INTEGRATION

NOT APPLICABLE

DIVISION 41 MATERIAL PROCESSING AND HANDLING EQUIPMENT

NOT APPLICABLE

DIVISION 42 PROCESS HEATING, COOLING, AND DRYING EQUIPMENT

NOT APPLICABLE

DIVISION 43 PROCESS GAS AND LIQUID HANDLING, PURIFICATION, AND STORAGE EQUIPMENT

NOT APPLICABLE

DIVISION 44 POLLUTION AND WASTE CONTROL EQUIPMENT

NOT APPLICABLE

DIVISION 45 INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT

NOT APPLICABLE

DIVISION 46 WATER AND WASTEWATER EQUIPMENT

NOT APPLICABLE

DIVISION 48 ELECTRICAL POWER GENERATION

NOT APPLICABLE

Abbreviation:	Name:	Discipline:
ARCH	RDG Planning & Design	Architect

ND OF SECTION 00 01 10

NOTICE TO BIDDERS AND NOTICE OF PUBLIC HEARING

Sealed bids for the Marshalltown Façade Rehabilitation project must be received and filed before **2:00 PM** local time on **March 21, 2023**, to the City Clerk at City Hall, 24 North Center Street, Marshalltown, Iowa. Bidders wishing to drop their bids off in person at City Hall should contact the City at 641-754-5701 to arrange for a time to transfer the bid. City Hall may have limited access to the public, but business operations are being conducted during the workweek. Staff will be available to assist bidders. Bids received after the deadline for submission of bids as stated herein shall not be considered and shall be returned to the late bidder unopened. The bidder shall hold the City harmless for failing to meet the deadline due to delayed delivery service.

The City intends to open, read aloud, and tabulate the sealed bids at 2:05 PM on March 21, 2023, in the City Hall, for further consideration by the City Council at a future meeting, scheduled at 5:30 PM on April 10, 2023. Consideration of the Award of contract would subsequently occur by action of the City Council at the same meeting, or at a later date and time announced at said meeting.

Notice is hereby given that a public hearing will be held by the City on the proposed contract documents (including the plans, specifications, and form of contract) and estimated construction cost for the Project at its regular meeting at 5:30 PM on March 13, 2023, in the Council Chambers at 10 West State Street. At the hearing, the City will receive and consider any objections made by any interested party, to the Plans and Specifications, proposed Form of Contract, and the Estimate of the Construction Cost for the project.

Work on the improvement shall commence within ten days of the issuance of a written Notice to Proceed. The Notice to Proceed will be issued upon approval of the contract by the Council and be completed as stated below.

The Work of the Project is defined by the Contract Documents and includes, but is not limited to, the following:

Facade Rehabilitation: Historic rehabilitation of existing brick and wood framed buildings. Rehabilitation will consist of exterior restoration and improvements, including but not limited to selective demolition; cleaning, repair, and repointing of stone and brick masonry; repair and replacement of doors, wood windows and storefronts; aluminum windows and storefronts; replacement of awnings and canopies; joint sealants; painting; lighting fixtures; roof replacement; and related construction.

The Work includes historic buildings being reviewed under Section 106 NHPA and HUD regulations for NEPA (24 CFR Part 58.5[b]). The Work will follow historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties.

Bids will be received for a single prime contract.

Bidding Documents may be examined at the offices of RDG Planning & Design, at plan rooms across the state and through the City of Marshalltown's website: <https://www.marshalltown-ia.gov/Bids.aspx>.

Bidders may obtain Bidding Documents at the office of the printer: Beeline and Blue, 2507 Ingersoll Avenue, Des Moines, Iowa, 50312, or by calling (515) 244-1611, from 8:00 AM until 5:00 PM, Monday through Friday, or through their on-line plan room at www.beelineandblue.com. Bidding Documents will be available February 28, 2023.

A Pre-Bid Conference will be held at **2:00 PM** on **March 9, 2023** at the site. Participation by General Contractors, Sub-Contractors and Suppliers is strongly encouraged, but is not mandatory. Please reach out to the point of contact below for the information if you wish to join.

Refer to other bidding requirements described in the Project Manual, Division 01 Section "Instructions to Bidders."

Each bidder shall accompany its bid with bid security as defined in Iowa Code Section 26.8, as security that the successful bidder will enter into a contract for the work bid upon and will furnish after the award of contract a corporate surety bond, in a form acceptable to the City, for the faithful performance of the contract, in an amount equal to 100% of the amount of the contract. The bidder's security shall be in the amount fixed in the Instruction to Bidders, in the

amount of five percent (5%) of the total bid and shall be in the form of a cashier's check or a certified check drawn on an FDIC insured bank in Iowa or on an FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn on a credit union in Iowa or chartered under the laws of the United States; or a bid bond on the form provided in the contract documents with corporate surety satisfactory to the City. The bid shall contain no condition except as provided in the specifications.

Performance and Payment Bond Requirement: 100% of contract amount.

No bid may be withdrawn for a period of 30 calendar days after the date of opening.

Award of contract is tentatively scheduled for **April 10, 2023**.

This project is funded, in part, by a Community Development Block Grant (CDBG). The requirements and provisions of the CDBG shall apply to this project, which include federal rules and regulations pertaining to labor relations such as the payment of "Davis-Bacon" prevailing wages.

Minority Owned and Female Owned Business participation is encouraged. Bidders shall make a good faith documented effort to encourage participation of minority owned and female owned businesses.

This project is sales tax exempt. The Owner will issue an exemption certificate for the purchase or use of building materials, supplies, and equipment that will be used in the performance of the construction contract.

By virtue of statutory authority, a preference will be given to products and provisions grown and coal produced within the state of Iowa.

Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

The project shall be substantially complete by **June 30, 2024**.

The City reserves the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

Point of Contact:

Michelle Spohnheimer, Housing & Community Development Director, phone: 641-754-5756, email: mspohnheimer@marshalltown-ia.gov

Owner:

City of Marshalltown
24 North Center Street
Marshalltown, Iowa 50158
Phone: 641-754-5701
www.marshalltown-ia.gov

Architect of Record:

RDG Planning & Design, Inc.
301 Grand Avenue
Des Moines, Iowa 50309
Phone: 515-288-3141
www.rdgusa.com

SECTION 3 LANGUAGE FOR PROCUREMENT DOCUMENTS

(This language is to be included in all procurement documents/ solicitations)

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

Section 3 Businesses are encourage to respond to this proposal. A Section 3 business is a business that is:

51% owned by Section 3 residents*

Whose permanent, full-time staff is comprised of at least 30% Section 3 residents*

Has committed 25% of the dollar amount of its subcontracts to Section 3 businesses

*A Section 3 resident is defined as a public housing resident or someone with a household income that is less than 80% of the area median income. Businesses that believe they meet the Section 3 criteria are encouraged to register as a Section 3 Business through HUD's website:

<https://portalapps.hud.gov/Sec3BusReg/BRegistry/RegisterBusiness>

Published by the order of the City of Marshalltown, Iowa, on this __th day of __, 2023.

SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

1.1 SUMMARY

- A. Definitions:
 - 1. All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, are applicable to these Instructions to Bidders.
 - 2. Owner is defined as the:

City of Marshalltown, Iowa

1.2 SITE EXAMINATION

- A. Examine the project site before submitting a bid.
- B. Each Bidder by submitting a bid represents that he has visited the site to become acquainted with the scope of the work; conditions of site; facilities for delivery, storing, placing and handling of materials and equipment; other work being performed; other work in place; and other obstacles, conditions, or relevant matters concerning the work to be performed.
- C. The successful Bidder will not be allowed extra compensation for any matter or thing which the bidder may have informed themselves of prior to submitting a bid
- D. The Bidder may contact the Owner at the following to discuss visiting the project site:

Michelle Spohnheimer
Director, Housing & Community Development
City of Marshalltown
Phone: 641-754-5756
mspohnheimer@marshalltown-ia.gov

- E. The currently occupied premises at the project site are open for examination by bidders only during the following hours:
 - 1. Monday through Friday: 8:00 AM to 5:00 PM.
 - 2. Weekends: 8:00 AM to 5:00 PM.

1.3 PREBID CONFERENCE

- A. All general contract and major subcontract Bidders and suppliers are invited. Attendance by General Contractors is strongly recommended but not mandatory.

DATE: **March 9, 2023** TIME: **2:00 PM**

LOCATION: City Hall
24 North Center Street
Marshalltown, IA 50158

1.4 DOCUMENT EXAMINATION

- A. Each Bidder by submitting a Bid represents that he has read and understands the Bidding Documents. This responsibility shall not be limited to paragraphs, sections, and drawings listed as pertaining to the trade or contract of a particular bidder. Bidder shall examine the document pertaining to the Work of other subcontracts and trades as his responsibility for certain work may be established therein.

- B. Bidding Documents include the Advertisement to Bid, Instructions to Bidders, and the Contract Documents, including any Addenda issued prior to the receipt of bids.
- C. Contract Documents are as defined in AIA Document A201 Article 1.
- D. Addenda are written or graphic instruments issued prior to the execution of the Contract that modify or interpret the Bidding Documents, including Drawings or Specifications, by additions, deletions, clarifications or corrections. Addenda will become a part of the Contract Documents when the Construction Contract is executed.

1.5 INTERPRETATIONS

- A. Should a bidder find discrepancies, ambiguities, or omissions in the documents; should he find work shown but not specified, or specified but not shown; or should he be in doubt as to any meaning, he shall immediately notify the Architect, in writing, at least 10 days before the closing of bids.
- B. Failure to request clarifications will not relieve the Contractor of his responsibilities to perform the work in accord with the intent of the documents. The signing of the contract will be considered that the Contractor has a thorough comprehension of the full intent and scope of the specifications and drawings.
- C. The Architect will issue any interpretation or correction as an Addendum. Only a written interpretation or correction by Addendum shall be binding. Bidder shall not rely upon any interpretation or correction given by any other method.
- D. If conflicting variances occur between the Drawings and Specifications in the Post Bid construction period, then the most stringent shall take precedence.
- E. Prior to the receipt of bids, Addenda will be mailed or delivered to each person or firm recorded by the Architect as having received the Bidding Documents and will be available for inspection wherever the Bidding Documents are kept available for that purpose.

1.6 SUBCONTRACTORS

- A. The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract:
 - 1. Must be acceptable to the Owner.
 - 2. Must comply with the requirements of the Bidding Requirements, Conditions of the Contract and the applicable Technical Specifications and Drawings.
- B. Bidder shall identify sub-contractors indicated on the Bid Form.
- C. Within the 48 hours following Bid Opening, the apparent low bidder shall submit a list of all subcontractors that will be used for this project. The subcontractor list shall include each firm's name, tax identification number, and address.

1.7 QUALIFICATION OF BIDDER

- A. In accordance with Iowa Code 26.9(2) and 26.16, no potential bidder shall be required to provide confidential or proprietary information or meet any class requirements as a precondition to submitting a responsive bid. However, as noted in Iowa Code 26.9(2), the lowest responsive bidder may be required to provide additional information to verify responsibility prior to and as a condition of obtaining final award of the contract. Any qualification requirements contained in any bid document indicates only preferred qualifications, not a precondition to bid, and the lowest responsive bidder's qualifications will be evaluated individually based on all information provided.
- B. The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. If the successful bidder is a non-Iowa corporation, he shall submit proof to the Owner, prior to execution of the Contract, of authorization by the Secretary of State to do business in the State of Iowa. The Owner reserves the right to reject any bid if the evidence fails to satisfy the Owner that the bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

1.8 BID SECURITY

- A. Bid Proposal shall be accompanied by a Bid Bond or a cashier's check drawn on a solvent Iowa bank or a bank chartered under the laws of the United States in the amount of 5% of the base bid. Bid security shall be made payable to the Owner. Submit bid security in a sealed envelope, separate from the envelope containing the bid proposal.
- B. Form of Bid Bond shall be AIA Document A310-2010, Bid Bond. Bid Bond shall be executed by corporations authorized to contract as surety in the state of Iowa
- C. The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after notice of the acceptance of the bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the bid security deposited with the bid proposal.
- D. Bid security will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within 30 days after the date of the opening of bids, upon demand by the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

1.9 SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with his delivery of the executed contract, the Contractor shall furnish a Surety Bond or Bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in Article 11 of the General Conditions and Supplementary General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

1.10 POWER OF ATTORNEY

- A. Attorneys-in-fact who sign Contract Bonds must file with each Bond a certified and effectively dated copy of their Power of Attorney. Attorneys-in-fact must be residents of the state of Iowa for surety companies authorized to do business in the state of Iowa.

1.11 LAWS AND REGULATIONS

- A. The bidder's attention is directed to the fact that all applicable State Laws, Municipal Ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

1.12 IOWA SALES TAX EXEMPTION

- A. This project is Iowa sales tax exempt. The owner will issue an authorization letter and exemption certificate for the purchase or use of building materials, supplies, and equipment that will be used in the performance of the construction contract. Persons shall purchase such items of tangible personal property without liability for the tax if such property will be used in the performance of the construction contract and a purchasing agent authorization letter and an exemption certificate, issued by the designated exempt entity, are presented to the retailer. Said taxes shall not be included in the bid value for this project.

1.13 DAVIS-BACON ACT AND RELATED ACTS

- A. Davis-Bacon and Related Acts: This project is funded, in part, by federal grants and funding. Rules and provisions of the Davis Bacon and Related Acts apply to this project. It is the responsibility of the Contractor to acquire current appropriate and necessary publications and materials regarding the Davis-Bacon and Related Acts and to comply with its rules and provisions as they apply to this Project.
 - 1. All labor performed on site shall be subject to wage restrictions, reporting, posting of notice at the work site, and associated federal penalties for failure to comply with the federal Davis-Bacon and Related Acts.
 - 2. All wages for on-site labor shall be greater than or equal to the minimum wage rates of federal Davis-Bacon and Related Acts as listed for:

Marshall County, Iowa

Current wage determination information for the county can be found at www.wdol.gov. Request work classifications and wage rates that do not appear on the wage determination information in writing through the contract administrator.

- 3. Payrolls for all labor shall be reported on the appropriate forms, shall be certified by employer, and shall be submitted weekly to the contract administrator.
- 4. Prior to initial pay application provide the contract administrator a list of labor classifications anticipated to be employed and providing on site labor for this project.

1.14 COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

- A. This project is funded, in part, by a Federal Community Development Block Grant (CDBG) administered through the Iowa Economic Development Authority (IEDA). Rules and regulations of the Federal Community Development Block Grant (CDBG) Program mandate that certain provisions and standards be invoked for development assisted projects.
 - 1. The Contractor shall comply with the provisions and standards as stated in Section 00 73 15 - Special Conditions of the Contract.
 - 2. The Contractor shall comply with the provisions and standards as stated in the Federal Labor Standards Provisions form HUD-4010.

1.15 MINORITY OWNED AND FEMALE OWNED BUSINESS PARTICIPATION

- A. Minority Owned and Female Owned Business participation is encouraged. Bidders shall make a good faith documented effort to encourage participation of minority owned and female owned businesses.
 - 1. Reference Section 00 73 15 - Special Conditions of the Contract.
 - 2. The Contractor shall submit documentation to Owner's Representative identifying business contacted and contracts issued to minority owned and female owned businesses.

1.16 SUBSTITUTION OF MATERIALS AND PRODUCTS

- A. Each bidder represents that his bid is based upon the materials and equipment described in the bidding documents.
- B. No substitution will be considered unless written request has been submitted to the Architect for approval at least ten (10) days prior to the date for receipt of bids. Each such request shall include a complete description of the proposed substitute, the name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data, and any other data or information necessary for a complete evaluation. Refer to Document 00 26 00.
- C. If the Architect approves a proposed substitution, such approval will be set forth in an Addendum.

1.17 AVAILABILITY OF SPECIFIED ITEMS

- A. Verify prior to bidding that specified items will be available in time for installation during orderly and timely progress of the work.
- B. In the event specified items will not be so available, notify the Architect prior to receipt of bids.

1.18 MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bidders may withdraw their bids at any time before bid closing. Bidders may modify such bids and resubmit them, or may submit new bids, so long as the requirements for submittal of bids are met.
- B. No bid may be withdrawn during the bid holding period stated in the Bid Form.

1.19 PREPARATION OF BID

- A. Bid Proposals shall be submitted on the prescribed form with all blank spaces for bid prices filled in, in ink or typewritten, in both words and figures. If in conflict, the amount written in words shall govern. If unit price and extension are in conflict, unit price shall govern. Additional information not requested or any alteration of the Bid Form may disqualify the Bidder.
- B. Proposals shall indicate the full name of bidder, including the firm or corporate name of the bidder and shall longhand signature of a principal duly authorized to execute contracts for the bidder. Proposals signed by an agent of the bidder must be accompanied by evidence of the agent's authority to execute contracts for the bidder. The name of each person signing the proposal shall be typed or printed below the signature.
- C. Submit Bid Form in opaque, sealed envelope, separate from bid security, bearing on the outside the following:

BID FOR: **Marshalltown Façade Rehabilitation**

BIDDER: [insert name of bidder]

CONTACT: [insert bidder's point of contact email address]

- D. Submit bid security in a separate envelope attached to the envelope containing the bid proposal.
- E. If submitting by mail or delivery service, enclose the above contents in another envelope. The mailing envelope shall bear the return address of the bidder. Address the mailing envelope with:

Sealed Bid Enclosed:

**Façade Rehabilitation
City of Marshalltown
Attn: City Clerk
City Hall
24 North Center Street
Marshalltown, IA 50158**

- F. Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered

1.20 RECEIPT AND OPENING OF BIDS

- A. Sealed bids will be received by the Owner until the time shown below, on the date shown below and will be publicly opened and read aloud at the location shown below.

BID DATE DUE: **March 21, 2023** TIME DUE: **2:00 PM (local time)**

LOCATION: City Hall
 24 North Center Street
 Marshalltown, IA 50158

BID OPENING: **March 21, 2023** TIME OPENING: **2:05 PM (local time)**

LOCATION: City Hall
 Council Chambers
 24 North Center Street
 Marshalltown, IA 50158

Bids will be received for a Single General Construction Contract – Stipulated Sum.

- B. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 30 days after the actual date of the opening thereof.

1.21 BID BREAKDOWN

- A. Within 48 hours of bid opening, the apparent low bidder shall provide, either as a separate breakout schedule or incorporated directly into the Schedule of Values, a detailed valuation of each individual business address listed below, in order to establish grant match amounts for each property Owner. (The total of the costs shall equal the lump-sum bid amount):

1 West Main Street	18 North Center Street
13-15 South Center Street	21 West Main Street
14 North Center Street	23 West Main Street
14 West Main Street	25 West Main Street
16 North Center Street	

- B. Within 48 hours of bid opening, the apparent low bidder shall provide, either as a separate breakout schedule or incorporated directly into the Schedule of Values, a detailed valuation of each Alternate for each individual business address listed above, in order to establish grant match amounts for each property Owner. (The total of the costs shall equal the lump-sum Alternate bid amount).

As Shown in Section 01 23 00 – Alternates.

- C. The detailed valuation for the above bid(s) shall include a description of the Work for each building, listed individually and formatted into line items using UniFormat™, MasterFormat™, or other widely used and acceptable industry classification standard. The detailed valuation shall indicate, at a minimum: costs for General Conditions and other expenses, and costs for major components or trades, including Demolition, Concrete, Masonry, Metals, Carpentry, Doors and Windows, Painting, Signage, Awnings, and other specialties appropriate for the Work at each building. Simply providing a lump sum cost per building will be insufficient.
- D. The bid breakdown may be used to establish the Schedule of Values as required by the General Conditions, and used for the Application and Certification for Payment.

1.22 REJECTION OF BIDS

- A. To the extent permitted by law, the Owner reserves the right to waive minor irregularities and to reject any and all bids. In addition, the Owner reserves the right to reject a bid if the bidder has failed to furnish any required bid security, or to submit data required by the bidding documents, or if the bid is in any way incomplete or irregular.
- B. The Owner reserves the right to reject any bid if the qualifications of the bidder fail to satisfy the Owner that the bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.
- C. The Owner also reserves the right to negotiate modifications to Unit Prices for additions to, or deductions from, the scheduled amount of work as given in the bid if they are considered excessive or unreasonable.

1.23 AWARD OF CONTRACT

- A. The Contract will be awarded on the basis of the apparent low base bid and the selection of any or all alternatives. Unit prices will not be considered in the determination of the award of Contract.

1.24 TIME OF COMPLETION

- A. Schedule the Work to achieve Substantial Completion as follows:
1. The Work of the Project shall be Substantial Complete on or before: **June 30, 2024.**
 2. It is agreed that the contract time is of prime importance and of the essence of this contract and failure to complete the Work on schedule will cause the Owner to sustain substantial damages.
 3. No liquidated damages will be assessed, but the Contractor is required to cooperate fully in meeting this date.

END OF SECTION 00 21 13

SECTION 00 26 00 – PROCUREMENT SUBSTITUTION PROCEDURES

1.1 SUMMARY

- A. Pre-Bid Substitutions.

1.2 BIDDER'S OPTIONS

- A. For products specified by reference standard only, select product meeting that standard, by any manufacturer.
- B. For products specified by naming one or several products or manufacturers, select one of the products and manufacturers named which complies with the technical Specifications. Submit a Request for Substitution for a product or manufacturer which is not specifically named unless "No Substitutions" is indicated. Architect and/or Engineer will review and consider for approval.
- C. For products specified by naming one or several products or manufacturers and stating "or equivalent", or "equal", or "Architect approved equivalent", or similar wording, submit a Request for Substitution for a product or manufacturer which is not specifically named. Architect and/or Engineer will review and consider for approval.
- D. For products specified by naming only one or several products or manufacturers, and "No Substitutions" is indicated, there is no option and no substitution will be allowed.

1.3 SUBSTITUTIONS

- A. Prepare Base Bid in accordance with requirements of the Bidding Documents.
 - 1. Substitutions for products may be made during the bidding period by submitting completed a Request for Substitution form and providing substantiating product information. The Request for Substitution form must be received by the Architect a minimum of ten (10) calendar days prior to the Bid Date.
 - 2. The Architect will consider substitution requests for approval provided they meet the submittal requirements and product information is complete and accurate.
 - 3. Architect will notify Bidders of approved product substitutions in an addendum.
- B. Submit a separate request for each item. Provide the following with each request:
 - 1. Complete data substantiating compliance of proposed substitution with requirements stated in Bidding Documents:
 - a. Product identification, including manufacturer's name and address.
 - b. Manufacturer's literature, identifying:
 - 1) Product description and model number.
 - 2) Reference standards.
 - 3) Performance and test data.
 - c. Samples, as applicable.
 - d. Name and address of projects on which product has been used and date of each installation.
 - 2. Itemized comparison of the proposed substitution with product specified, listing significant variations.
 - 3. Advise of any change in construction schedule resulting from use of proposed substitution.
 - 4. All effects of substitution on separate contracts.
 - 5. List of changes required in other work or products.
 - 6. Designation of responsibility for cost of required license fees or royalties.

7. Description of availability of maintenance services and sources of replacement materials and parts.
- C. Substitutions will not be considered for acceptance when:
 1. Acceptance will require substantial revision of Contract Documents.
 2. In the judgement of the Architect, the submittal does not include adequate information for a comprehensive evaluation.

1.4 BIDDER'S REPRESENTATION

- A. In making formal request for substitution the bidder represents that:
 1. The bidder has investigated proposed product and has determined that it is equivalent to or superior in all respects to that specified.
 2. The bidder will provide the same warranties or bonds for substitution as for the product specified.
 3. The bidder will coordinate installation of the accepted substitution into the Work and will make such changes as may be required for the Work to be completed in all respects.
 4. The bidder waives claims for additional costs caused by substitution that may subsequently become apparent.

1.5 ARCHITECT'S ACTION

- A. Review requests for substitution. Substitution requests that are either approved or not approved will not be returned to person submitting request.
- B. Issue an addendum to identify accepted substitutions.
- C. Only those substitutions noted as approved in an addendum may be included in the Bid.

1.6 SUBSTITUTION REQUEST FORM

- A. A Request for Substitution form is included at the end of this Section.
- B. Substitutions will be considered only when the Request for Substitution form is completed and submitted with product information requested.

REQUEST FOR SUBSTITUTION

TO: RDG Planning & Design
301 Grand Avenue
Des Moines, IA 50309-1718
sfenton@rdgusa.com

DATE RECEIVED: _____

We submit the following product/system/material information for your consideration and approval:

SPECIFICATION SECTION NUMBER AND NAME: _____

SPECIFIED ITEM: _____

PROPOSED SUBSTITUTION: _____

Attach complete information on changes to Drawings and/or Specifications, which proposed substitution would require for its proper installation.

Submit with request necessary samples and substantiating data to show equivalency (quality and performance) to that specified. Clearly mark manufacturer's literature to identify proposed item and to identify criteria confirming product is equivalent to the specification.

The undersigned certifies that the function, appearance, quality, performance and compatibility with adjacent materials are equivalent to the specified item.

Submitted by:

_____ (Signature)	_____ (Phone)
_____ (Firm)	_____ (Fax)
_____ (Address)	_____ (Email)

ARCHITECT ACTION:

☐ RECOMMENDED	☐ NOT RECOMMENDED	☐ RECOMMENDED AS NOTED
	☐ RECEIVED LATE	☐ INSUFFICIENT DATA RECEIVED

By: _____ Date: _____

ENGINEER OR CONSULTANT ACTION:

☐ RECOMMENDED	☐ NOT RECOMMENDED	☐ RECOMMENDED AS NOTED
	☐ RECEIVED LATE	☐ INSUFFICIENT DATA RECEIVED

By: _____ Date: _____

OWNER ACTION:

☐ RECOMMENDED

☐ NOT RECOMMENDED

☐ RECOMMENDED AS NOTED

☐ RECEIVED LATE

☐ INSUFFICIENT DATA RECEIVED

By: _____ Date: _____

FILL IN BLANKS BELOW:

A. Does the substitution affect dimensions indicated on the Drawings?

☐ Yes ☐ No If yes, describe the changes: _____

B. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution?

☐ Yes ☐ No If no, fully explain: _____

C. What effect does substitution have on other Contracts or other trades?

D. What effect does substitution have on construction schedule?

E. Manufacturer's warranties of the proposed and specified items are:

☐ Same ☐ Different If different, fully explain: _____

F. Reason for Request for Substitution:

G. Comparison of specified item with the proposed substitution; list significant variations:

H. What maintenance services are provided and who will provide:

I. Estimated cost savings or additional cost to make substitution:

(Attach additional sheets as required)

END OF SECTION 00 26 00

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
1 West Main Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
1 West Main Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'A Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 1 West Main Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the façade.

Asbestos was detected in two (2) of the nine (9) samples collected from various building components within the Property's façade. See Table 1 for additional information. ACMs include:

- Caulking(s)

All building materials similar in appearance, color, and/or texture to those determined to contain asbestos must be assumed to contain asbestos throughout this building.

Based on these results, the Property's façade requires further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
1 West Main Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of a two-story brick building that is a Staging 2 Sell It shop.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 9 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following tables show samples positively identified by the laboratory to be asbestos containing materials (ACM) and samples that were analyzed as non-ACM. The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content	Estimated Quantities
1WM-01	Caulking	Misc	N	Gray/White	Ext	Window Joints	<1% Chrysotile	25 LF
1WM-05	Caulking	Misc	N	Tan/White	Ext	Door to Upstairs	<1% Chrysotile	40 LF

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

Zero (0) bulk material samples were analyzed greater than 1% asbestos. Two (2) of the remaining building material samples were detected with a concentration of <1% asbestos. ACMs include caulking(s). If during demolition or renovation activities additional areas of identified ACM are discovered, they should be abated accordingly. Laboratory analytical reports are provided in Appendix B.

Iowa OSHA would consider disturbance of these two (2) materials as unclassified asbestos work.

Though an asbestos abatement contractor is not required to remove materials containing 1% or less asbestos, these materials must be removed wet and promptly contained and disposed of in leak-tight containers. Materials containing 1% or less asbestos are not required to be disposed of at an approved landfill as asbestos waste material.

Employers of those engaging in the disturbance of 1% or less asbestos are required to provide their workers with Asbestos Awareness training of at least two hours prior to disturbance of said materials. Further, those removing materials containing 1% or less asbestos must maintain documentation proving that breathing zone exposures do not exceed either OSHA's permissible exposure limit or short-term excursion limit.

It is important to note that these are estimated quantities; therefore, the abatement contractors and the client representative should discern between the estimated quantity above and future exploration of the property at the pre-bid walk-through to determine the final quantity during abatement procedures.

Table 2 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
1WM-02	Caulking	Misc	N	Gray	Ext	Around Windows	ND
1WM-03	Adhesive	Misc	N	Yellow	Ext	Outside Entry	ND
1WM-04 – Finish Coat	Plaster	Misc	Y	White	Ext	Soffit	ND
1WM-04 – Base Coat	Plaster	Misc	Y	Gray	Ext	Soffit	ND
1WM-06	Caulking	Misc	N	Gray	1	Around Interior windows	ND
1WM-07	Expansion Joint	Misc	N	Black	Ext	Sidewalk Meets Brick	ND
1WM-08	Window Glaze	Misc	N	Gray/White	2	Upstairs Windows	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was detected in two (2) of the bulk material samples collected from the façade of the building located at 1 West Main Street, Marshalltown, Iowa. ACM's include caulking(s). Based on the results of the data collected during the assessment, the façade of the building requires further action prior to renovation.

Impact7G recommends the abatement of all ACM containing components located within the inspection area if those building materials are to be disturbed during any future renovation/demolition activities. All abatement work shall be completed in accordance with local, state, and federal regulations. A visual inspection is recommended upon completion of abatement work to document that all ACMs within the scope of abatement have been removed.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211256

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN-1 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-01 162211256-0001	CAULKING, WHITE, EXT, WINDOW JOINTS	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<1% Chrysotile
1-02 162211256-0002	CAULKING, GRAY, EXT, AROUND WINDOWS	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
1-03 162211256-0003	ADHESIVE, YELLOW, EXT, ON OUTSIDE ENTRY	Yellow Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
1-04-Finish Coat 162211256-0004	PLASTER, WHITE, EXT, SOFFIT	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
1-04-Base Coat 162211256-0004A	PLASTER, WHITE, EXT, SOFFIT	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
1-05 162211256-0005	CAULKING, WHITE, EXT, DOOR TO UPSTAIRS	Tan/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<1% Chrysotile
1-06 162211256-0006	CAULKING, GRAY, EXT, AROUND INTERIOR WINDOWS	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
1-07 162211256-0007	EXPANSION JOINT, BLACK, EXT, SIDEWALK MEETS BRICK	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
1-08 162211256-0008	WINDOW GLAZE, WHITE, 2, UPSTAIRS WINDOW	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-13



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211256

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN-1 WEST MAIN

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 10:13 AM

Analyst(s):

Maggie Hayden PLM (9)

Samples Reviewed and approved by:

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-14



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material

Chain of Custody

EMSL Order Number (Lab Use Only)

EMSL Analytical, Inc.
6340 Castleplace Dr.
Indianapolis, IN 46250
Phone: (317)803-2997
Fax: (317)803-3047

1622 11256

Company: IMPACT7G		EMSL – Bill to: Same	
Street: 8951 Windsor Parkway		<i>Third Party Billing requires written authorization from third party.</i>	
City: Johnston	State: IA	Zip Code: 50131	Country: USA
Report To: Kim Crosser		Phone: 515-460-1124	Fax: 515-685-2236
Email Address: kcrosser@Impact7G.com		Please Provide results: EMAIL	
Project Name: CITY OF MARSHALLTOWN-1 West Main			
US State Samples Taken: IA			
Turnaround Time (TAT) Options			
☐ 3-Hour	☐ 6-Hour	☒ 24-Hour	☐ 32-Hour
☐ 48-Hour	☐ 96-Hour	☐ 1 Week	☐ 2 Week
*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 hr TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytic Price Guide.			
PLM – BULK (reporting limit)		TEM – Air ☐ 4-4.5hr TAT (AHERA only)	
☒ PLM EPA 600/R-93/116 (<1%)		☐ AHERA 40 CFR, Part 763	
☐ Check for Positive Stop – Clearly Identify Homogeneous Group		Filter/Pore Size (Air Samples): ☐ 0.8 µm ☐ 0.45 µm	
Sampler's Name:		Sampler's Signature:	
Sample #	Sample Description	Volume/Area (Air)	Date/Time Sampled
1-01	Caulking, White, Ext, Window Joints		
1-02	Caulking, Gray, Ext, Around Windows		
1-03	Adhesive, Yellow, Ext, on Outside Entry		
1-04	Plaster, White, Ext, Soffit		
1-05	Caulking, White, Ext, Door to Upstairs		
1-06	Caulking, Gray, Ext, Around Interior Windows		
1-07	Expansion Joint, Black, Ext, Sidewalk Meets Brick		
1-08	Window Glaze, White, 2, Upstairs Window		
Client Sample # (s):	1-01 – 1-08	Total # of Samples:	8
Relinquished (Client):	Aaron Heuss	Date:	5/19/22
Received (Lab):		Date:	5/23/22
Comments/Special Instructions:	PLEASE SAMPLE ALL LAYERS, ADHESIVES, TEXTURES, ETC. Thanks! ☺		

APPENDIX C

Photographs

Photograph table includes photos of all asbestos-containing materials.

5/19/22 Photographer: Aaron Heuss	Asbestos Containing Materials Inspection 1 West Main Street Marshalltown, Iowa
Photo #1 Description: ACM Gray/White Caulking Location: Exterior, Window Joints Sample 1WM-01	
Photo #2 Description: ACM Tan/White Caulking Location: Exterior, Doors to Upstairs Sample 1WM-05	

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
13 15 South Center Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
13 15 South Center Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'Aaron Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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APPENDIX B - Laboratory Reports & Chain of Custody Documentation

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 13 15 South Center Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the facade.

Asbestos was not detected in any of the ten (10) samples collected from various building components within the Property's façade. See Table 1 for additional information.

Based on these results, the Property's façade does not require any further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
13 15 South Center Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of a two-story 5,925 SF brick building constructed in 1880. The first floor is occupied by Pentz Appliances.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 10 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following table show samples identified by the laboratory to be non-asbestos containing materials (NACM). The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
13-15-01	Caulk	Misc	N	Black	Ext	Around Windows	ND
13-15-02	Mortar	Misc	N	Gray	Ext	Corner of Building	ND
13-15-03	Window Glaze	Misc	N	White	2	Windows	ND
13-15-04ABC	Plaster	Misc	Y	Gray	2	Walls Around Window	ND
13-15-05ABC	Skim Coat	Surf	Y	White	2	Walls Around Window	ND
13-15-06	Plaster	Misc	Y	Gray	Ext	Soffit	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was not detected in any of the bulk material samples collected from the façade of the building located at 13 15 South Center Street, Marshalltown, Iowa. Based on the results of the data collected during the assessment, the façade of the building requires no further action prior to renovation.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislabs@emsl.com

EMSL Order: 162211295

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 13 - 15 SOUTH CENTER

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
13-15-01 162211295-0001	CAULK BLACK EXT - AROUND WINDOWS	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
13-15-02 162211295-0002	MORTAR GRAY EXT - CORNER OF BUILDING	Gray Non-Fibrous Homogeneous		15% Quartz 85.0% Non-fibrous (Other)	None Detected
13-15-03 162211295-0003	WINDOW GLAZE WHITE 2 - WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
13-15-04A 162211295-0004	PLASTER GRAY 2 - WALLS AROUND WINDOW	Gray Non-Fibrous Homogeneous	<1% Hair	20% Quartz 80.0% Non-fibrous (Other)	None Detected
13-15-04B 162211295-0005	PLASTER GRAY 2 - WALLS AROUND WINDOW	Gray Non-Fibrous Homogeneous	<1% Hair	20% Quartz 80.0% Non-fibrous (Other)	None Detected
13-15-04C 162211295-0006	PLASTER GRAY 2 - WALLS AROUND WINDOW	Gray Non-Fibrous Homogeneous	<1% Hair	20% Quartz 80.0% Non-fibrous (Other)	None Detected
13-15-05A 162211295-0007	SKIM COAT WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
13-15-05B 162211295-0008	SKIM COAT WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
13-15-05C 162211295-0009	SKIM COAT WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-29



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislaboratory@emsl.com

EMSL Order: 162211295

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124

Fax: (515) 528-8005

Received Date: 05/23/2022 9:20 AM

Analysis Date: 05/24/2022

Collected Date:

Project: CITY OF MARSHALLTOWN - 13 - 15 SOUTH CENTER

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
13-15-06	PLASTER GRAY EXT -	Gray		20% Quartz	None Detected
162211295-0010	SOFFIT	Non-Fibrous		80.0% Non-fibrous (Other)	
		Homogeneous			

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-30



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

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EMSL Order: 162211295

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Attention: Kim Cresser
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8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 13 - 15 SOUTH CENTER

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 11:21 AM

Analyst(s):

Alison Pacey PLM (10)

Samples Reviewed and approved by:

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
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6340 Castleplace Dr.
Indianapolis, IN 46250
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EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

16221 1298

1 of 2

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
14 16 18 North Center Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
14 16 18 North Center Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'A. Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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Table 1 – Non-Asbestos Containing Material Sample List

APPENDICES

APPENDIX A - Qualifications

APPENDIX B - Laboratory Reports & Chain of Custody Documentation

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 14 16 18 North Center Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the facade.

Asbestos was not detected in any of the nine (9) samples collected from various building components within the Property's façade. See Table 1 for additional information.

Based on these results, the Property's façade does not require any further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
14 16 18 North Center Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of 3 different store fronts. A dog grooming shop, a tattoo shop, and a handmade jewelry shop.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 9 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following table show samples identified by the laboratory to be non-asbestos containing materials (NACM). The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
141618-01	Caulking	Misc	N	White	Ext	Where Siding Meets Block	ND
141618-02	Caulking	Misc	N	Gray	Ext	Around Windows	ND
141618-03	Caulking	Misc	N	White	Ext	Around Tile to Upstairs	ND
141618-04	Caulking	Misc	N	White	Ext	Block Meets Window	ND
141618-05	Calking	Misc	N	White	Ext	On Door	ND
141618-06	Caulking	Misc	N	Gray	Ext	Foundation	ND
141618-07	Window Glaze	Misc	N	White	2	Above all Shops	ND
141618-08	Plaster	Misc	Y	White	2	All Walls Below Windows	ND
141618-09	Skim Coat	Surf	Y	White	2	All Walls Below Windows	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was not detected in any of the bulk material samples collected from the façade of the building located at 14 16 18 North Center Street, Marshalltown, Iowa. Based on the results of the data collected during the assessment, the façade of the building requires no further action prior to renovation.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislabs@emsl.com

EMSL Order: 162211268

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date: 05/19/2022

Project: CITY OF MARSHALLTOWN - 14 16 18 NORTH CENTER

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
141618-01 162211268-0001	CAULKING WHITE EXT-WHERE SIDING MEETS BLOCK	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-02 162211268-0002	CAULKING GRAY EXT-AROUND WINDOWS	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-03 162211268-0003	CAULKING WHITE EXT-AROUND TILE TO UPSTAIRS	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-04 162211268-0004	CAULKING WHITE EXT-BLOCK MEETS WINDOW	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-05 162211268-0005	CAULKING WHITE EXT-ON DOOR	Gray/Red Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-06 162211268-0006	CAULKING GRAY EXT-FOUNDATION	Tan/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-07 162211268-0007	WINDOW GLAZE WHITE 2-ABOVE ALL SHOPS	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
141618-08 162211268-0008	PLASTER WHITE 2-ALL WALLS BELOW WINDOWS	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Perlite 80.0% Non-fibrous (Other)	None Detected
141618-09 162211268-0009	SKIM COAT WHITE 2-ALL WALLS BELOW WINDOWS	White Non-Fibrous Homogeneous		15% Quartz 85.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-44



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211268

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124

Fax: (515) 528-8005

Received Date: 05/23/2022 9:20 AM

Analysis Date: 05/24/2022

Collected Date: 05/19/2022

Project: CITY OF MARSHALLTOWN - 14 16 18 NORTH CENTER

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 10:02 AM

Analyst(s):

Ross A. Matlock

Ross Matlock PLM (9)

Samples Reviewed and approved by:

Melissa Newkirk

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-45

Asbestos Chain of Custody EMSL Order Number
(Lab Use Only)

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

[illegible]

RDG 3005.009.00

00 31 26-46

Ship Date:

Comments/Special Instructions:	PLEASE SAMPLE ALL LAYERS, ADHESIVES, TEXTURES, ETC. Thanks!
-----------------------------------	---

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
14 West Main Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
14 West Main Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'A. Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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Table 2 – Non-Asbestos Containing Material Sample List

APPENDICES

APPENDIX A - Qualifications
APPENDIX B - Laboratory Reports & Chain of Custody Documentation
APPENDIX C - Photographs

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 14 West Main Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the façade.

Asbestos was detected in two (2) of the eight (8) samples collected from various building components within the Property's façade. See Table 1 for additional information. ACMs include:

- Window Glaze
- Caulking

All building materials similar in appearance, color, and/or texture to those determined to contain asbestos must be assumed to contain asbestos throughout this building.

Based on these results, the Property's façade requires further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
14 West Main Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of a 2-story 1900 SF brick building which is occupied by Stepping Stones Christian Book Store.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 8 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following tables show samples positively identified by the laboratory to be asbestos containing materials (ACM) and samples that were analyzed as non-ACM. The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content	Estimated Quantities
14WM-01	Window Glaze	Misc	N	Gray/White	2	Upstairs Windows	<1% Chrysotile	4 EA
14WM-07	Caulking	Misc	N	Gray/Tan	Ext	Old Caulking Around Front	5% Chrysotile	50 LF

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

One (1) bulk material sample was analyzed greater than 1% asbestos. One (1) of the remaining building material samples was detected with a concentration of <1% asbestos. ACMs include window glaze and caulking. If during demolition or renovation activities additional areas of identified ACM are discovered, they should be abated accordingly. Laboratory analytical reports are provided in Appendix B.

Though an asbestos abatement contractor is not required to remove materials containing 1% or less asbestos, these materials must be removed wet and promptly contained and disposed of in leak-tight containers. Materials containing 1% or less asbestos are not required to be disposed of at an approved landfill as asbestos waste material.

Employers of those engaging in the disturbance of 1% or less asbestos are required to provide their workers with Asbestos Awareness training of at least two hours prior to disturbance of said materials. Further, those removing materials containing 1% or less asbestos must maintain documentation proving that breathing zone exposures do not exceed either OSHA's permissible exposure limit or short-term excursion limit.

It is important to note that these are estimated quantities; therefore, the abatement contractors and the client representative should discern between the estimated quantity above and future exploration of the property at the pre-bid walk-through to determine the final quantity during abatement procedures.

Table 2 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
14WM-02	Drywall	Misc	N	Brown/White	2	Walls Around Window	ND
14WM-03	Drywall Compound	Misc	N	White	2	Walls Around Window	ND
14WM-04	Drywall Tape	Misc	N	White	2	Walls Around Window	ND
14WM-05	Caulking	Misc	N	Black	Ext	Around Main Entrance	ND
14WM-06	Grout	Misc	N	Tan/Brown	Ext	Tile Grout	ND
14WM-08	Caulking	Misc	N	Gray	1	Interior Around Windows	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was detected in two (2) of the bulk material samples collected from the façade of the building located at 14 West Main Street, Marshalltown, Iowa. ACM's include window glaze and caulking. Based on the results of the data collected during the assessment, the façade of the building requires further action prior to renovation.

Impact7G recommends the abatement of all ACM containing components located within the inspection area if those building materials are to be disturbed during any future renovation/demolition activities. All abatement work shall be completed in accordance with local, state, and federal regulations. A visual inspection is recommended upon completion of abatement work to document that all ACMs within the scope of abatement have been removed.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislaboratory@emsl.com

EMSL Order: 162211280

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Crosser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 14 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
14-01 162211280-0001	WINDOW GLAZE WHITE 2 - UPSTAIRS WINDOWS	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<1% Chrysotile
14-02 162211280-0002	DRYWALL WHITE 2 - WALLS AROUND WINDOW	Brown/White Fibrous Heterogeneous	20% Cellulose	75% Gypsum 5.0% Non-fibrous (Other)	None Detected
14-03 162211280-0003	DRYWALL COMPOUND WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
14-04 162211280-0004	DRYWALL TAPE WHITE 2 -WALLS AROUND WINDOW	White Fibrous Homogeneous	95% Cellulose	5.0% Non-fibrous (Other)	None Detected
14-05 162211280-0005	CAULKING BLACK EXT - AROUND MAIN ENTRANCE	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
14-06 162211280-0006	GROUT TAN EXT - TILE GROUT	Brown Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
14-07 162211280-0007	CAULKING WHITE EXT - OLD CAULKING AROUND FRONT	Gray/Tan Non-Fibrous Homogeneous		95.0% Non-fibrous (Other)	5% Chrysotile
14-08 162211280-0008	CAULKING GRAY 1 - INTERIOR AROUND WINDOWS	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

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EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211280

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 14 WEST MAIN

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 9:53 AM

Analyst(s):

Paul Rihm PLM (8)

Samples Reviewed and approved by:

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-61

Asbestos Chain of Custody EMSL Order Number
(Lab Use Only)

6340 Castleplace Dr.
Indianapolis, IN 46250
Phone: (317)803-2997
Fax: (317)803-3047

162211280

APPENDIX C

Photographs

Photograph table includes photos of all asbestos-containing materials.

5/19/22 Photographer: Aaron Heuss	Asbestos Containing Materials Inspection 14 West Main Street Marshalltown, Iowa
Photo #1 Description: ACM Gray/White Window Glaze Location: 2 nd Floor, Upstairs Windows Sample 14WM-01	
Photo #2 Description: ACM Gray Plaster Location: Exterior, Soffit Sample 14WM-07	

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
19 West Main Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
19 West Main Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'Aaron Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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7.0	CONDITIONS & LIMITATIONS	6

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Table 1 – Asbestos Containing Material Sample List
Table 2 – Non-Asbestos Containing Material Sample List

APPENDICES

APPENDIX A - Qualifications
APPENDIX B - Laboratory Reports & Chain of Custody Documentation
APPENDIX C - Photographs

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 19 West Main Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the façade.

Asbestos was detected in four (4) of the seven (7) samples collected from various building components within the Property's façade. See Table 1 for additional information. ACMs include:

- Caulking(s)
- Plaster
- Slate Adhesive

All building materials similar in appearance, color, and/or texture to those determined to contain asbestos must be assumed to contain asbestos throughout this building.

Based on these results, the Property's façade requires further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
19 West Main Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of a 2-story Tobacco and Vape Outlet.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 7 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following tables show samples positively identified by the laboratory to be asbestos containing materials (ACM) and samples that were analyzed as non-ACM. The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content	Estimated Quantities
19WM-01	Caulking	Misc	N	White	Ext	Around Entry	3% Chrysotile	80 LF
19WM-04	Plaster	Misc	N	White	Ext	Soffit	<1% Chrysotile	100 SF
19WM-05	Caulking	Misc	N	white	Ext	Where Wall Meets Window	2% Chrysotile	25 LF
19WM-07	Slate Adhesive	Misc	N	Black	Ext	Behind Slate	10% Chrysotile	50 SF

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

Three (3) bulk material samples were analyzed greater than 1% asbestos. One (1) of the remaining building material samples were detected with a concentration of <1% asbestos. ACMs include caulking(s), plaster and slate adhesive. If during demolition or renovation activities additional areas of identified ACM are discovered, they should be abated accordingly. Laboratory analytical reports are provided in Appendix B.

Though an asbestos abatement contractor is not required to remove materials containing 1% or less asbestos, these materials must be removed wet and promptly contained and disposed of in leak-tight containers. Materials containing 1% or less asbestos are not required to be disposed of at an approved landfill as asbestos waste material.

Employers of those engaging in the disturbance of 1% or less asbestos are required to provide their workers with Asbestos Awareness training of at least two hours prior to disturbance of said materials. Further, those removing materials containing 1% or less asbestos must maintain documentation proving that breathing zone exposures do not exceed either OSHA's permissible exposure limit or short-term excursion limit.

It is important to note that these are estimated quantities; therefore, the abatement contractors and the client representative should discern between the estimated quantity above and future exploration of the property at the pre-bid walk-through to determine the final quantity during abatement procedures.

Table 2 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
19WM-02	Slate	Misc	N	Black	Ext	Around Entry	ND
19WM-03	Expansion Joint	Misc	N	White	Ext	Where Sidewalk Meets Entry	ND
19WM-06	Caulking	Misc	N	Gray	Ext	Around Window Trim	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was detected in four (4) of the bulk material samples collected from the façade of the building located at 19 West Main Street, Marshalltown, Iowa. ACM's include caulking(s), plaster and slate adhesive. Based on the results of the data collected during the assessment, the façade of the building requires further action prior to renovation.

Impact7G recommends the abatement of all ACM containing components located within the inspection area if those building materials are to be disturbed during any future renovation/demolition activities. All abatement work shall be completed in accordance with local, state, and federal regulations. A visual inspection is recommended upon completion of abatement work to document that all ACMs within the scope of abatement have been removed.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislaboratory@emsl.com

EMSL Order: 162211297

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Crosser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 19 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
19-01 162211297-0001	CAULKING WHITE EXT - AROUND ENTRY	White Non-Fibrous Homogeneous		97.0% Non-fibrous (Other)	3% Chrysotile
19-02 162211297-0002	SLATE BLACK EXT - AROUND ENTRY	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
19-03 162211297-0003	EXPANSION JOINT WHITE EXT - WHERE SIDEWALK MEETS ENTRY	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
19-04 162211297-0004	PLASTER WHITE EXT - SOFFIT	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<1% Chrysotile
19-05 162211297-0005	CAULKING WHITE EXT - WHERE WALL MEETS WINDOW	White Non-Fibrous Homogeneous		98.0% Non-fibrous (Other)	2% Chrysotile
19-06 162211297-0006	CAULKING GRAY EXT - AROUND WINDOW TRIM	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
19-07 162211297-0007	SLATE ADHESIVE BLACK EXT - BEHIND SLATE	Gray/Black Non-Fibrous Homogeneous		90.0% Non-fibrous (Other)	10% Chrysotile

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-77



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

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Attention: Kim Cresser
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Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 19 WEST MAIN

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 10:53 AM

Analyst(s):

Alison Pacey PLM (7)

Samples Reviewed and approved by:

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-78

Asbestos Chain of Custody EMSL Order Number
(Lab Use Only)

6340 Castleplace Dr.
Indianapolis, IN 46250
Phone: (317)803-2997
Fax: (317)803-3047

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

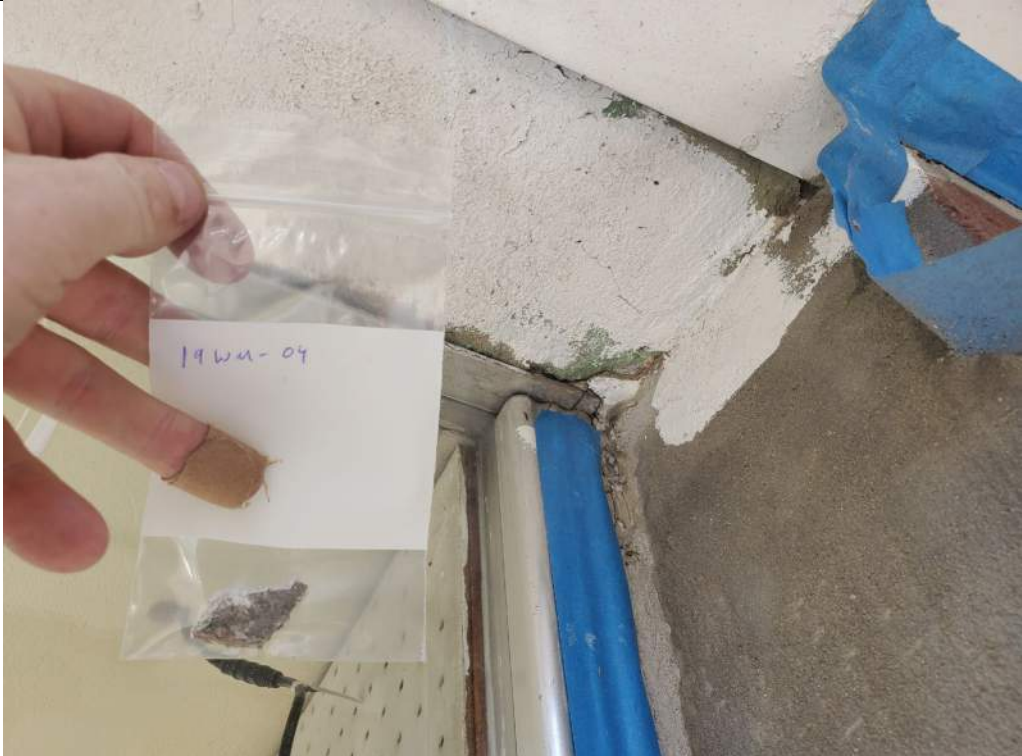
162211297

Company: IMPACT7G			☒ EMSL – Bill to: Same Third Party Billing requires written authorization from third party.		
Street: 8951 Windsor Parkway					
City: Johnston		State: IA		Zip Code: 50131	Country: USA
Report To: Kim Crosser			Phone: 515-685-2299		Fax: 515-685-2236
Email Address: kcrosser@impact7g.com			Please Provide results: EMAIL		
Project Name: City of Marshalltown - 19 West Main					
US State Samples Taken: IA					
Turnaround Time (TAT) Options					
☐ 3-Hour ☐ 6-Hour ☒ 24-Hour ☐ 32-Hour ☐ 48 -Hour ☐ 72-Hour ☐ 1 Week ☐ 2 Week					
*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 hr TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytic Price Guide					
PLM – BULK (reporting limit)			TEM – Air ☐ 4-4.5hr TAT (AHERA only)		
☒ PLM EPA 600/R-93/116 (<1%)			☐ AHERA 40 CFR, Part 763		
Sampler Names: Aaron Heuss			Sampler Signature:		
☐ Check for Positive Stop – Clearly Identify Homogeneous Group			Filter Pore Size (Air Samples): ☐ 0.8 µm ☐ 0.45 µm		
Sample ID	Sample Material/Description	Color	Floor	Location	Sample Date
19-01	Caulking	White	Ext	Around Entry	
19-02	Slate	Black	Ext	Around Entry	
19-03	Expansion Joint	White	Ext	Where Sidewalk Meets Entry	
19-04	Plaster	White	Ext	Soffit	
19-05	Caulking	white	Ext	Where Wall Meets Window	
19-06	Caulking	Gray	Ext	Around Window Trim	
19-07	Slate Adhesive	Black	Ext	Behind Slate	
Client Sample # (s):	19-01- 19-07			Total #:	7
Relinquished (Client):	Aaron Heuss	Date:	5/19/2022	Time:	
Received (Lab):		Date:	5/23/22	Time:	9:20 AM
Comments/Special Instructions:	PLEASE SAMPLE ALL LAYERS, ADHESIVES, TEXTURES, ETC. Thanks! MARSHALLTOWN - FACADE REHABILITATION EXISTING ASBESTOS INFORMATION				

APPENDIX C

Photographs

Photograph table includes photos of all asbestos-containing materials.

5/19/22 Photographer: Aaron Heuss	Asbestos Containing Materials Inspection 19 West Main Street Marshalltown, Iowa
Photo #1 Description: ACM White Caulking Location: Exterior, Around Entry Sample 19WM-01	
Photo #2 Description: ACM Gray Plaster Location: Exterior, Soffit Sample 19WM-04	

Photograph table includes photos of all asbestos-containing materials.

5/19/22 Photographer: Aaron Heuss	Asbestos Containing Materials Inspection 19 West Main Street Marshalltown, Iowa
Photo #1 Description: ACM White Caulking Location: Exterior, Where Wall Meets Window Sample 19WM-05	
Photo #2 Description: ACM Gray/Black Slate Adhesive Location: Exterior, Behind Slate Sample 19WM-07	

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
21 West Main Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
21 West Main Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'A. Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	2
3.0	PROPERTY DESCRIPTION.....	3
4.0	INSPECTION LIMITATIONS	3
5.0	INSPECTION ACTIVITIES	3
6.0	CONCLUSIONS / RECOMMENDATIONS	5
7.0	CONDITIONS & LIMITATIONS	5

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Table 1 – Non-Asbestos Containing Material Sample List

APPENDICES

APPENDIX A - Qualifications

APPENDIX B - Laboratory Reports & Chain of Custody Documentation

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 21 West Main Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the facade.

Asbestos was not detected in any of the seventeen (17) samples collected from various building components within the Property's façade. See Table 1 for additional information.

Based on these results, the Property's façade does not require any further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
21 West Main Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of a two-story brick shop that is currently being used as storage.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 17 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following table show samples identified by the laboratory to be non-asbestos containing materials (NACM). The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
21WM-01	Caulking	Misc	N	Black	Ext	Around Marble	ND
21WM-02	Grout	Misc	N	Black	Ext	Joints on the Marble	ND
21WM-03	Tile Grout	Misc	N	Gray	Ext	Floor Tile Entrance	ND
21WM-04	Ceramic Tile	Misc	N	Teal	Ext	Floor Tile Entrance	ND
21WM-05	Caulking	Misc	N	White	Ext	On Brick Patch	ND
21WM-06	Caulking	Misc	N	Black	Ext	Around Windows and Door	ND
21WM-07	Plaster	Misc	Y	Gray	Ext	Soffit	ND
21WM-08	Caulking	Misc	N	White	1	On Old Overhang	ND
21WM-09	Ceiling Tile	Misc	N	White	1	Entrance Up to Door	ND
21WM-10	Window Glaze	Misc	N	White	2	Upstairs Windows	ND
21WM-11	Caulking	Misc	N	White	2	In Between Window and Storm Door	ND
21WM-12ABC	Plaster	Misc	Y	Gray	2	Walls Around Windows	ND
21WM-13ABC	Skim Coat	Surf	Y	White	2	Walls Around Windows	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was not detected in any of the bulk material samples collected from the façade of the building located at 21 West Main Street, Marshalltown, Iowa. Based on the results of the data collected during the assessment, the façade of the building requires no further action prior to renovation.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



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Received Date: 05/23/2022 9:20 AM
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Project: CITY OF MARSHALLTOWN - 21 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
21-01 162211277-0001	CAULKING BLACK EXT-AROUND MARBLE	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-02 162211277-0002	GROUT BLACK EXT-JOINS ON THE MARBLE	Black Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
21-03 162211277-0003	TILE GROUT GRAY EXT-FLOOR TILE ENTRANCE	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
21-04 162211277-0004	CERAMIC TILE TEAL EXT-FLOOR TILE ENTRANCE	Green Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-05 162211277-0005	CAULKING WHITE EXT-ON BRICK PATCH	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-06 162211277-0006	CAULKING BLACK EXT-AROUND WINDOWS AND DOOR	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-07 162211277-0007	PLASTER GRAY EXT-SOFFIT	Gray/White Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
21-08 162211277-0008	CAULKING WHITE1-ON OLD OVERHANG	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-09 162211277-0009	CEILING TILE WHITE 1-ENTRANCE UP TO DOOR	Gray/White Fibrous Homogeneous	95% MinWool	5.0% Non-fibrous (Other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

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Project: CITY OF MARSHALLTOWN - 21 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
21-10 162211277-0010	WINDOW GLAZE WHITE 2-UPSTAIRS WINDOWS	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-11 162211277-0011	CAULKING WHITE 2-IN BETWEEN WINDOW AND STORM DOOR	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-12A 162211277-0012	PLASTER GRAY 2-WALLS AROUND WINDOWS	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
21-12B 162211277-0013	PLASTER GRAY 2-WALLS AROUND WINDOWS	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
21-12C 162211277-0014	PLASTER GRAY 2-WALLS AROUND WINDOWS	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
21-13A 162211277-0015	SKIM COAT WHITE 2-WALLS AROUND WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-13B 162211277-0016	SKIM COAT WHITE 2-WALLS AROUND WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
21-13C 162211277-0017	SKIM COAT WHITE 2-WALLS AROUND WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

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EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211277

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date: 05/19/2022

Project: CITY OF MARSHALLTOWN - 21 WEST MAIN

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 9:51 AM

Analyst(s):

Maggie Hayden PLM (17)

Samples Reviewed and approved by:

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
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Asbestos Chain of Custody EMSL Order Number
(Lab Use Only)

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Fax: (317)803-3047

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

162211277

Company: IMPACT7G						☒ EMSL – Bill to: Same Third Party Billing requires written authorization from third party					
Street: 8951 Windsor Parkway											
City: Johnston				State: IA		Zip Code: 50131			Country: USA		
Report To: Kim Crosser						Phone: 515-685-2299			Fax: 515-685-2236		
Email Address: kcrosier@impact7g.com						Please Provide results: EMAIL					
Project Name: City of Marshalltown - 21 West Main											
US State Samples Taken: IA											
Turnaround Time (TAT) Options											
☐ 3-Hour ☐ 6-Hour ☒ 24-Hour ☐ 32-Hour ☐ 48-Hour ☐ 72-Hour ☐ 1 Week ☐ 2 Week											
*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 hr TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytic Price Guide.											
PLM – BULK (reporting limit)						TEM – Air ☐ 4-4.5hr TAT (AHERA only)					
☒ PLM EPA 600/R-93/116 (<1%)						☐ AHERA 40 CFR, Part 763					
Sampler Names: Aaron Heuss						Sampler Signature:					
☐ Check for Positive Stop – Clearly Identify Homogeneous Group						Filter Pore Size (Air Samples): ☐ 0.8 µm ☐ 0.45 µm					
Sample ID	Sample Material/Description				Color	Floor	Location				Sample Date
21-01	Caulking				Black	Ext	Around Marble				
21-02	Grout				Black	Ext	Joins on the Marble				
21-03	Tile Grout				Gray	Ext	Floor Tile Entrance				
21-04	Ceramic Tile				Teal	Ext	Floor Tile Entrance				
21-05	Caulking				White	Ext	On Brick Patch				
21-06	Caulking				Black	Ext	Around Windows and Door				
21-07	Plaster				Gray	Ext	Soffit				
21-08	Caulking				White	1	On Old Overhang				
21-09	Ceiling Tile				White	1	Entrance Up to Door				
21-10	Window Glaze				White	2	Upstairs Windows				
21-11	Caulking				White	2	In Between Window and Storm Door				
21-12ABC	Plaster				Gray	2	Walls Around Windows				
21-13ABC	Skim Coat				White	2	Walls Around Windows				
Client Sample # (s):	21-01 - 21-13C						Total #:	17			
Relinquished (Client):	Aaron Heuss					Date:	5/19/2022		Time:		
Received (Lab):						Date:	5/23/22		Time:		
Comments/Special Instructions:	PLEASE SAMPLE ALL LAYERS, ADHESIVES, TEXTURES, ETC. Thanks! MARSHALLTOWN - FACADE REHABILITATION EXISTING ASBESTOS INFORMATION										

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
23 West Main Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
23 West Main Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'A Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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APPENDIX C - Photographs

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 23 West Main Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the façade.

Asbestos was detected in two (2) of the eleven (11) samples collected from various building components within the Property's façade. See Table 1 for additional information. ACMs include:

- Caulking(s)

All building materials similar in appearance, color, and/or texture to those determined to contain asbestos must be assumed to contain asbestos throughout this building.

Based on these results, the Property's façade requires further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
23 West Main Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of 2-story Storage shop.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 11 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are “suspected” to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious “mud” type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following tables show samples positively identified by the laboratory to be asbestos containing materials (ACM) and samples that were analyzed as non-ACM. The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content	Estimated Quantities
23WM-01	Caulking	Misc	N	White	Ext	Around Door to 2nd Floor	<1% Chrysotile	50 LF
23WM-02	Caulking	Misc	N	White	Ext	Behind Overhang	<1% Chrysotile	100 LF

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

Three (3) bulk material samples were analyzed greater than 1% asbestos. One (1) of the remaining building material samples were detected with a concentration of <1% asbestos. ACMs include caulking(s), plaster and slate adhesive. If during demolition or renovation activities additional areas of identified ACM are discovered, they should be abated accordingly. Laboratory analytical reports are provided in Appendix B.

Though an asbestos abatement contractor is not required to remove materials containing 1% or less asbestos, these materials must be removed wet and promptly contained and disposed of in leak-tight containers. Materials containing 1% or less asbestos are not required to be disposed of at an approved landfill as asbestos waste material.

Employers of those engaging in the disturbance of 1% or less asbestos are required to provide their workers with Asbestos Awareness training of at least two hours prior to disturbance of said materials. Further, those removing materials containing 1% or less asbestos must maintain documentation proving that breathing zone exposures do not exceed either OSHA's permissible exposure limit or short-term excursion limit.

It is important to note that these are estimated quantities; therefore, the abatement contractors and the client representative should discern between the estimated quantity above and future exploration of the property at the pre-bid walk-through to determine the final quantity during abatement procedures.

Table 2 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
23WM-03	Caulking	Misc	N	Black	Ext	Around Main Windows	ND
23WM-04	Window Seal	Misc	N	Black	Ext	Around Main Windows	ND
23WM-05	Caulking	Misc	N	White	Ext	Around Soffits	ND
23WM-06ABC	Plaster	Misc	Y	Gray	2	Walls Around Window	ND
23WM-07ABC	Skim Coat	Surf	Y	White	2	Walls Around Window	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was detected in two (2) of the bulk material samples collected from the façade of the building located at 23 West Main Street, Marshalltown, Iowa. ACM's include caulking(s). Based on the results of the data collected during the assessment, the façade of the building requires further action prior to renovation.

Impact7G recommends the abatement of all ACM containing components located within the inspection area if those building materials are to be disturbed during any future renovation/demolition activities. All abatement work shall be completed in accordance with local, state, and federal regulations. A visual inspection is recommended upon completion of abatement work to document that all ACMs within the scope of abatement have been removed.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislaboratory@emsl.com

EMSL Order: 162211300

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN 23 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
23-01 162211300-0001	CAULKING WHITE EXT - AROUND DOOR TO 2ND FLOOR	Gray/White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<1% Chrysotile
23-02 162211300-0002	CAULKING WHITE EXT - BEHIND OVERHANG	Gray/Tan Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<1% Chrysotile
23-03 162211300-0003	CAULKING BLACK EXT - AROUND MAIN WINDOWS	Brown/Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
23-04 162211300-0004	WINDOW SEAL BLACK EXT - AROUND MAIN WINDOWS	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
23-05 162211300-0005	CAULKING WHITE EXT - AROUND SOFFITS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
23-06A 162211300-0006	PLASTER GRAY 2 - WALLS AROUND WINDOW	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
23-06B 162211300-0007	PLASTER GRAY 2 - WALLS AROUND WINDOW	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
23-06C 162211300-0008	PLASTER GRAY 2 - WALLS AROUND WINDOW	Gray Non-Fibrous Homogeneous		20% Quartz 80.0% Non-fibrous (Other)	None Detected
23-07A 162211300-0009	SKIM COAT WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
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<http://www.EMSL.com> / indianapolislaboratory@emsl.com

EMSL Order: 162211300

Customer ID: IMPA25

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Attention: Kim Crosser
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8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN 23 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
23-07B 162211300-0010	SKIM COAT WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
23-07C 162211300-0011	SKIM COAT WHITE 2 - WALLS AROUND WINDOW	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

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MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

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00 31 26-111



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<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211300

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN 23 WEST MAIN

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 10:47 AM

Analyst(s):

Maggie Hayden PLM (11)

Samples Reviewed and approved by:

Asbestos Laboratory Manager
or other approved signatory

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MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

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00 31 26-112

Asbestos Chain of Custody EMSL Order Number
(Lab Use Only)

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company: IMPACT7G					
Street: 8951 Windsor Parkway					
City: Johnston			State: IA		
Report To: Kim Crosser			Zip Code: 50131		Country: USA
Email Address: kcrosser@impact7g.com			Phone: 515-685-2299		Fax: 515-685-2236
Project Name: City of Marshalltown - 23 West Main			Please Provide results: EMAIL		
US State Samples Taken: IA					
Turnaround Time (TAT) Options					
☐ 3-Hour ☐ 6-Hour ☒ 24-Hour ☐ 32-Hour ☐ 48-Hour ☐ 72-Hour ☐ 1 Week ☐ 2 Week					
*For TEM Air 3 hr through 6 hr, please call ahead to schedule *There is a premium charge for 3 hr TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytic Price Guide.					
PLM – BULK (reporting limit)			TEM – Air ☐ 4-4.5hr TAT (AHERA only)		
☒ PLM EPA 600/R-93/116 (<1%)			☐ AHERA 40 CFR, Part 763		
Sampler Names: Aaron Heuss			Sampler Signature: _____		
☐ Check for Positive Stop – Clearly Identify Homogeneous Group			Filter Pore Size (Air Samples): ☐ 0.8 µm ☐ 0.45 µm		
Sample ID	Sample Material/Description	Color	Floor	Location	Sample Date
23-01	Caulking	White	Ext	Around Door to 2nd Floor	
23-02	Caulking	White	Ext	Behind Overhang	
23-03	Caulking	black	Ext	Around Main Windows	
23-04	Window Seal	Black	Ext	Around Main Windows	
-23-05	caulking	White	Ext	Around Soffits	
23-06ABC	Plaster	Gray	2	Walls Around Window	
23-07ABC	Skim Coat	White	2	Walls Around Window	
Client Sample # (s):	23-01-07C			Total #:	11
Relinquished (Client):	Aaron Heuss			Date:	5/19/2022
Received (Lab):	_____			Date:	5/13/22
Comments/Special Instructions:				Time:	9:30 AM
PLEASE SAMPLE ALL LAYERS, ADHESIVES, TEXTURES, ETC. Thanks!					
MARSHALLTOWN - FACADE REHABILITATION EXISTING ASBESTOS INFORMATION					

APPENDIX C

Photographs

Photograph table includes photos of all asbestos-containing materials.

5/19/22 Photographer: Aaron Heuss	Asbestos Containing Materials Inspection 23 West Main Street Marshalltown, Iowa
Photo #1 Description: ACM Gray/White Caulking Location: Exterior, Around Door 2 nd Floor Sample 23WM-01	
Photo #2 Description: ACM Gray/Tan Caulking Location: Exterior, Behind Overhang Sample 23WM-02	

LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION



**Commercial Property
25 West Main Street
Marshalltown, Iowa**

Prepared for:

**City of Marshalltown
36 N Center Street
Marshalltown, Iowa 50158**

Prepared by:



**8951 Windsor Parkway
Johnston, Iowa 50131**

May 24, 2022



LIMITED ASBESTOS CONTAINING MATERIALS INSPECTION

Commercial Property
25 West Main Street
Marshalltown, Iowa

Inspected and Prepared by:

A handwritten signature in black ink, appearing to read 'Aaron Heuss', written over a horizontal line.

Aaron Heuss
Environmental Specialist I
Iowa Certified Asbestos Inspector: 22-82101

Prepared and Reviewed by:

A handwritten signature in black ink, appearing to read 'Kim Crosser-Harms', written over a horizontal line.

Kim Crosser - Harms
Sr. Project Manager
Iowa Certified Asbestos Inspector: 22-81481

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5.0	INSPECTION ACTIVITIES	3
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APPENDIX B - Laboratory Reports & Chain of Custody Documentation

1.0 EXECUTIVE SUMMARY

Impact7G, Inc. (Impact7G), completed a Limited Asbestos Containing Materials (ACM) Inspection on May 19, 2022 of the façade of the building located at 25 West Main Street, Marshalltown, Iowa (Property). The purpose of this Limited ACM Inspection is to document the presence of asbestos containing materials and assist the City of Marshalltown (Client) in facilitating renovation activities of the facade.

Asbestos was not detected in any of the eight (8) samples collected from various building components within the Property's façade. See Table 1 for additional information.

Based on these results, the Property's façade does not require any further action prior to any renovation activities.

2.0 INTRODUCTION

A. Property Information

Location:

Commercial Property
25 West Main Street
Marshalltown, Iowa 50158

Contact Person:

City of Marshalltown
Deb Millizer
36 N Center Street
Marshalltown, Iowa 50158

B. Personnel

Sr. Project Manager: Kim Crosser-Harms	State of Iowa License 22-81481
Inspector: Aaron Heuss	State of Iowa License 22-82101

C. Sampling Plan

According to the Client, the scope of this Limited ACM Inspection includes the façade of the building.

This Limited ACM Inspection is in accordance with OSHA Regulation 1926.1101. All samples collected in the field were sent to EMSL, an NVLAP certified laboratory for analysis. The samples were analyzed via the polarized light microscopy (PLM) method for asbestos content. If requested by Client, samples were further analyzed via the transmission electron microscopy (TEM) method or PLM 400 Point Count analysis method.

D. Regulation Review

The U.S. EPA qualifies asbestos containing materials (ACM) as materials with an asbestos content greater than 1%. According to Iowa OSHA, ACM is any material found to contain asbestos, regardless of its concentration, and shall be regulated as hazardous waste. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I nonfriable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II nonfriable ACM” is defined as any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or

reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.0 PROPERTY DESCRIPTION

The Property consists of a two-story 5,360 SF commercial building constructed in 1890. The 1st floor is currently occupied by Skokin' G's BBQ Restaurant.

4.0 INSPECTION LIMITATIONS

An Inspection limitation, for the purpose of this report, is any action or task that is limited from the original scope work. The overall reason for any limitation is the protection of Impact7G personnel. Examples of limitations can range from a lack of accessibility to an area of the Property, unsafe work areas, collecting additional samples, etc.

- **Only the façade of the building was inspected.**

5.0 INSPECTION ACTIVITIES

Iowa certified asbestos inspectors from Impact7G collected 8 samples on May 19, 2022. The samples were collected from various accessible building components located throughout the façade. Upon completion of bulk sampling activities, samples were sent to EMSL, an NVLAP certified laboratory for analysis.

Materials that are "suspected" to contain asbestos are divided into the following three categories:

1. **Surfacing materials** are materials that are sprayed or troweled on for acoustical, decorative, or fireproofing purposes. Examples are textured ceilings or drywall, exterior stucco and structural steel fireproofing;
2. **Thermal System Insulation (TSI)** is insulation used to inhibit heat transfer from pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and HVAC systems. Examples are hard cementitious "mud" type insulation on pipe elbows and tees, pipe insulation runs and risers, boiler insulation, flues; and,
3. **Miscellaneous** materials are mostly non-friable products when maintained in good condition. Examples are resilient floor coverings including vinyl, linoleum and floor tile, mastics and adhesives, cement products, caulk, drywall, ceiling tile and roofing materials.

The following table show samples identified by the laboratory to be non-asbestos containing materials (NACM). The complete analytical results can be found in Appendix B.

Table 1 – Non-Asbestos Containing Material Sample List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Floor	Location	Asbestos Content
25-01ABC	Plaster	Misc	Y	Gray	2	Walls Around Windows	ND
25-02ABC	Skim Coat	Surf	Y	White	2	Walls Around Windows	ND
25-03	Window Glaze	Misc	N	White	2	On All Windows	ND
25-04	Caulking	Misc	N	Black	Ext	Door To Upstairs	ND

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Asbestos Content** – ND=None Detected
 B=Basement, R=Roof, Int=Interior, Ext=Exterior

6.0 CONCLUSIONS / RECOMMENDATIONS

The following conclusions and recommendations are summarized as follows:

- Asbestos was not detected in any of the bulk material samples collected from the façade of the building located at 25 West Main Street, Marshalltown, Iowa. Based on the results of the data collected during the assessment, the façade of the building requires no further action prior to renovation.

7.0 CONDITIONS & LIMITATIONS

The Iowa Department of Natural Resources' (IDNR) Air Quality Bureau and Occupational Safety and Health Bureau (OSHA) of the Iowa Division of Labor Services require notification of any renovation/demolition activities in non-residential projects if the combined regulated ACM meets or exceeds any of the following thresholds: 160 square feet of surfacing ACM, 260 linear feet of TSI, or 35 cubic feet of ACM debris.

Impact7G has performed the tasks contained within this report in a thorough and professional manner consistent with commonly accepted standard industry practices. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the property. Impact7G cannot guarantee, and does not warrant, that this report has identified all adverse environmental factors and/or conditions affecting the subject property. This report is not a bidding document or project specification as it does not contain the necessary components. Impact7G cannot warrant the work of any third party that may have aided in the completion of this report. This report has been prepared on behalf of and exclusively for use by the City of Marshalltown for specific application to their project as discussed. Contractors, consultants or other third parties reviewing this report must draw their own conclusions regarding data contained within the report, further investigation or required remediation.

APPENDIX A

Qualifications

AARON HEUSS

DOB: 06-25-1982

Issued: 04-19-2022



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	22-8210	02-22-2023
SUPERVISOR	22-8211	02-23-2023



Asbestos

Rod A. Roberts

Rod A. Roberts
Labor Commissioner

APPENDIX B

**Laboratory Reports &
Chain of Custody Documentation**



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislaboratory@emsl.com

EMSL Order: 162211289

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124
Fax: (515) 528-8005
Received Date: 05/23/2022 9:20 AM
Analysis Date: 05/24/2022
Collected Date:

Project: CITY OF MARSHALLTOWN - 25 WEST MAIN

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
25-01A 162211289-0001	PLASTER GRAY 2 - WALLS AROUND WINDOWS	Gray Non-Fibrous Homogeneous	<1% Hair	20% Quartz 80.0% Non-fibrous (Other)	None Detected
25-01B 162211289-0002	PLASTER GRAY 2 - WALLS AROUND WINDOWS	Gray Non-Fibrous Homogeneous	<1% Hair	20% Quartz 80.0% Non-fibrous (Other)	None Detected
25-01C 162211289-0003	PLASTER GRAY 2 - WALLS AROUND WINDOWS	Gray Non-Fibrous Homogeneous	<1% Hair	20% Quartz 80.0% Non-fibrous (Other)	None Detected
25-02A 162211289-0004	SKIM COAT WHITE 2 - WALLS AROUND WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
25-02B 162211289-0005	SKIM COAT WHITE 2 - WALLS AROUND WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
25-02C 162211289-0006	SKIM COAT WHITE 2 - WALLS AROUND WINDOWS	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
25-03 162211289-0007	WINDOW GLAZE WHITE 2 - ON ALL WINDOWS	Gray/Tan Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
25-04 162211289-0008	CAULKING BLACK EXT - DOOR TO UPSTAIRS	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-127



EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 162211289

Customer ID: IMPA25

Customer PO:

Project ID:

Attention: Kim Cresser
Impact7G
8951 Windsor Parkway
Johnston, IA 50131

Phone: (515) 460-1124

Fax: (515) 528-8005

Received Date: 05/23/2022 9:20 AM

Analysis Date: 05/24/2022

Collected Date:

Project: CITY OF MARSHALLTOWN - 25 WEST MAIN

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 05/23/2022

Sample Receipt Time: 9:20 AM

Analysis Completed Date: 05/24/2022

Analysis Completed Time: 10:48 AM

Analyst(s):

Ross A. Matlock

Ross Matlock PLM (8)

Samples Reviewed and approved by:

Melissa Newkirk

Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

MARSHALLTOWN - FACADE REHABILITATION
RDG 3005.009.00

EXISTING ASBESTOS INFORMATION
00 31 26-128

6340 Castleplace Dr.
Indianapolis, IN 46250
Phone: (317)803-2997
Fax: (317)803-3047

EMSL ANALYTICAL INC.
LABORATORY • PRODUCTS • TRAINING

1622/1289

SECTION 00 41 13 – BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

BID TO: City of Marshalltown
24 North Center Street
Marshalltown, IA 50158

BID FROM:

BID FOR: Contract work for the: **Marshalltown Façade Rehabilitation**
As shown in Bidding Documents dated: **February 20, 2023**

BID PLACE: City Hall
24 North Center Street
Marshalltown, IA 50158

BID DATE: **March 21, 2023** **BID TIME:** **2:00 PM (local time)**

1. The undersigned BIDDER agrees, if the Bid is accepted, to enter into an agreement with OWNER, in the form included in the Bidding Documents, to perform and furnish the Work as specified or indicated in the Bidding Documents for the Bid Price and within the Bid Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - A. This Bid will remain subject to acceptance for 30 days after the day of Bid opening;
 - B. To the extent permitted by law, the Owner has the right to accept or reject this Bid, including alternate bids, and to waive minor informalities in the bidding;
 - C. BIDDER accepts the provisions of the Instructions and Supplementary Instructions to Bidders regarding disposition of Bid Security;
 - D. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within 10 days after the date of Owner's Notice of Award;
 - E. BIDDER has examined copies of all the Bidding Documents;
 - F. BIDDER has visited the site and become familiar with the general, local and site conditions;
 - G. BIDDER is familiar with federal, state, and local laws and regulations;
 - H. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Bidding Documents and additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents;
 - I. This Bid is genuine and not made in the interest of or on behalf of an undisclosed person, firm or corporation and is not submitted in conformity with an agreement or rules of a group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited another Bidder to submit a false or sham Bid; BIDDER has not solicited or induced a person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion

COMPLETE THIS FORM AND RETURN WITH YOUR BID

to obtain for itself an advantage over another BIDDER or over OWNER.

- J. **This project is sales tax exempt. The owner will issue an exemption certificate for the purchase or use of building materials, supplies, and equipment that will be used in the performance of the construction contract.**
- K. BIDDER agrees to comply with the requirements and provisions of Davis-Bacon and Related Acts for this Project.
- L. BIDDER will submit the schedule of values to the Architect within 48 hours after the bid opening. Providing, either as a separate breakout schedule or incorporated directly into the Schedule of Values, a detailed valuation of each individual business address listed in Section 01 10 00 "Summary" and Section 01 23 00 "Alternates".
- M. In accordance with Iowa Code 26.9(2) and 26.16, no potential bidder shall be required to provide confidential or proprietary information or meet any class requirements as a precondition to submitting a responsive bid. However, as noted in Iowa Code 26.9(2), the lowest responsive bidder may be required to provide additional information to verify responsibility prior to and as a condition of obtaining final award of the contract. Any qualification requirements contained in any bid document indicates only preferred qualifications, not a precondition to bid, and the lowest responsive bidder's qualifications will be evaluated individually based on all information provided.

3. BIDDER has received the following Addenda. Receipt of which is hereby acknowledged;

Addendum No.	Dated	Addendum No.	Dated
Addendum No.	Dated	Addendum No.	Dated
Addendum No.	Dated	Addendum No.	Dated

4. BIDDER will complete the work in accordance with the Contract Documents for the following price:

LUMP SUM BID: EXCLUDE adjustments to the work called out to be priced as Alternates.
Sum of: \$
DOLLARS
<i>(Fill in amount in both numbers and words.)</i>

5. **ALTERNATES:** Include cost variation to above Individual Bid Price applicable to the Work in accordance with Division 01 Section "Alternates". (Note: Description of work indicated here is only a brief summary. See Contract Documents, including drawings, for full definition of each Alternate.)

ADD scope of work:	
ALTERNATE No. 1:	• 1: replace awning(s) + remove canopy & repair plaster • 2: replace awning(s) • 5: replace awning(s)

COMPLETE THIS FORM AND RETURN WITH YOUR BID

• 6: provide awning(s)
Add Sum of: \$
DOLLARS
<i>(Fill in amount in both numbers and words.)</i>

ADD scope of work:
ALTERNATE No. 2:
• 1: replace stucco and repoint masonry • 1: rehabilitate windows • 2: masonry cleaning • 3: masonry cleaning
Add Sum of: \$
DOLLARS
<i>(Fill in amount in both numbers and words.)</i>

ADD scope of work:
ALTERNATE No. 3:
• 2: exterior vestibules and storefront repairs • 3: remove panels, replace siding (front entrance, south & east) • 3: exterior vestibule and storefront repairs • 6: replace storefront
Add Sum of: \$
DOLLARS
<i>(Fill in amount in both numbers and words.)</i>

ADD scope of work:
ALTERNATE No. 4:
• 1: replace windows • 2: rehabilitate windows • 3: rehabilitate windows + replace doors • 3: remove panels, replace siding (side entrance, east) • 5: rehabilitate door • 7: rehabilitate windows • 8: replace door, paint windows
Add Sum of: \$
DOLLARS

COMPLETE THIS FORM AND RETURN WITH YOUR BID

(Fill in amount in both numbers and words.)

6. BIDDER agrees that all Work will be substantially complete on or before the following substantial completion date, and ready for final payment in accordance with the conditions and time period set forth in the General Conditions, on or before: **June 30, 2024.**
7. If awarded the contact, the Bidder intends to award subcontracts in the following areas to the firms listed below:

MASONRY:

8. ATTACHMENTS: The following documents are attached to and made a condition of this Bid:
- A. Bid Security of 5% of the bid amount in the form of a certified check or bid bond is enclosed. The bidder acknowledges the bid security becomes the property of the Owner in the event the contract and bonds are not executed within the time period set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.
 - B. DOL Bidder Status Form: see Section 00 45 13.
 - C. Intent to Comply with Section 3 Requirements: see Section 00 45 15.
9. BID FORM SIGNATURE(S):

Signature	Title		
Printed Name	Company Name		
Date	Company Address		
Phone	City	State	Zip
Email			

END OF SECTION 00 41 13

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?

☐ 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.

SECTION 3 – CONTRACTOR INTENT TO COMPLY

For Project (insert project name): Marshalltown Downtown Revitalization

In (Insert City Name): Marshalltown, Iowa IEDA Project Number: 20-DTR-003

Contractor Name: _____ hereinafter referred to as “CONTRACTOR.”

Address: _____ City: _____ State: _____ Zip: _____

This form is the CONTRACTOR’s official statement acknowledging their understanding that Section 3 requirements are mandatory for the proposed project which is funded in part with funds from the Department of Housing and Urban Development (HUD). The form also signifies the CONTRACTOR’s intent to comply with the Section 3 requirements as outlined in the plans and specifications, including but not limited to, the intent to utilize Section 3 (low to moderate income) workers and subcontractors where possible and complying with all mandatory reporting related to Section 3 HUD guidelines.

In recognition of the intent to comply the CONTRACTOR indicates their compliance with the following certifications:

☐ Yes If awarded a contract for this HUD-funded project, CONTRACTOR is able to determine employee’s hourly wages and addresses.

☐ Yes ☐ No Is this business a registered Section 3 business with the U.S. Department of Housing and Urban Development? You can search for Section 3 Businesses here: <https://hudapps.hud.gov/OpportunityPortal/>

☐ Yes Willing to provide information on the hours worked by all employees, including Section 3 and Targeted Section 3 employees for this job?

☐ Yes If the need to hire new employees during this job occurs, agree to hire Section 3 qualified employees for those job opportunities presuming all other qualifications are equal with qualified non Section 3 applicants?

☐ Yes If the need to subcontract arises, willing to CONSIDER hiring and subcontracting with a Section 3 business registered with HUD. You can search for Section 3 Businesses here: <https://hudapps.hud.gov/OpportunityPortal/>

The CONTRACTOR estimates that the total hours worked on this project by employees of the CONTRACTOR will be _____.

The CONTRACTOR recognizes that this contracting opportunity is subject to HUD Section requirements (24 CFR Part 75). The CONTRACTOR has read and understands the Section 3 requirements as generally described above and presented in the Section 3 contract language included in the procurement documents for this project (plans and specifications, request for qualification, request for proposals, etc.). If awarded a contract, the CONTRACTOR commits to following Section 3 requirements, as they apply to this project. If awarded a contract for this project, the CONTRACTOR agrees to provide reports to the project’s Grant Administrator on a timely basis) regarding Section 3 efforts and accomplishments.

Signature: _____ Date: _____

Print Name: _____ Title: _____

Template as of January 23, 2023

SECTION 00 52 13 – AGREEMENT FORM

1.1 AGREEMENT

- A. AIA Document A101-2017, Standard Form of Agreement Between Owner and Contractor. A copy of the Agreement is included in the Project Manual.
- B. Properly executed copies of this form of agreement will become a part of the Contract Documents

END OF SECTION 00 52 13



AIA Document A101™ – 2017

Exhibit A Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the « » day of « » in the year « »
(In words, indicate day, month and year.)

for the following **PROJECT**:
(Name and location or address)

Downtown Façade Improvements
Marshalltown, IA

THE OWNER:
(Name, legal status and address)

City of Marshalltown
24 North Center Street
Marshalltown, IA 50158
Phone: 641-754-5701
www.marshalltown-ia.gov

THE CONTRACTOR:
(Name, legal status and address)

Company
Address
City-State-Zip
Phone Number: ???

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- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies

required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, **property insurance written on a builder's risk "all-risks"** completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss

Sub-Limit

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage

Sub-Limit

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

- ☐ **§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

«—»

- ☐ **§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

«—»

- ☐ **§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

«—»

- ☐ **§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

«—»

- ☐ **§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

«—»

- ☐ **§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

«—»

- ☐ **§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

«—»

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

- ☐ ~~§ A.2.5.1 Cyber Security Insurance~~ for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. (Indicate applicable limits of coverage or other conditions in the fill point below.)



- ☐ ~~§ A.2.5.2 Other Insurance~~
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, ~~unless a different duration is stated below:~~

~~(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)~~

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than One Million Dollars (\$1,000,000.00) each occurrence, Two Million Dollars (\$2,000,000.00), general aggregate, and One Million Dollars (\$1,000,000.00) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than One Million Dollars (\$1,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than Five Hundred Thousand Dollars (\$500,000.00) each accident, One Million Dollars (\$1,000,000.00) each employee, and Two Million Dollars (\$2,000,000.00) policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks.

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, ~~unless a different duration is stated below:~~

~~(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)~~

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

- ☒ § A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, **relieves the Owner of the responsibility to purchase and maintain such insurance** except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions, ~~unless otherwise set forth below:~~

~~(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)~~

- ☐ § A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate, for Work within fifty (50) feet of railroad property.

- ☐ § A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos containing materials.

- ☒ § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

- ☒ § A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

- ☐ § A.3.3.2.6 Other Insurance

~~(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)~~

Coverage

Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	Amount equal to 100% of the Contract Sum.
Performance Bond	Amount equal to 100% of the Contract Sum.

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

~~Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:~~

«—»

DRAFT

SECTION 00 61 13 – BOND FORMS

1.1 PERFORMANCE AND PAYMENT BOND

- A. AIA Documents A312, Performance and Payment Bond Form, 2010 Edition, published by the American Institute of Architects, is hereby made a part of the Bidding Documents by reference.
- B. Properly executed copies of these bond forms will become part of the Contract Documents.

END OF SECTION 00 61 13

SECTION 00 72 13 – GENERAL CONDITIONS

1.1 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

- A. AIA Document A201-2017, General Conditions of the Contract for Construction, is the General Conditions of the Contract. A copy of the General Conditions is included in the Project Manual.
- B. Each article of the General Conditions remains in effect unless expressly amended or deleted by other contract documents.

END OF SECTION 00 72 13



AIA Document A201™ – 2017

General Conditions of the Contract for Construction

For the following Project:

(Name, location and detailed description)

Downtown Façade Improvements
Marshalltown, IA

THE OWNER:

(Name, legal status and address)

City of Marshalltown
24 North Center Street
Marshalltown, IA 50158
Phone: 641-754-5701
www.marshalltown-ia.gov

THE ARCHITECT:

(Name, legal status and address)

RDG Planning & Design, Inc.
301 Grand Avenue
Des Moines, IA 50309-1718
Phone: (515) 288-3414
www.rdgusa.com

RDG Project No.: R3005.009.00

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 The terms and conditions of the Contract Documents, including but not limited to the General Conditions, the Supplementary Conditions, and Division 01 Specification Sections, apply to all Sections of the Specifications.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.7.1 Instruments of Service transmitted in digital form or any other information or documentation transmitted in digital form are not Contract Documents. Discrepancies may exist between digital data files and corresponding hard-copy Contract Documents including, but not limited to, subsequent modifications to the Contract Documents. In the event of a conflict between the Contract Documents and the digital data files, the Contract Documents shall govern. Users of digital data files shall be responsible for confirming the accuracy and completeness of the files relative to current Contract Documents.

§ 1.7.2 Data contained in Architect provided digital data files, at the time of transfer to third parties, are part of the Architect's Instruments of Service and shall not be used by anyone receiving this data for any purpose other than as a convenience in the preparation of shop drawings for the referenced project. Any other use or reuse by others is prohibited. Users of these digital data files shall agree to make no claim and hereby waive, to the fullest extent permitted by law, any claim or cause of action or any nature against the Architect, its officers, consultants, directors, agents, and sub-consultants, and any employees of them, that may arise out of or in connection with use of these digital data files. Furthermore, users shall, to the fullest extent permitted by law, defend, indemnify and hold harmless the Architect, its officers, consultants, directors, agents, and sub-consultants, and any employees of them, from and against any and all claims, causes of action, damages, liabilities and costs, including, but not limited to, reasonable attorneys' fees and defense costs, arising out of or resulting from the use of these digital data files.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™– 2013, Building Information Modeling and Digital Data Exhibit, and the requisite ~~AIA Document G202™–2013, Project Building Information Modeling Protocol Form~~ RDG BIM Project Execution Plan, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner

to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3,

the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.2.5 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect for evaluating and responding to the Contractor's requests for information where the requested information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. Work required by the Contract Documents to be performed after working hours or work the Contractor elects to perform after hours shall be completed at no additional cost to the Owner.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.2.1 After the Contract has been executed, the Owner and Architect will consider requests for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 01 of the Specifications). By making requests for substitutions, the Contractor:

- .1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that the Contractor will provide the same warranty for the substitution as it would have provided for the product specified;

- .3 certifies that the cost data presented is complete and includes all related costs for the substituted product and for Work that must be changed as a result of the substitution, except for the Architect's redesign costs, and waives all claims for additional costs related to the substitution that subsequently become apparent; and
- .4 shall coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

§ 3.4.2.2 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect for reviewing the Contractor's proposed substitutions and making agreed-upon changes in the Drawings and Specifications resulting from such substitutions.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.6.1 Bidders shall be responsible for informing themselves of tax laws, requirements, regulations, and interpretations as they apply to this project.

§ 3.6.2 This Project is Iowa sales tax exempt. Persons shall purchase such items of tangible personal property without liability for the tax if such property will be used in the performance of the construction contract and a purchasing agent authorization letter and an exemption certificate, issued by the designated exempt entity, are presented to the retailer. Said taxes shall not be included in the bid value for this Project.

§ 3.6.3 The Owner shall issue an authorization letter and an exemption certificate to the Contractor, subcontractor, builder, or manufacturer to be used as provided in Iowa Code. The authorization letter and the exemption certificate shall specify the construction project to which they apply and shall be valid only for that project. The Owner shall notify the Iowa Department of Revenue that such authorization letter and exemption certificate have been issued. The notification shall, to the extent practicable, describe the project and identify the Contractors, subcontractors, builders, and manufacturers which will be using the letter and certificate.

§ 3.6.4 The Contractor shall provide to the Owner a listing of Contractors, subcontractors, builders, and manufacturers which will be purchasing tangible personable property for this Project and request the owner provide an authorization letter and an exemption certificate relative to Article 3.6.2 above.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

- .1 City has calculated the required building permit fee of \$250 per building. Each building will require a separate permit and fee. As stated above, the Contractor shall pay for these building permit fees.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains ~~or recognizes the existence of~~ burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence or good faith belief of such existence of such remains or features may be made as provided in Article 15.

§ 3.7.6 Plan reviews which may be required by the State of Iowa Building Code Commissioner for 661 Iowa Administrative Code Chapter 200 Fire Marshal Administration or 661 Iowa Administrative Code Chapter 300 State Building Code - Administration shall be secured by the Architect and paid for by the Owner. Exception: Fire Alarm and Automatic Sprinkler System plan reviews and fees shall be paid by the Contractor.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly

by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.9.4 The Contractor shall employ a superintendent or an assistant to the superintendent who will perform as a coordinator for structural, mechanical, and electrical Work. The coordinator shall be knowledgeable in structural, mechanical, and electrical systems and capable of reading, interpreting and coordinating Drawings, Specifications, and shop drawings pertaining to such systems. The coordinator shall assist the Subcontractors in arranging space conditions to eliminate interference between the structural, mechanical, and electrical systems and other Work and shall supervise the preparation of coordination drawings documenting the spatial arrangements for such systems within restricted spaces. The coordinator shall assist in planning and expediting the proper sequence of delivery of structural, mechanical, and electrical equipment to the site.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. ~~If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.~~

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.12.11 The Architect's and its consultant's review of Contractor's submittals will be limited to examination of an initial submittal and one (1) re-submittal. The Architect's review of additional submittals will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for evaluation of such additional re-submittals.

§ 3.12.12 The Architect's and its consultant's review of Contractor's submittal out of sequence from the submittal schedule agreed to by the Architect shall entitle the Owner to deduct from the Contract Sum amounts paid to the Architect for review of such out of sequence submittals.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

~~§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.~~

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the Owner, Architect, Architect's Consultants, and their agents and employees from and against any and all claims, causes of actions, damages, losses and expenses, including but not limited to attorney's' fees, arising out of or resulting from the performance or prosecution of the Work by the Contractor, it's subcontractors, agents, or employees; or arising from any neglect, default, or mismanagement or omissions by the Contractor, it's subcontractors, agents, or employees in the performance of any duties imposed by the contract or by law; provided that any such claim, damage, loss, or expense:

- .1 is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting there from, and
- .2 is caused in whole or in part by any fault, negligence, act, or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by them and/or anyone for whose acts any of them may be liable, and including any of their employee's injury or damages caused in whole or in part by the negligence of the same employee.

Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in Section 3.18.1.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§3.19 Iowa Code Chapter 573 Claims

§ 3.19.1 Contractor shall secure discharge by separate surety bond or otherwise of any 573 Claim that arises from Contractor's dealings with subcontractors or suppliers, or from any subcontractor's dealings with sub-subcontractors or suppliers. Contractor shall indemnify the Owner for any costs the Owner may sustain due to the filing of any Iowa Code Chapter 573 Claims arising from Contractor's dealings with subcontractors or suppliers, including the price of any bond to discharge said claims and reasonable attorney's fees incurred in defending said claims. The Owner shall retain all rights to make any claims or pursue any remedies it might have in contract or common law against the Contractor or surety. After Contractor's discharge by separate surety bond or otherwise of any 573 claim, Owner shall waive all rights to withhold double (or any part of) said 573 claim.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols. Communications by and with individual building owners, tenants, and occupants shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. ~~The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.~~

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon in writing or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon in writing or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term “Subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term “Subcontractor” does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term “Sub-subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor’s Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor’s Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be

responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- 1** The change in the Work;
- 2** The amount of the adjustment, if any, in the Contract Sum; and
- 3** The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 Contractor shall comply with the following provisions in determining any change in contract cost.

- 1** For the Prime Contractor, any changes or additions to the work which involve extra cost and for which the additional cost is determined by mutual agreement on a lump sum amount, shall be handled on the basis of net cost plus 10 percent; this percentage shall include overhead and profit. 'Cost' shall include all items of material and labor, including pro rata charge for foreman, use of power tools and equipment (for the time actually used), power, bond premium, liability, compensation, insurance, and automobile insurance. Social security insurance, old age, and unemployment insurance may be considered as cost, but these items will not carry the 10 percent for overhead and profit. When requested, the Contractor shall furnish evidence of net cost by means of invoices and certified time records.
- 2** When the Prime Contractor seeks the work of a change order through the quotation of a subcontractor(s), the cost submitted to the Owner will list a total maximum of 15 percent overhead and profit for all Contractors. Ten percent (10%) overhead and profit will be allowed for the Contractor actually performing the work. The remaining 5 percent will be allowed for coordination of the work by the Prime Contractor.
- 3** Changes in the work involving credits for work not performed shall be made on the basis of total cost. Contractor mark-up for profit and overhead shall be included in the construction cost change.

- .4 The Contractor shall furnish to the Architect an itemized breakdown of quantities and prices on all changes. Degree and detail of breakdown shall be at the Architect's discretion, but, in general, shall be in such detail appropriate to the size and scope of the change so as to allow timely and meaningful evaluation.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and

credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the

Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

§ 8.3.4 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect as Additional Services for delays attributed to the Contractor.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents. The form of Application for Payment shall be a notarized AIA Document G702, Application and Certificate for Payment, supported by AIA Document G703, Continuation Sheet.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 The Owner will retain five percent (5%) of each Application for Payment in accordance with Section 573.12 of the Code of Iowa:

- .1 Retainage will be held 30 days after completion and final acceptance of the Work, unless otherwise requested by the Contractor in accordance with Section 26.13 of the Code of Iowa.
- .1 At the end of the 30 day period, the Owner will continue to hold double the total amount of all claims on file and the estimated value of incomplete work.
- .2 A request for early release of retained funds will only be considered upon completion of the following:

- .1 Substantial Completion of the Work substantiated by an executed Certificate of Substantial Completion.
- .2 Notification to all known suppliers, subcontractors, and sub-subcontractors of the Contractors intent to request a release of retained funds in compliance with Section 26.13 of the Code of Iowa.
- .3 Receipt of an itemized, tabulated list prepared by the Contractor of all incomplete or nonconforming work items, including valuation of each work item listed. Include separate columns for labor and material for each item listed. Upon approval, this list shall be incorporated into the Schedule of Values for subsequent payment applications. All values shall be listed as double the estimated value of work item.
- .4 G706 - Contractor's Affidavit of Payment of Debts and Claims.
- .5 G706A - Contractor's Affidavit of Release of Liens.
- .6 G707 - Consent of Surety to Final Payment.
- .7 Evidence of continuation of liability coverage, including coverage for completed operations in accordance Section 11.1 of AIA General Conditions.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1** defective Work not remedied;
- .2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5** damage to the Owner or a Separate Contractor;
- .6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7** repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

~~**§ 9.5.3** When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.~~

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

~~**§ 9.6.4** The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.~~

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.3.1 The Architect shall not be required to make inspections to determine Substantial Completion when the Work is not sufficiently complete or will result in extensive lists of items to be completed or corrected. When the Work is not sufficiently complete and such inspections are requested by the Contractor or are necessary to allow Owner occupancy by the required substantial completion date, the Owner shall have the right to deduct from the Contract Sum amounts paid to the Architect for additional services to conduct such inspections.

§ 9.8.3.2 The Architect's inspection of any portion of the Work to determine whether such portion of the Work is substantially complete will be limited to an initial inspection and one (1) re-inspection. Additional re-inspections will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for such additional re-inspections.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the such Certificate. ~~Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.~~

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.1.1 The Architect's inspection of the Work to determine whether the Work is acceptable for Final Completion and Final Payment will be limited to one (1) inspection. Additional re-inspections will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for such additional re-inspections.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld

by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- 1** liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- 2** failure of the Work to comply with the requirements of the Contract Documents;
- 3** terms of special warranties required by the Contract Documents; or
- 4** audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- 1** employees on the Work and other persons who may be affected thereby;
- 2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- 3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to the negligent acts, errors, or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall defend, indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against any and all claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make

a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, ~~excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.~~

§ 13.1.1 Compliance with Law Provision: The Contractor agrees that he will comply with all applicable Federal, State, and local laws, statutes, codes, rules, and regulations having jurisdiction over the Project. Contractor shall take all necessary precautions to keep the site and work in compliance with the safety and health regulations for construction issued by the Bureau of Labor Standards of the U.S. Department of Labor as well as the Occupational Safety and Health Standards, parts 1910 and 1926 as amended and as enforced by the State of Iowa.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.6 Davis-Bacon and Related Acts

§ 13.6.1 Davis-Bacon and Related Acts: This project is funded, in part, by federal grants and funding. Rules and provisions of the Davis Bacon and Related Acts apply to this project. It is the responsibility of the Contractor to acquire current appropriate and necessary publications and materials regarding the Davis-Bacon and Related Acts and to comply with its rules and provisions as they apply to this Project.

§ 13.7 Community Development Block Grant (CDBG)

§ 13.7.1 This project is funded, in part, by a Federal Community Development Block Grant (CDBG) administered through the Iowa Economic Development Authority. Rules and regulations of the Federal Community Development Block Grant Program mandate that certain provisions and standards be invoked for development assisted projects.

§ 13.7.2 The Contractor shall comply with the provisions and standards as stated in Section 00 73 15 - Special Conditions of the Contract.

§ 13.7.3 The Contractor shall comply with the provisions and standards as stated in the current edition of the Federal Labor Standards Provisions, form HUD-4010.

§ 13.8 Minority owned and female owned business participation

§ 13.8.1 Minority Owned and Female Owned Business participation is encouraged. Bidders shall make a good faith documented effort to encourage participation of minority owned and female owned businesses.

§ 13.8.2 The Contractor shall submit documentation to Owner's Representative identifying business contacted and contracts issued to minority owned and female owned businesses.

§ 13.9 Accounting records

§ 13.9.1 The Contractor shall maintain, or cause to be maintained, all books, records and all other financial documents pertaining to the Project in accordance with generally accepted accounting principles. Such records of the Contractor shall be available for inspection and copying by the Iowa Economic Development Authority or its designated agents, the Auditor of the State of Iowa, the Treasurer of the State of Iowa, the Attorney General of the State of Iowa and the Iowa Division of Criminal Investigation at all times within the term of this Agreement and during the term of any extension thereof, and for five (5) full years from the date of completion the Project. The Contractor shall cause the books, records and all other financial documents of its subcontractors and suppliers pertaining to the Project described in this Agreement to be available consistent with this paragraph.

§ 13.9.2 Within thirty (30) days of receipt of a written request, the Contractor shall deliver copies of all agreements or documents relating to the Project; copies of all invoices, receipts, statements or vouchers relating to the Project; a list of all unpaid bills for labor and materials in connection with the Project; and budgets and revisions showing estimated costs of the Project and funds required at any given time to complete and pay for the Project.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- 1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- 2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- 3** Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- 4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub- subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.2.5 Provisions of law pursuant to the Code of Iowa, Act to Provide for Termination of Contracts for Construction of Public Improvements when construction work or work thereon is stopped because of a National Emergency, shall apply to and become a part of this contract and shall be binding upon all parties hereto, including Subcontractors and Sureties upon any Bond given or filed in connection herewith.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.6.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work, and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.

§ 15.1.6.4 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks

sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to

file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

SECTION 00 73 15 – SPECIAL CONDITIONS OF THE CONTRACT

The following provisions are made part of the Contract.

1. Access and Maintenance of Records.

The contractor must maintain all required records for five years after final payments are made and all other pending matters are closed.

At any time during normal business hours and as frequently as is deemed necessary, the contractor shall make available to the Iowa Economic Development Authority, the State Auditor, the General Accounting Office, and the Department of Housing and Urban Development, for their examination, all of its records pertaining to all matters covered by this contract and permit these agencies to audit, examine, make excerpts or transcripts from such records, contract, invoices, payrolls, personnel records, conditions of employment, and all other matters covered by this contract.

2. Civil Rights.

The Contractor must comply with the following laws and regulations:

- Title VI of the Civil Rights Act of 1964 (P.L. 88-352). *States that no person may be excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance on the basis of race, color, or national origin.*
- Title VIII of the Civil Rights Act of 1968 (Fair Housing Act), as amended.
- Federal Executive Order 11063, as amended by Executive Order 12259. *Equal Opportunity Housing*
- Iowa Civil Rights Act of 1965. *This Act mirrors the Federal Civil Rights Act.*
- Section 109 of Title I of the Housing and Community Development Act of 1974, as amended (42 U.S.C. 5309). *Provides that no person shall be excluded from participation in, denied the benefits of, or subjected to discrimination on the basis of race, color, national origin, sex, age, or handicap under any program or activity funded in part or in whole under Title I of the Act.*
- The Age Discrimination Act of 1975, as amended (42 U.S.C. 1601 et seq.) *Provides that no person on the basis of age, be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity receiving Federal financial assistance.*
- Section 504 of the Rehabilitation Act of 1973, as amended (P.L. 93-112, 29 U.S.C. 794). *Provides that no otherwise qualified individual shall solely by reason of his/her handicap be excluded from participation in, be denied the benefits of, or be discriminated against under any program or activity receiving Federal financial assistance.*
- Americans with Disabilities Act (P.L. 101-336, 42 U.S.C. 12101-12213) *Provides comprehensive civil rights to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications.*

- Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701u). *The purpose of section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) (section 3) is to ensure that employment and other economic opportunities generated by certain HUD financial assistance shall, to the greatest extent feasible, and consistent with existing Federal, State and local laws and regulations, be directed to low- and very low-income persons, particularly those who are recipients of government assistance for housing, and to business concerns which provide economic opportunities to low- and very low-income persons.*

3. Termination Clause.

Reference AIA Document A201-2007 Article 14, as amended.

4. Certification regarding government-wide restriction on lobbying.

The Recipient (Contractor) certifies, to the best of his or her knowledge and belief, that:

- No Federal appropriated funds have been paid or will be paid, by or on behalf of the Recipient, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee, or an employee of a Member of congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Recipient shall complete and submit Standard Form-LLL, "Disclosure Form to Report Federal Lobbying" in accordance with its instruction.
- The Recipient shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

5. Lead-Safe Housing Regulations (as applicable).

24 CFR Part 35 et. al.

Requirements for Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally Owned Residential Properties and Housing Receiving Federal Assistance, Final Rule

6. Recycled Materials

The contractor agrees to comply with all the requirements of Code of Iowa chapter 8A.315-317 and Iowa Administrative Code chapter 11-117.6(5) — Recycled Product and Content which states: When appropriate, specifications shall include requirements for the use of recovered materials and products.

The specifications shall not restrict the use of alternative materials, exclude recovered materials, or require performance standards that exclude products containing recovered materials unless the subrecipient seeking the product can document that the use of recovered materials will impede the intended use of the product.

7. Notice of Awarding Agency Requirements and Regulations Pertaining to Reporting

The Contractor must provide information as necessary and as requested by the Iowa Economic Development Authority for the purpose of fulfilling all reporting requirements related to the CDBG program.

8. Executive Orders 11246 and 11375. (For all contracts in excess of \$10,000)

During the performance of this contract, the contractor agrees as follows:

- 1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- 2) The Contractor will, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- 3) The Contractor will send to each labor union or representative of workers with which they have a collective bargaining agreement or other Contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- 4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant order of the Secretary of Labor.
- 5) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- 6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any such rules, regulations or orders, this Contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further government Contracts in accordance with

procedures authorized in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

- 7) The Contractor will include the provision of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.
9. The Contractor will comply with the following laws and regulations. (For all contracts in excess of \$100,000)
 - 1) Section 306 of the Clean Air Acts [42 U.S.C. 1857 (h)].
 - 2) Section 508 of the Clean Water Act [33 U.S.C. 1368].
 - 3) Executive Order 11738. *Providing administration of the Clean Air and Water Acts.*

In accordance with the Clean Air and Water Act, during the performance of this contract, the Contractor agrees as follows:

- 1) The Contractor will certify that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency pursuant to 40 CFR 15.20.
 - 2) The Contractor agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
 - 3) The Contractor agrees that as a condition for the award of a Contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, Environmental Protection Agency, indicating that a facility utilized or to be utilized for the Contract is under consideration to be listed on the Excluded Party Listing System
 - 4) The Contractor agrees that it will include or cause to be included the criteria and requirements in Paragraphs (1) through (4) of this section in every nonexempt subcontract and require every subcontractor to take such action as the Government may direct as a means of enforcing such provisions.
10. Federal Labor Standards Provisions. (For all construction contracts in excess of \$2,000)

In addition to the preceding provisions, all construction contracts in excess of \$2,000 must include the Federal Labor Standards Provisions (verbatim) found in Appendix 2 under Required Contract Provisions. (Housing rehabilitation contracts of less than 8 units are excluded from this requirement.)

Federal Labor Standards Provisions (verbatim) found in Appendix 2, including:

- Davis-Bacon and Related Acts
- Contract Work Hours and Safety Standard Act
- Copeland Anti-kickback Act

11. Section 3 language for Contracts.

- A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i)

preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

END OF SECTION 00 73 15

<https://sam.gov/wage-determination/IA20230049/1>

General Decision Number: IA20230049 01/13/2023

Superseded General Decision Number: IA20220049

State: Iowa

Construction Type: Building

County: Marshall County in Iowa.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

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 \$16.20 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 2023. 	
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 \$12.15 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 2023. 	

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 <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	01/13/2023

BOIL0083-009 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 41.52	30.36

CARP0004-002 05/01/2022

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 31.75	26.61

* ELEV0033-002 01/01/2023

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 51.68	37.335+a+b

FOOTNOTES:

A. Employer contributes 8% of regular basic hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for employees with less than 5 years of service.

B. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day; Day after Thanksgiving; & Christmas Day.

ENGI0150-010 06/01/2022

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Forklift).....	\$ 37.50	36.90

Class 4

ENGI0150-037 06/01/2022

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Crane).....	\$ 38.50	36.90

Class 2

IRON0111-002 07/01/2022

	Rates	Fringes
IRONWORKER (Reinforcing).....	\$ 35.00	29.31

IRON0577-001 06/01/2022

	Rates	Fringes
IRONWORKER (Ornamental).....	\$ 28.80	25.05

LABO0177-002 05/01/2016

	Rates	Fringes
LABORER (Mason Tender - Brick)...	\$ 24.07	10.98

PAIN0246-001 05/01/2022

	Rates	Fringes
PAINTER (Brush and Roller).....	\$ 28.84	14.36

PAIN0676-001 05/01/2021

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 30.19	16.28

SFIA0669-002 01/01/2022

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 37.58	24.69

SHEE0045-003 06/01/2020

	Rates	Fringes
SHEET METAL WORKER (Includes HVAC Duct Installation).....	\$ 35.60	20.97

* UAVG-IA-0001 01/01/2019

	Rates	Fringes
MILLWRIGHT.....	\$ 28.20	23.74

* UAVG-IA-0002 01/01/2019

	Rates	Fringes
PIPEFITTER, Includes HVAC Pipe and Unit Installation.....	\$ 34.46	19.28

* SUIA2016-022 07/19/2016

	Rates	Fringes
BRICKLAYER.....	\$ 25.93	9.70

CARPENTER, Includes Acoustical Ceiling Installation, and Drywall Hanging (Excludes Form Work).....	\$ 23.30	12.28
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CEMENT MASON/CONCRETE FINISHER...	\$ 21.12	11.07
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ELECTRICIAN, Includes HVAC/Temperature Controls Installation.....	\$ 26.11	6.56
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INSULATOR: Mechanical (Duct, Pipe and Mechanical System Insulation).....	\$ 19.04	7.32
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IRONWORKER, STRUCTURAL.....	\$ 25.29	15.89
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LABORER: Common or General.....	\$ 17.25	6.93
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LABORER: Landscape.....	\$ 14.81 **	0.00
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LABORER: Pipelayer.....	\$ 18.00	2.70
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OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 27.31	15.35
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OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 27.55	22.85
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OPERATOR: Bulldozer.....	\$ 22.31	8.36
OPERATOR: Loader.....	\$ 25.80	17.19
PLUMBER.....	\$ 31.85	15.12
ROOFER.....	\$ 14.00 **	3.91

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

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 DECISION"

EMPLOYEE RIGHTS

UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

1-866-487-9243
TTY: 1-877-889-5627
www.dol.gov/whd



WH1321 REV 10/17



Job Safety and Health IT'S THE LAW!

All workers have the right to:

- A safe workplace.
- Raise a safety or health concern with your employer or OSHA, or report a work-related injury or illness, without being retaliated against.
- Receive information and training on job hazards, including all hazardous substances in your workplace.
- Request a confidential OSHA inspection of your workplace if you believe there are unsafe or unhealthy conditions. You have the right to have a representative contact OSHA on your behalf.
- Participate (or have your representative participate) in an OSHA inspection and speak in private to the inspector.
- File a complaint with OSHA within 30 days (by phone, online or by mail) if you have been retaliated against for using your rights.
- See any OSHA citations issued to your employer.
- Request copies of your medical records, tests that measure hazards in the workplace, and the workplace injury and illness log.

This poster is available free from OSHA.

Employers must:

- Provide employees a workplace free from recognized hazards. It is illegal to retaliate against an employee for using any of their rights under the law, including raising a health and safety concern with you or with OSHA, or reporting a work-related injury or illness.
- Comply with all applicable OSHA standards.
- Notify OSHA within 8 hours of a workplace fatality or within 24 hours of any work-related inpatient hospitalization, amputation, or loss of an eye.
- Provide required training to all workers in a language and vocabulary they can understand.
- Prominently display this poster in the workplace.
- Post OSHA citations at or near the place of the alleged violations.

On-Site Consultation services are available to small and medium-sized employers, without citation or penalty, through OSHA-supported consultation programs in every state.

Contact OSHA. We can help.



1-800-321-OSHA (6742) • TTY 1-877-889-5627 • www.osha.gov

OSHA 3185-04-08 2015

Equal Employment Opportunity is THE LAW

Private Employers, State and Local Governments, Educational Institutions, Employment Agencies and Labor Organizations

Applicants to and employees of most private employers, state and local governments, educational institutions, employment agencies and labor organizations are protected under Federal law from discrimination on the following bases:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN: Title VII of the Civil Rights Act of 1964, as amended, protects applicants and employees from discrimination in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, on the basis of race, color, religion, sex (including pregnancy), or national origin. Religious discrimination includes failing to reasonably accommodate an employee's religious practices where the accommodation does not impose undue hardship.

DISABILITY: Title I and Title V of the Americans with Disabilities Act of 1990, as amended, protect qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee, barring undue hardship.

AGE: The Age Discrimination in Employment Act of 1967, as amended, protects applicants and employees 40 years of age or older from discrimination based on age in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment.

SEX (WAGES): In addition to sex discrimination prohibited by Title VII of the Civil Rights Act, as amended, the Equal Pay Act of 1963, as amended, prohibits sex discrimination in the payment of wages to women and men performing substantially equal work, in jobs that require equal skill, effort, and responsibility, under similar working conditions, in the same establishment.

GENETICS: Title II of the Genetic Information Nondiscrimination Act of 2008 protects applicants and employees from discrimination based on genetic information in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. GINA also restricts employers' acquisition of genetic information and strictly limits disclosure of genetic information. Genetic information includes information about genetic tests of applicants, employees, or their family members; the manifestation of diseases or disorders in family members (family medical history); and requests for or

receipt of genetic services by applicants, employees, or their family members.

RETALIATION: All of these Federal laws prohibit covered entities from retaliating against a person who files a charge of discrimination, participates in a discrimination proceeding, or otherwise opposes an unlawful employment practice.

WHAT TO DO IF YOU BELIEVE DISCRIMINATION HAS OCCURRED: There are strict time limits for filing charges of employment discrimination. To preserve the ability of EEOC to act on your behalf and to protect your right to file a private lawsuit, should you ultimately need to, you should contact EEOC promptly when discrimination is suspected. The U.S. Equal Employment Opportunity Commission (EEOC), 1-800-669-4000 (toll-free) or 1-800-669-6820 (toll-free TTY number for individuals with hearing impairments). EEOC field office information is available at www.eeoc.gov or in most telephone directories in the U.S. Government or Federal Government section. Additional information about EEOC, including information about charge filing, is available at www.eeoc.gov.

Employers Holding Federal Contracts or Subcontracts

Applicants to and employees of companies with a Federal government contract or subcontract are protected under Federal law from discrimination on the following bases:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN: Executive Order 11246, as amended, prohibits job discrimination on the basis of race, color, religion, sex or national origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment. **INDIVIDUALS WITH DISABILITIES:** Section 503 of the Rehabilitation Act of 1973, as amended, protects qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee, barring undue hardship. Section 503 also requires that Federal contractors take affirmative action to employ and advance in employment qualified individuals with disabilities at all levels of employment, including the executive level.

DISABLED, RECENTLY SEPARATED, OTHER PROTECTED, AND ARMED FORCES SERVICE MEDAL VETERANS: The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. 4212, prohibits job discrimination and requires affirmative action to employ and advance in employment disabled veterans, recently separated veterans (within three years of discharge or release from active duty), other protected veterans (veterans

who served during a war or in a campaign or expedition for which a campaign badge has been authorized), and Armed Forces service medal veterans (veterans who, while on active duty, participated in a U.S. military operation for which an Armed Forces service medal was awarded).

RETALIATION: Retaliation is prohibited against a person who files a complaint of discrimination, participates in an OFCCP proceeding, or otherwise opposes discrimination under these Federal laws. Any person who believes a contractor has violated its nondiscrimination or affirmative action obligations under the authorities above should contact immediately. The Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210, 1-800-397-6251 (toll-free) or (202) 693-1337 (TTY). OFCCP may also be contacted by e-mail at Public@dcl.gov, or by calling an OFCCP regional or district office, listed in most telephone directories under U.S. Government, Department of Labor.

Programs or Activities Receiving Federal Financial Assistance

RACE, COLOR, NATIONAL ORIGIN, SEX INDIVIDUALS WITH DISABILITIES: In addition to the protections of Title VII of the Civil Rights Act of 1964, as amended, prohibits employment amended, Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination on the basis of race, color or national origin in programs or Federal financial assistance. Employment discrimination is covered by Title VI if the primary objective of the financial assistance is provision of employment, or where employment discrimination causes or may cause discrimination in providing services under such programs. Title IX of the Education Amendments of 1972 prohibits employment discrimination on the basis of sex in educational programs or activities which receive Federal financial assistance.

INDIVIDUAL WITH DISABILITIES: Section 504 of the Rehabilitation Act of 1973, as amended, prohibits employment discrimination on the basis of disability in any program or activity which receives Federal financial assistance. Discrimination is prohibited in all aspects employment against persons with disabilities who, with or without reasonable accommodation, can perform the essential functions of the job.

If you believe you have been discriminated against in a program of any institution which receives Federal financial assistance, you should immediately contact the Federal agency providing such assistance.



**EQUAL HOUSING
OPPORTUNITY**

**We Do Business in Accordance With the Federal Fair
Housing Law**

(The Fair Housing Amendments Act of 1988)

**It is Illegal to Discriminate Against Any Person
Because of Race, Color, Religion, Sex,
Handicap, Familial Status, or National Origin**

In the sale or rental of housing or
residential lots

In the provision of real estate
brokerage services

In advertising the sale or rental
of housing

In the appraisal of housing

In the financing of housing

Blockbusting is also illegal

Anyone who feels he or she has been
discriminated against may file a complaint of
housing discrimination:

1-800-669-9777 (Toll Free)

1-800-927-9275 (TTY)

www.hud.gov/fairhousing

**U.S. Department of Housing and
Urban Development
Assistant Secretary for Fair Housing and
Equal Opportunity
Washington, D.C. 20410**

Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development Office of Labor Relations

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.

A. 1. (i) Minimum Wages. 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 29 CFR 5.5(a)(1)(iv); 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 29 CFR 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 29 CFR 5.5(a)(1)(ii) 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) Any class of laborers or mechanics 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. HUD shall approve an additional classification and wage rate and fringe benefits therefor 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 HUD or its designee 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 HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee 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, HUD or its designee 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. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work 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. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee 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 HUD or its designee. 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/esa/whd/forms/wh347instr.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 HUD or its designee 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 HUD or its designee, 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 subparagraph 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 HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(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 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), 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 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 subparagraph A.3.(ii)(b).

(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 subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee 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, HUD or its designee 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 subcontractor's 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 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 29 CFR Part 5 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 will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, 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 this paragraph.

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 (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. 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) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. 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 the individual is employed on such work to work in excess of 40 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 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, 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 subparagraph (1) of this paragraph, 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 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) **Withholding for unpaid wages and liquidated damages.** HUD or its designee 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 contract, 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 subparagraph (2) of this paragraph.

(4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph 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 subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes:
1. Project information.
 2. Work covered by Contract Documents.
 3. Work under separate contracts.
 4. Work sequence.
 5. Access to site.
 6. Work restrictions.
 7. Specification and drawing conventions.
- B. Related Section:
1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of building owner's facilities.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of the Project is defined by the Contract Documents and includes, but is not limited to, the following:
1. Facade Rehabilitation: Historic rehabilitation of existing brick and wood framed buildings. Rehabilitation will consist of exterior restoration and improvements, including but not limited to selective demolition; cleaning, repair, and repointing of stone and brick masonry; repair and replacement of wood windows and storefronts; replacement of awnings and canopies; joint sealants; painting; and related construction. The following addresses are included in the Facade Rehabilitation Project:
- | | | |
|---|-----------------------|--------------------|
| 1 | 13-15 South Center | Pentz Appliance |
| 2 | 14-16-18 North Center | Salon & Paw Spa |
| 3 | 1 West Main | Staging to Sell It |
| 4 | (Not Used) | |
| 5 | 21 West Main | Vacant |
| 6 | 23 West Main | Vacant |
| 7 | 25 West Main | Smokin G's BBQ |
| 8 | 14 West Main | Stepping Stone |
2. The Work includes historic buildings being reviewed under Section 106 NHPA and HUD regulations for NEPA (24 CFR Part 58.5[b]). The Work will follow historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties.

- B. Type of Contract
 - 1. Project will be constructed under a single prime contract.
- C. Project Completion:
 - 1. Schedule the Work to achieve Substantial Completion as follows:
 - a. Work, as itemized on Schedule of Values worksheet included in Section 01 29 00 "Payment Procedures" and indicated on the Drawings, shall be Substantial Complete on or before **June 30, 2024**.
 - 1) It is agreed that the contract time is of prime importance and of the essence of this contract and failure to complete the Work on schedule will cause the Owner to sustain substantial damages.
 - 2) No liquidated damages will be assessed, but the Contractor is required to cooperate fully in meeting this date.

1.4 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to building owners and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Buildings: Maintain portions of existing buildings affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- D. Annual Events: so that construction work will not able to take place during this time.
 - 1. None.

1.5 WORK UNDER OWNER'S SEPARATE CONTRACTS

- A. Work with Separate Contractors: Cooperate fully with Owner's separate contractors, so work on those contracts may be carried out smoothly, without interfering with or delaying Work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under Owner's separate contracts.
 - 1. General Contractor shall provide a copy of their Project Schedule to Separate Contractors and shall update as appropriate.
 - 2. General Contractor shall schedule the work of the Separate Contractors and give them at least 72 hours' notice as to when their work will be performed.
 - 3. General Contractor shall provide temporary enclosures to prevent weather and water infiltration at the Work resulting from the work of the Separate Contractors.
- B. Concurrent Work: Owner has awarded separate contract(s) for the following construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract.
 - 1. **Asbestos Abatement:** (contractor to be determined), for hazardous materials abatement.

1.6 COORDINATION WITH OCCUPANTS

- A. Full Occupancy: Building owners and the general public will occupy site and existing building(s) during entire construction period. Cooperate with building owners during construction operations to minimize conflicts and facilitate the building owner's and the general public's continued usage. Perform the Work so as not to interfere with building owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from building owners and approval of authorities having jurisdiction.
 - 2. Notify building owner(s) not less than 72 hours in advance of activities that will affect building owner's operations.

1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
 - 2. Public Safety and Convenience: The Contractor shall at all times conduct the work so as to insure the least possible obstruction to traffic and inconvenience to the general public and residents in the vicinity of the work, and to insure the protection of persons and property in a manner satisfactory to the Owner. No road or street shall be closed to the public except with the permission of the Owner and proper governmental authorities. Fire hydrants on or adjacent to the work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the use of sidewalks and the proper functioning of all gutters, sewer inlets, which shall not be obstructed except as approved by the Owner
 - 3. Business Access: Every effort shall be made to preserve existing sidewalks to provide access to businesses affected by the Work. The Contractor shall erect construction safety fencing between the work zones and pedestrian sidewalks. No business shall be denied pedestrian access for a period lasting longer than 48 hours.
 - a. A minimum four-foot (4') width of clear walkway shall be maintained for pedestrian access to abutting businesses. Access must be maintained from a minimum of one direction at all times. A temporary access to the businesses shall be provided using wood planking or plywood sheets.
 - 4. Partial Street Closings: Notify appropriate City officials at least 72 hours prior to closing any streets. Warning signs and barricades shall be provided to adequately alert motorists to the closed streets.
- B. On-Site Work Hours: Limit work to between the hours of 7:00 a.m. to 8:00 p.m. daily, unless otherwise approved in advance by Owner.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by building owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify building owner 72 hours in advance of proposed utility interruptions serving an unoccupied or occupied area.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to building owner's occupancy with building owner.
 - 1. Notify building owner not less than 72 hours in advance of proposed disruptive operations.
 - 2. Obtain building owner's written permission before proceeding with disruptive operations.

- E. Controlled Substances: Use of tobacco products and other controlled substances on Project site or in occupied buildings is not permitted. Comply with building owners' policies, requirements of authorities having jurisdiction, or Iowa law, whichever is more stringent.

1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
- C. Related Requirements:
 - 1. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Allowance shall include cost Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
 - 3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Not Used.
- B. Allowance No. 2: Lump-Sum Allowance: Include the sum of \$38,000.00 for glazed tile (glazed architectural terra-cotta) replacement at Buildings 5, and 6.

1. This allowance includes material, receiving, handling, and installation costs, and Contractor overhead and profit.
- C. Allowance No. 3: Lump-Sum Allowance: Include the total sum of \$2,100.00 for three replacement light fixtures at Building 3 (Alternate #3) as per ceiling plan C3/A05.03b.
 1. This allowance includes material, receiving, handling, and installation costs, and Contractor overhead and profit.

END OF SECTION 01 21 00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

(Note: Description of work indicated here is only a brief summary. See Contract Documents, including drawings, for full definition of each Alternate.)

ALTERNATE No. 1:	ADD scope of work: • 1: replace awning(s) + remove canopy & repair plaster • 2: replace awning(s) • 5: replace awning(s) • 6: provide awning(s)
ALTERNATE No. 2:	ADD scope of work: • 1: replace stucco and repoint masonry • 1: rehabilitate windows • 2: masonry cleaning • 3: masonry cleaning
ALTERNATE No. 3:	ADD scope of work: • 2: exterior vestibules and storefront repairs • 3: remove panels, replace siding (front entrance, south & east) • 3: exterior vestibule and storefront repairs • 6: replace storefront
ALTERNATE No. 4:	ADD scope of work: • 1: replace windows • 2: rehabilitate windows • 3: rehabilitate windows + replace doors • 3: remove panels, replace siding (side entrance, east) • 5: rehabilitate door • 7: rehabilitate windows • 8: replace door, paint windows

END OF SECTION 01 23 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
 - 1. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
 - 2. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use "Request for Substitution" Form included in Division 00 Section "Procurement Substitution Procedures."
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.

- g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Convenience: Not allowed.
- B. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

- b. Substitution request is fully documented and properly submitted.
- c. Requested substitution will not adversely affect Contractor's construction schedule.
- d. Requested substitution has received necessary approvals of authorities having jurisdiction.
- e. Requested substitution is compatible with other portions of the Work.
- f. Requested substitution has been coordinated with other portions of the Work.
- g. Requested substitution provides specified warranty.
- h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections:
 - 1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.2 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request or 14 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times,

and activity relationship. Use available total float before requesting an extension of the Contract Time.

6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use form acceptable to Architect.

1.4 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: Refer to Division 01 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit Price Adjustment: Refer to Division 01 Section "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit price work.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections:
 - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 01 Section "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.
 - 3. Division 01 Section "Submittal Procedures" for administrative requirements governing the preparation and submittal of the submittal schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Schedule of Values, General:
 - 1. Contractor shall coordinate format, content, and breakdown of schedule of values with Owner's Grant Administrator through the Architect to facilitate tracking and processing grant funds. The purpose of the breakout is to track the grants and show the needed matching amounts needed to complete the grants.
 - 2. Submit the schedule of values to Architect within 48 hours after the bid opening.

Provide, either as a separate breakout schedule or incorporated directly into the Schedule of Values, a detailed valuation of each individual business address listed in Section 01 10 00 "Summary" and Section 01 23 00 "Alternates".

- B. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values correlated with each element.

C. Format and Content:

1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
1. Submit draft of AIA Document G703 Continuation Sheets and breakout sheets indicated.
2. Provide a breakdown of the Contract Sum as described and in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents.
3. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
4. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
5. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
6. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
7. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
 2. Contractor shall coordinate format, content, and breakdown of Application for Payment with Owner's Grant Administrator through Architect to facilitate tracking and processing grant funds.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

- E. Davis-Bacon and Related Acts: This project is funded, in part, by a federal grant. Rules and provisions of the Davis Bacon and Related Acts apply to this project. It is the responsibility of the Contractor to acquire current appropriate and necessary publications and materials regarding the Davis-Bacon and Related Acts and to comply with its rules and provisions as they apply to this Project.
1. All labor performed on site shall be subject to wage restrictions, reporting, posting of notice at the work site, and associated federal penalties for failure to comply with the federal Davis-Bacon and Related Acts.
 2. All wages for on-site labor shall be greater than or equal to the minimum wage rates of federal Davis–Bacon and Related Acts as listed for:

Marshall County, Iowa

Current wage determination information for the county can be found at www.wdol.gov. Request work classifications and wage rates that do not appear on the wage determination information in writing through the contract administrator.

3. Payrolls for all labor shall be reported on the appropriate forms, shall be certified by employer, and shall be submitted weekly to the contract administrator.
 4. Prior to initial pay application provide the contract administrator a list of labor classifications anticipated to be employed and providing on site labor for this project.
- F. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide name and location of storage facility, detailed list of stored materials, certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Materials previously stored and included in previous Applications for Payment.
 - b. Work completed for this Application utilizing previously stored materials.
 - c. Additional materials stored with this Application.
 - d. Total materials remaining stored, including materials with this Application.
- G. Transmittal: Submit four signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 48 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

NOTE: electronic copy (PDF) of the Application for Payment may be used in lieu of original copies, if acceptable to all parties.

- H. Initial Application for Payment: Administrative actions and submittals that **must precede or coincide** with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Products list (preliminary if not final).
 5. Submittal schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of building permits.

9. Certificates of insurance and insurance policies.
10. Performance and payment bonds.

NOTE: Failure to provide submittals shown above may result in delay or rejection of the Application for Payment.

- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Administrative and supervisory personnel.
 - 3. Requests for Information (RFIs).
 - 4. Project meetings.
- B. Related Sections:
 - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.

1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.

3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
 9. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.5 KEY PERSONNEL

- A. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond.
 - 1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or inaccurately prepared RFIs.
 - 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 - 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 7 days of receipt of the RFI response.
- E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:
 - 1. Project name.
 - 2. Name and address of Contractor.
 - 3. Name and address of Architect.
 - 4. RFI number including RFIs that were dropped and not submitted.
 - 5. RFI description.
 - 6. Date the RFI was submitted.
 - 7. Date Architect's response was received.
 - 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner, Architect, and Contractor.
 - 1. Conduct the conference to review responsibilities and personnel assignments.
 - 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned

parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Sustainable design requirements.
 - m. Preparation of record documents.
 - n. Use of the premises and existing building.
 - o. Work restrictions.
 - p. Working hours.
 - q. Owner's occupancy requirements.
 - r. Responsibility for temporary facilities and controls.
 - s. Procedures for moisture and mold control.
 - t. Procedures for disruptions and shutdowns.
 - u. Construction waste management and recycling.
 - v. Parking availability.
 - w. Office, work, and storage areas.
 - x. Equipment deliveries and priorities.
 - y. First aid.
 - z. Security.
 - aa. Progress cleaning.
4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - n. Warranty requirements.
 - o. Compatibility of materials.

- p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a Project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing sustainable design documentation.
 - e. Requirements for preparing operations and maintenance data.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - i. Submittal procedures.
 - j. Coordination of separate contracts.
 - k. Owner's partial occupancy requirements.
 - l. Installation of Owner's furniture, fixtures, and equipment.
 - m. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Architect will conduct monthly progress meetings.
1. Coordinate dates of meetings with preparation of payment requests.
 2. **Meetings may be suspended, or the frequency adjusted, according to the pace or progress of construction.** For example, winter weather may delay or slow progress of construction, therefore meetings may be suspended or held less frequently than other seasons. **Conference calls or video conferences may also be more appropriate than on-site meetings, during certain periods of construction.** Coordinate adjustments with Owner and Architect.
 3. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in

planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

4. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
5. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

F. Coordination Meetings: Conduct Project coordination meetings as deemed necessary. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and pre-installation conferences.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
- c. Review present and future needs of each contractor present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.
- 3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Field condition reports.
 - 3. Special reports.
- B. Related Sections:
 - 1. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
 - 2. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format(s):
 - 1. PDF electronic file.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- C. Field Condition Reports: Submit at time of discovery of differing conditions.
- D. Special Reports: Submit at time of unusual event.

1.4 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Contractor's Construction Schedule, General:
 - 1. The Contractor shall submit to the Architect and Owner **at least seven days prior** to the Preconstruction Conference a planned sequence of construction, indicating the order and approximate dates of initiation and completion of each element of the Project. Specific content and format of the Contractor's Construction Schedule will be finalized and agreed upon at the time of the Preconstruction Conference. In general, the Schedule will be required to comply with the following:

- a. Provide a separate Construction Schedule for the Facade Rehabilitation portion of the Work. Identify each address as a separate activity for each main element of the Work. Individual addresses are listed in Section 01 10 00 "Summary".
- b. Include substantial completion dates for the Work in compliance.

NOTE: Failure to provide schedule may result in delay or rejection of the Application for Payment.

- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each individual building address as a separate element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 7 days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 4. Substantial Completion Dates: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 5. Punch List and Final Completion: Include not more than 30 days for punch list and final completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.
 1. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 2. Work Restrictions: Include the effect of the following items in the schedule:
 - a. Coordination with existing construction.
 - b. Protection of existing construction.
 - c. Uninterruptible services.
 - d. Existing occupancies and public usage
 - e. Public safety and convenience.
 3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Submittals.
 - b. Purchases.
 - c. Mockups.
 - d. Fabrication.
 - e. Sample testing.
 - f. Deliveries.
 - g. Installation.
 - h. Tests and inspections.
 - i. Adjusting.
 - j. Curing.
 - k. Startup and placement into final use and operation.

4. Construction Areas: Identify each major area of construction for each element of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, and the following interim milestones:
 1. Façade Rehabilitation: Include proposed start date and completion date for each separate address.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 1. Unresolved issues.
 2. Unanswered RFIs.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
- G. Recovery Schedule: When periodic update indicates the Work is 14 Insert number or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- H. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction schedule within 30 days of date established for commencement of the Work. Base schedule on the initial construction schedule and additional information received at the Preconstruction Conference.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.3 REPORTS

- A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.4 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, and response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. As the Work progresses, indicate final completion percentage for each activity.

NOTE: Failure to provide schedule may result in delay or rejection of the Application for Payment.

- B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 32 00

SECTION 01 32 33 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction photographs.
 - 2. Periodic construction photographs.
 - 3. Final Completion construction photographs.
- B. Related Sections include the following:
 - 1. Division 01 Section "Submittal Procedures" for submitting photographic documentation.
 - 2. Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.

1.2 SUBMITTALS

- A. Construction Photographs:
 - 1. Digital Images: Submit a complete set of digital image electronic files with each submittal of prints on CD-ROM, DVD, or other commonly used portable storage format. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as the sensor, uncropped. Organize so that the location of the image and date that the image was taken are obvious.

1.3 USAGE RIGHTS

- A. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in uncompressed TIFF or JPEG format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1600 by 1200 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Date and Time: Include date and time in filename for each image.
 - 2. Field Office Images: Maintain one set of images on CD-ROM, DVD, or other commonly used portable storage format, in the field office at Project site, available at all times for reference. Identify images same as for those submitted to Architect.

- C. Preconstruction Photographs: Before starting construction, take digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.
 - 1. Flag construction limits before taking construction photographs.
 - 2. Take photographs to show existing conditions adjacent to property before starting the Work.
 - 3. Take at least six photographs of each building address included in Façade work and of other existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
 - 4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- D. Periodic Construction Photographs:
 - 1. Take at least 12 digital photographs monthly, coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
 - 2. Take digital photographs to record concealed elements that would be difficult to identify or measure and record later for the projects record documents.
- E. Final Completion Construction Photographs: Take at least six digital photographs of each building façade after date of Substantial Completion for submission as Project Record Documents.
- F. Additional Photographs: Architect may issue requests for additional photographs, in addition to periodic photographs specified. Additional photographs will not be paid for by Change Order and are included in the Contract Sum.
 - 1. Three days' notice will be given, where feasible.
 - 2. In emergency situations, take additional photographs within 24 hours of request.
 - 3. Circumstances that could require additional photographs include, but are not limited to, the following:
 - a. Special events planned at Project site.
 - b. Immediate follow-up when on-site events result in construction damage or losses.
 - c. Photographs to be taken at fabrication locations away from Project site. These photographs are not subject to unit prices or unit-cost allowances.
 - d. Substantial Completion of a major phase or component of the Work.

END OF SECTION 01 32 33

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 3. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 4. Division 01 Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with start-up construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action, informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled dates for purchasing.
 - h. Scheduled dates for installation.
 - i. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: At Contractor's written request, electronic copies of Architect's CADD files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals, subject to the following conditions:
 1. Contractor shall execute a CADD/Electronic File Transfer / Use Agreement included in the Project Manual following this section.
 2. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
 5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
- D. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
 1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a dash and then a sequential number (e.g., 061000_01). Resubmittals shall include an alphabetic suffix after sequential number (e.g., 061000_01A).
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Other necessary identification.
- E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use Specification Section number followed by a dash and then a sequential number ((e.g., 061000_01). Resubmittals shall include an alphabetic suffix after sequential number (e.g., 061000_01A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Include the following information on an inserted cover sheet:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Name of subcontractor.
 - h. Name of supplier.
 - i. Name of manufacturer.
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Other necessary identification.
 5. Include the following information as keywords in the electronic file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.
- F. Options: Identify options requiring selection by the Architect.
- G. Deviations: Identify deviations from the Contract Documents on submittals.

- H. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Use form acceptable to Architect.
 2. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Indication of full or partial submittal.
 - j. Drawing number and detail references, as appropriate.
 - k. Transmittal number.
 - l. Submittal and transmittal distribution record.
 - m. Remarks.
 - n. Signature of transmitter.
 3. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Submit electronic submittals as PDF electronic files directly to Architect's Info Exchange Project Website specifically established for this Project. No fee or special software other than internet access is required for access to the Info Exchange Project Website. Specific access instructions will be provided following Award of Contract.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."

3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
4. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."

2.2 ACTION SUBMITTALS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based upon Architect's digital data drawing files is otherwise permitted.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project record sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- A. Submittals Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- B. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- C. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- D. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number and title of related Specification Section(s) covered by subcontract.
 3. Drawing number and detail references, as appropriate, covered by subcontract.
 4. Submit subcontract list in the following format:

- a. PDF electronic file.

2.3 INFORMATIONAL SUBMITTALS

- A. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents.
 - 2. Manufacturer and product name, and model number if applicable.
 - 3. Number and name of room or space.
 - 4. Location within room or space.
 - 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- B. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- C. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- F. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- G. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- L. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- M. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- N. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- O. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- P. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- Q. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- R. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- S. Construction Photographs: Comply with requirements specified in Division 01 Section "Photographic Documentation."
- T. Material Safety Data Sheets (MSDSs): Submit information directly to Owner, if requested by Owner; do not submit to Architect.

2.4 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
 1. Final Unrestricted Release: Where submittals are marked "Approved", "No Exception Taken", or "Reviewed" that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
 2. Final-But-Restricted Release: When submittals are marked "Approved as Noted" or "Make Corrections Noted" that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend upon that compliance.
 3. Returned for Resubmittal: When submittal is marked "Not Approved", "Revise and Resubmit" or "Rejected" or "Submit Specified Item" do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary until an approval status is obtained that permits the Work to proceed.
 - a. Do not permit submittals returned for resubmittal to be used at the Project site, or elsewhere where Work is in progress. Submittals which have not been reviewed may not be used to construct the Work.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- E. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

- F. Unsolicited Submittals: Architect may discard submittals not required by the Contract Documents without any review or action.

END OF SECTION 01 33 00

CADD/Electronic File Transfer / Use Agreement

Date:

Project Name:

Project No.:

File No.:

Dear (Contractor Name):

At your request, we will provide electronic files for your convenience and use in establishing earthwork quantities, project layout or in the preparation of shop drawings related to the above noted project, subject to the following terms and conditions:

Our electronic files are compatible with: (software/hardware specifications). RDG makes no representation as to the compatibility of these files with your hardware or your software beyond the specified release of the referenced specifications.

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These electronic files are not contract documents, nor do they contain changes occurring after issuance of the bidding documents. Differences may exist between these electronic files and corresponding hard-copy contract documents or any subsequent changes to them. Revisions issued by addenda prior to bidding may or may not be represented on these files. We make no representation regarding the accuracy or completeness of the electronic files you receive. In the event that a conflict arises between the hard-copy contract documents, including subsequent changes, and the electronic files, the contract documents shall govern. You are responsible for determining if any conflict exists and make any updates necessary to correct conflicts and make the files current with subsequent changes. By your use of these electronic files, you are not relieved of your duty to fully comply with the contract documents, including, and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate your work with that of other contractors for the project. All elements of these drawings may not be drawn to the scale indicated. If used to determine dimensions, layout or quantities, the user shall verify drawings correspond to noted dimensions and verify scale.

Because information presented on the electronic files can be modified, unintentionally or otherwise, we reserve the right to remove all indicia of ownership and/or involvement from each electronic display.

We will furnish you electronic files of the following drawing sheets [] with [] without addendums posted:

Drawing Number	Drawing Date		Drawing Number	Drawing Date		Drawing Number	Drawing Date		Drawing Number	Drawing Date

Prior to delivery: This agreement shall be signed and submitted.

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Issued By (Name)

Contractor Signature

Title

RDG Planning & Design
301 Grand Avenue
Des Moines, IA 50309-1718

Contractor Company Name

SECTION 01 35 91 - HISTORIC TREATMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general protection and treatment procedures for the entire Project and the following specific work:
 - 1. Historic removal and dismantling.

1.2 DEFINITIONS

- A. Consolidate: To strengthen loose or deteriorated materials in place.
- B. Design Reference Sample: A sample that represents the Architect's pre-bid selection of work to be matched; it may be existing work or work specially produced for the Project.
- C. Dismantle: To disassemble and detach items by hand from existing construction to the limits indicated, using small hand tools and small one-hand power tools, to protect nearby historic surfaces; and legally dispose of dismantled items off-site, unless indicated to be salvaged or reinstalled.
- D. Existing to Remain: Existing items that are not to be removed or dismantled.
- E. Historic: Spaces, areas, rooms, surfaces, materials, finishes, and overall appearance which are important to the successful preservation, rehabilitation, restoration, and reconstruction as determined by the Architect.
- F. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by the Architect.
- G. Reconstruct: To remove existing item, replicate damaged or missing components, and reinstall in original position.
- H. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.
- I. Reinstall: To protect removed or dismantled item, repair and clean it as indicated for reuse, and reinstall it in original position, or where indicated.
- J. Remove: Specifically for historic spaces, areas, rooms, and surfaces, the term means to detach an item from existing construction to the limits indicated, using hand tools and hand-operated power equipment, and legally dispose of it off-site, unless indicated to be salvaged or reinstalled.
- K. Repair: To correct damage and defects, retaining existing materials, features, and finishes while employing as little new material as possible. Includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- L. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- M. Replicate: To reproduce in exact detail, materials, and finish, unless otherwise indicated.

- N. Reproduce: To fabricate a new item, accurate in detail to the original, and in either the same or a similar material as the original, unless otherwise indicated.
- O. Restore: To consolidate, replicate, reproduce, repair, and refinish as required to achieve the indicated results.
- P. Retain: To keep existing items that are not to be removed or dismantled.
- Q. Reversible: New construction work, treatments, or processes that can be removed or undone in the future without damaging historic materials, unless otherwise indicated.
- R. Salvage: To protect removed or dismantled items and deliver them to Owner.
- S. Stabilize: To provide structural reinforcement of unsafe or deteriorated items while maintaining the essential form as it exists at present; also, to reestablish a weather-resistant enclosure.
- T. Strip: To remove existing finish down to base material, unless otherwise indicated.

1.3 COORDINATION

- A. Historic Treatment Sub-schedule: A construction schedule coordinating the sequencing and scheduling of historic treatment work for entire Project, including each activity to be performed in historic spaces, areas, and rooms, and on historic surfaces; and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for historic treatment work.
 - 1. Schedule construction operations in sequence required to obtain best historic treatment results.
 - 2. Coordinate sequence of historic treatment work activities to accommodate the following:
 - a. Owner's continuing occupancy of portions of existing building.
 - b. Owner's partial occupancy of completed Work.
 - c. Other known work in progress.
 - d. Tests and inspections.
 - 3. Detail sequence of historic treatment work, with start and end dates.
 - 4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
 - 5. Use of elevator and stairs.
 - 6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.
- B. Public Circulation: Coordinate historic treatment work with public circulation patterns at Project site. Some work is near public circulation patterns. Public circulation patterns cannot be closed off entirely, and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

1.4 PROJECT MEETINGS FOR HISTORIC TREATMENT

- A. Preliminary Historic Treatment Conference: Before starting historic treatment work, conduct conference at Project site.
 - 1. Contractor shall conduct meetings and record meeting results.
 - 2. Attendees: In addition to representatives of Owner, Architect, and Contractor, testing service representative, historic treatment specialists, chemical-cleaner manufacturer, and installers whose work interfaces with or affects historic treatment shall be represented at the meeting.

3. Agenda: Discuss items of significance that could affect progress of historic treatment work, including review of the following:
 - a. Historic Treatment Sub-schedule: Discuss and finalize; verify availability of materials, historic treatment specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Fire-prevention plan.
 - c. Governing regulations.
 - d. Areas where existing construction is to remain and the required protection.
 - e. Hauling routes.
 - f. Sequence of historic treatment work operations.
 - g. Storage, protection, and accounting for salvaged and specially fabricated items.
 - h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
 - i. Qualifications of personnel assigned to historic treatment work and assigned duties.
 - j. Requirements for extent and quality of work, tolerances, and required clearances.
 - k. Methods and procedures related to historic treatments, including product manufacturers' written instructions and precautions regarding historic treatment procedures and their effects on materials, components, and vegetation.
 - l. Embedded work such as flashings and lintels, special details, collection of wastes, protection of occupants and the public, and condition of other construction that affect the Work or will affect the work.
 4. Reporting: Record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.
- B. Coordination Meetings: Conduct coordination meetings specifically for historic treatment work at monthly intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and pre-installation conferences.
1. Contractor shall conduct meetings and record meeting results.
 2. Attendees: In addition to representatives of Owner, Architect, and Contractor, each historic treatment specialist, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of historic treatment work activities shall be represented at these meetings. All participants at conference shall be familiar with Project and authorized to conclude matters relating to historic treatment work.
 3. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of historic treatment work. Include topics for discussion as appropriate to status of Project.
 - a. Historic Treatment Sub-schedule: Review progress since last coordination meeting. Determine whether each schedule item is on time, ahead of schedule, or behind schedule. Determine how construction behind schedule will be expedited with retention of quality; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities are completed within the Contract Time.
 - b. Schedule Updating: Revise Contractor's Historic Treatment Sub-schedule after each coordination meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
 - c. Review present and future needs of each entity present, including review items listed in the "Preliminary Historic Treatment Conference" Paragraph above and the following:
 - 1) Interface requirements of historic treatment work with other Project Work.
 - 2) Status of submittals for historic treatment work.
 - 3) Access to historic treatment work.
 - 4) Effectiveness of fire-prevention plan.
 - 5) Quality and work standards of historic treatment work.
 - 6) Change Orders for historic treatment work.

4. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.5 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during removal and dismantling work remain Owner's property. Carefully dismantle and salvage each item or object.

1.6 SUBMITTALS

- A. Historic Treatment Sub-schedule:
 1. Submit historic treatment sub-schedule within seven days of date established for commencement of historic treatment work.
- B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by historic treatment operations.
- C. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- D. Schedule of Selective Demolition Activities: Indicate the following:
 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's tenants' on-site operations are uninterrupted.
 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 3. Coordination for shutoff, capping, and continuation of utility services.
 4. Use of elevator and stairs.
 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. Historic Treatment Program: Submit 30 days before work begins.
- F. Fire-Prevention Plan: Submit 30 days before work begins.
- G. Inventory of Salvaged Items: After removal or dismantling work is complete, submit a list of items that have been salvaged.
- H. Predemolition Photographs or Video: Submit before Work begins.

1.7 QUALITY ASSURANCE

- A. Historic Treatment Program: The historic treatment program shall follow historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties.
 1. Prepare a written plan for historic treatment for the whole Project, including each phase or process and protection of surrounding materials during operations. Describe in detail materials, methods, and equipment to be used for each activity of work. Show compliance with indicated methods and procedures specified in this and other sections.

2. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
 3. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.
- B. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-prevention devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include each fire watch's training, duties, and authority to enforce fire safety.
- C. Mockups: Prepare mockups of specific historic treatment procedures specified in this Section to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
- D. Regulatory Requirements: Comply with governing EPA notification regulations before beginning removal and dismantling work. Comply with hauling and disposal regulations of authorities having jurisdiction.
- E. Historic Treatment Preconstruction Conference: Conduct conference at Project site.
1. General: Review methods and procedures related to historic treatment including, but not limited to, the following:
 - a. Review manufacturer's written instructions for precautions and effects of historic treatment procedures on materials, components, and vegetation.
 - b. Review and finalize historic treatment construction schedule; verify availability of materials, equipment, and facilities needed to make progress and avoid delays.
 - c. Review qualifications of personnel assigned to the work and assign duties.
 - d. Review material application, work sequencing, tolerances, and required clearances.
 - e. Review areas where existing construction is to remain and requires protection.
 2. Removal and Dismantling:
 - a. Inspect and discuss condition of construction to be removed or dismantled.
 - b. Review requirements of other work that relies on substrates exposed by removal and dismantling work.

1.8 STORAGE AND PROTECTION OF HISTORIC MATERIALS

- A. Salvaged Historic Materials:
1. Clean only loose debris from salvaged historic items unless more extensive cleaning is indicated.
 2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area indicated on Drawings.
 5. Protect items from damage during transport and storage.
- B. Historic Materials for Reinstallation:
1. Repair and clean historic items as indicated and to functional condition for reuse.
 2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
 3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make item functional for use indicated.
- C. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after historic treatment and construction work in the vicinity is complete.
- D. Storage and Protection: When taken from their existing locations, catalog and store historic items within a weathertight enclosure where they are protected from wetting by rain, snow, condensation, or ground water, and from freezing temperatures.
 1. Identify each item with a nonpermanent mark to document its original location. Indicate original locations on plans elevations, sections, or photographs by annotating the identifying marks.
 2. Secure stored materials to protect from theft.

1.9 PROJECT CONDITIONS

- A. General Size Limitation in Historic Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.
- B. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.
- E. Storage or sale of removed or dismantled items on-site is not permitted unless otherwise indicated.

1.10 HAZARDOUS MATERIALS

- A. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract, unless otherwise noted.
- B. Asbestos: Existing glazing putty or other materials may contain asbestos, lead or other hazardous components.
 1. In the case of asbestos, stop work in the area of potential hazard, shut off fans and other air-handlers ventilating the area, and rope off area until the questionable material is identified. Re-assign workers to continue work in unaffected areas.
 2. Contractor shall notify the owner of materials suspected to contain asbestos.
 3. Owner will have materials tested.
 4. Owner will have materials shown to have asbestos removed.
 5. Resume work in the area of concern after safe working conditions are verified.
- C. Lead-Based Paint: Lead-based paint may be present on interior and exterior painted surfaces of the buildings. Renovation activities may result in exposure to lead.

1. Reference the U.S. Department of the Interior, National Park Service Preservation Briefs #37 Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing at <http://www.nps.gov/hps/tps/briefs/brief37.htm>.
2. Perform removal and abatement of lead-containing materials and lead-based paint, and all renovation work affected by the presence of lead-containing materials and lead-based paint, in compliance with state and Federal Occupational Safety and Health Administration (OSHA) requirements.
3. Sanding, stripping and refinishing operations on surfaces containing lead paint shall be performed in accordance with all regulatory rules and standards, including OSHA's Lead Standard for the Construction Industry (29 CFR 1926.62).
4. Contractors, Sub-contractors, or employees that disturb lead based paint shall be certified by the Iowa Department of Public Health as a Lead Safe Renovator, Lead Abatement Worker, or Lead Abatement Contractor.
5. Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe work practices. (Title X requirement).
6. Legal disposal of lead-based paint waste is the responsibility of the contractor.
7. No lead-based paint abatement program will be performed by the Owner.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Preparation for Removal and Dismantling: Examine construction to be removed or dismantled to determine best methods to safely and effectively perform removal and dismantling work. Examine adjacent work to determine what protective measures will be necessary. Make explorations, probes, and inquiries as necessary to determine condition of construction to be removed or dismantled and location of utilities and services to remain that may be hidden by construction that is to be removed or dismantled.
 1. Verify that affected utilities have been disconnected and capped.
 2. Inventory and record the condition of items to be removed and dismantled for reinstallation or salvage.
 3. Before removal or dismantling of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
 4. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures as a result of removal and dismantling work.
- B. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
 1. Comply with requirements specified in Division 01 Section "Photographic Documentation."
- C. Perform surveys as the Work progresses to detect hazards resulting from historic treatment procedures.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 1. Comply with requirements for existing services/systems interruptions specified in Section 01 10 00 "Summary."

- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with utility companies.
 - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

3.3 PROTECTION, GENERAL

- A. Ensure that supervisory personnel are on-site and on duty when historic treatment work begins and during its progress.
- B. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from historic treatment procedures.
 - 1. Use only proven protection methods, appropriate to each area and surface being protected.
 - 2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where historic treatment work is being performed.
 - 3. Erect temporary barriers to form and maintain fire-egress routes.
 - 4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during historic treatment work.
 - 5. Contain dust and debris generated by historic treatment work, and prevent it from reaching the public or adjacent surfaces.
 - 6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
 - 7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
- C. Temporary Protection of Historic Materials:
 - 1. Protect existing historic materials with temporary protections and construction. Do not deface or remove existing materials.
 - 2. Do not attach temporary protection to historic surfaces except as indicated as part of the historic treatment program and approved by Architect.
- D. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
- E. Utility and Communications Services:

1. Notify the Owner, Architect, and authorities having jurisdiction, owning or controlling wires, conduits, pipes, and other services affected by the historic treatment work before commencing operations.
 2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for the historic treatment work.
 3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.
- F. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is in working order.
1. Prevent solids such as stone or mortar residue from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from historic treatment work.
 2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

3.4 PROTECTION DURING APPLICATION OF CHEMICALS

- A. Protect motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm or damage resulting from applications of chemical cleaners and paint removers.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in historic treatment program. Use covering materials and masking agents that are waterproof, UV-resistant, and will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials staining.
- C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
- D. Neutralize and collect alkaline and acid wastes and legally dispose of off Owner's property.
- E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.5 PROTECTION FROM FIRE

- A. General: Follow fire-prevention plan and the following.
1. Comply with NFPA 241 requirements unless otherwise indicated.
 2. Remove and keep area free of combustibles including, rubbish, paper, waste, and chemicals, except to the degree necessary for the immediate work.
 - a. If combustible material cannot be removed, provide fire blankets to cover such materials.
 3. Prohibit smoking by all persons within the Project work and staging areas.
- B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or highly combustible materials, including welding, torch-cutting, soldering, brazing, paint removal with heat, or other operations where open flames or implements utilizing high heat or combustible solvents and chemicals are anticipated.

1. Obtain Owner's approval for operations involving use of open-flame or welding or other high-heat equipment.
 2. As far as practical, restrict heat-generating equipment to shop areas or outside the building.
 3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
 4. Use fireproof baffles to prevent flames, sparks, hot gasses, or other high-temperature material from reaching surrounding combustible material.
 5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
 6. Fire Watch: Before working with heat-generating equipment or highly combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows.
 - a. Train each fire watch in the proper operation of fire-control equipment and alarms.
 - b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
 - c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
 - d. Have fire watch perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work at each area of the Project site to detect hidden or smoldering fires and to ensure that proper fire-prevention is maintained.
 - e. Maintain fire-watch personnel at each area of the Project site until 60 minutes after conclusion of daily work.
- C. Fire Extinguishers, Fire Blankets, and Rag Buckets: Maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire watch are trained in fire-extinguisher and blanket operation.

3.6 GENERAL HISTORIC TREATMENT

- A. Have historic treatment work performed only by qualified historic treatment specialists.
- B. Ensure that supervisory personnel are present when historic treatment work begins and during its progress.
- C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs. Comply with requirements in Section 01 32 33 "Photographic Documentation."
- D. Perform surveys of Project Site as the Work progresses to detect hazards resulting from historic treatment procedures.
- E. Follow the procedures in subparagraphs below and procedures approved in historic treatment program unless otherwise indicated:
 1. Retain as much existing material as possible; repair and consolidate rather than replace.
 2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
 3. Use reversible processes wherever possible.
 4. Use historically accurate repair and replacement materials and techniques unless otherwise indicated.
 5. Record existing work before each procedure (preconstruction) and progress during the work with digital preconstruction documentation photographs or video recordings.

- F. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.
 - 1. Do not proceed with the work in question until directed by Architect.
- G. Where missing features are indicated to be repaired or replaced, provide work with appearance based on accurate duplications rather than on conjecture, subject to approval of Architect.
- H. Where work requires existing features to be removed or dismantled and reinstalled, perform these operations without damage to the material itself, to adjacent materials, or to the substrate.
- I. Identify new and replacement materials and features with permanent marks hidden in the completed Work to distinguish them from original materials. Record a legend of identification marks and the locations of the items on record Drawings.

3.7 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 9. Dispose of demolished items and materials promptly. Comply with requirements in Section 01 74 19 "Construction Waste Management and Disposal."

3.8 HISTORIC REMOVAL AND DISMANTLING

- A. General: Have removal and dismantling work performed by a qualified historic removal and dismantling specialist. Ensure that historic removal and dismantling specialist's field supervisors are present when removal and dismantling work begins and during its progress.
- B. Perform work in accordance with the historic treatment program and approved mockup(s).
 - 1. Provide supports or reinforcement for existing construction that becomes temporarily weakened by the work, until the work is completed.
 - 2. Perform cutting by hand or with small power tools wherever possible. Cut holes and slots neatly to size required, with minimum disturbance of adjacent work.

3. Do not operate air compressors inside building, unless approved by Architect in each case.
 4. Do not drill or cut columns, beams, joints, girders, structural slabs, or other structural supporting elements, without having Contractor's professional engineer's written approval for each location before such work is begun.
 5. Do not use explosives.
- C. Water-Mist Sprinkling: Use water-mist sprinkling and other wet methods to control dust only with adequate, approved procedures and equipment that ensure that such water will not create a hazard or adversely affect other building areas or materials.
- D. Unacceptable Equipment: Keep equipment that is not permitted for historic removal or dismantling work away from the vicinity where such work is being performed.
- E. Removing and Dismantling Items On or Near Historic Surfaces:
1. Use only dismantling tools and procedures within 12 inches of historic surface. Do not use pry bars. Protect historic surface from contact with or damage by tools.
 2. Unfasten items to be removed, in the opposite order from which they were installed.
 3. Support each item as it becomes loosened to prevent stress and damage to the historic surface.
 4. Dismantle anchorages.
- F. Masonry Walls:
1. Remove masonry carefully and erect temporary bracing and supports as needed to prevent unexpected collapse of materials being removed.
 2. Dismantle top edge and sides before removing wall. Stop removal work and immediately inform the Architect if any structural elements above or adjacent to the work show signs of distress or dislocation during any phase of removal work.
 3. Remove wall in easily managed pieces.
 4. During removal, the Contractor is responsible for the stability of the partially remaining wall. Notify the Architect of the condition of temporary bracing for wall if work is temporarily stopped during the wall's removal.
- G. Steelwork:
1. Expose all structural steel for examination by the Architect and the Contractor's professional engineer before proceeding with removal or dismantling.
 2. If any distress is shown by the structure during performance of the work, stop work and take immediate precautionary measures to ensure safety of the structure. Inform the Architect of the problem, steps taken, and proposed corrective actions.
 3. Brace and support structural steel being removed and remaining during all phases of the work.
 4. Concrete-Encased Steel: Where steel is known to be encased by concrete being removed, saw cut with blades that will cut no deeper than the thickness of the concrete cover with an adequate margin for error in the location of the steel. Isolate sections of concrete by saw cutting before beginning removal.
- H. Loose Plaster: Identify loose, non-historic plaster and separate it from its substrate by tapping with a hammer and prying with a chisel or screwdriver. Do not use pry bars. Leave sound, firmly adhered plaster in place. Do not damage, remove, or dismantle historic plasterwork except where indicated or where it is an immediate hazard to personnel and as approved by the Architect.
- I. Concrete Floor Surface Removal: Remove floor surfaces, fill, and topping, to the indicated lower elevations or cleavage planes as indicated on Drawings. Use dismantling methods when

removing floor surfaces 12 inches or less away from historic walls. Take away material to a uniform surface at the indicated level.

- J. Anchorages:
 - 1. Remove anchorages associated with removed items.
 - 2. Dismantle anchorages associated with dismantled items.
 - 3. In non-historic surfaces, patch holes created by anchorage removal or dismantling in accordance with the requirements for new work.
 - 4. In historic surfaces, patch or repair holes created by anchorage removal or dismantling in accordance with Section specific to the historic surface being patched.

3.9 BIRD-EXCREMENT REMOVAL

- A. General: Before disturbing accumulated bird excrement, employ a qualified industrial hygienist to perform tests, make recommendations, and observe the work. Follow procedures required by authorities having jurisdiction and recommended by industrial hygienist.
- B. Removing Bird Excrement: Have bird-excrement removal work performed by a qualified bird-excrement removal specialist.
 - 1. Before removal, treat bird excrement to kill pathogens; dampen excrement to prevent particles becoming airborne.
 - 2. Use only nonmetallic tools such as plastic spatulas and brushes with natural fiber or nylon bristles.
 - 3. Collect excrement debris as it is removed and legally dispose of off-site.

3.10 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 4. Comply with requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

3.11 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 01 35 91

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
 - 1. Divisions 02 through 49 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Laboratory Mockups: Full-size, physical assemblies constructed at testing facility to verify performance characteristics.
 - 2. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on the project site, consisting of multiple products, assemblies and subassemblies.

- 3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.
- D. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: For mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
 - 1. Indicate manufacturer and model number of individual components.
 - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
 - 1. Seismic-force resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by the Architect.
 - 2. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.
- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
 - 1. Name, address, and telephone number of technical representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Statement that products at Project site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.

6. Statement on whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. **Factory-Authorized Service Representative's Reports:** Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement on whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- D. **Permits, Licenses, and Certificates:** For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.8 QUALITY ASSURANCE

- A. **General:** Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. **Specialists:** Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. **Testing Agency Qualifications:** An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, mockups; do not reuse products on Project.
 - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups, General: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 - 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 - 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at the Project.
 - 4. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 - 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 7. Demolish and remove mockups when directed, unless otherwise indicated.
 - 8. Provide temporary lighting to replicate the same source, foot-candle level, and color temperature of specified lighting for space enabling Owner and Architect to accurately evaluate finish selections and quality of the Work.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.

- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.10 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified special inspector or testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.

- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
 - 1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.

AABC Associated Air Balance Council; www.aabc.com

AAMA American Architectural Manufacturers Association; www.aamanet.org

AAPFCO Association of American Plant Food Control Officials; www.aapfco.org

AASHTO American Association of State Highway and Transportation Officials;
www.transportation.org

AATCC American Association of Textile Chemists and Colorists; www.aatcc.org

ABMA American Bearing Manufacturers Association; www.americanbearings.org

ABMA American Boiler Manufacturers Association; www.abma.com

ACI American Concrete Institute; (Formerly: ACI International); www.concrete.org

ACPA American Concrete Pipe Association; www.concrete-pipe.org

AEIC Association of Edison Illuminating Companies, Inc. (The); www.aeic.org

AF&PA American Forest & Paper Association; www.afandpa.org

AGA American Gas Association; www.aga.org

AHAM Association of Home Appliance Manufacturers; www.aham.org

AHRI Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org

AI Asphalt Institute; www.asphaltinstitute.org

AIA American Institute of Architects (The); www.aia.org

AISC American Institute of Steel Construction; www.aisc.org

AISI American Iron and Steel Institute; www.steel.org

AITC American Institute of Timber Construction; www.aitc-glulam.org

AMCA Air Movement and Control Association International, Inc.; www.amca.org

ANSI American National Standards Institute; www.ansi.org

AOSA Association of Official Seed Analysts, Inc.; www.aosaseed.com

APA The Engineered Wood Association; www.apawood.org

APA Architectural Precast Association; www.archprecast.org

API American Petroleum Institute; www.api.org

ARI Air-Conditioning & Refrigeration Institute; (See AHRI)

ARI American Refrigeration Institute; (See AHRI)

ARMA Asphalt Roofing Manufacturers Association; www.asphaltroofing.org

ASCE American Society of Civil Engineers; www.asce.org

ASCE/SEI.. American Society of Civil Engineers/Structural Engineering Institute; (See ASCE)

ASHRAE.... American Society of Heating, Refrigerating and Air-Conditioning Engineers;
www.ashrae.org

ASME..... ASME International; (American Society of Mechanical Engineers); www.asme.org

ASSE American Society of Sanitary Engineering; www.asse-plumbing.org

ASSP American Society of Safety Professionals (The); www.assp.org

ASTM..... ASTM International; www.astm.org

ATIS..... Alliance for Telecommunications Industry Solutions; www.atis.org

AVIXA Audiovisual and Integrated Experience Association; (Formerly: Infocomm International); www.soundandcommunications.com

AWEA American Wind Energy Association; www.awea.org

AWI Architectural Woodwork Institute; www.awinet.org

AWMAC..... Architectural Woodwork Manufacturers Association of Canada; www.awmac.com

AWPA American Wood Protection Association; www.awpa.com

AWS..... American Welding Society; www.aws.org

AWWA American Water Works Association; www.awwa.org

BHMA Builders Hardware Manufacturers Association; www.buildershardware.com

BIA Brick Industry Association (The); www.gobrick.com

BICSI BICSI, Inc.; www.bicsi.org

BIFMA..... BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org

BISSC..... Baking Industry Sanitation Standards Committee; www.bissc.org

BWF Badminton World Federation; (Formerly: International Badminton Federation);
www.bissc.org

CDA Copper Development Association; www.copper.org

CE..... Conformite Europeenne; http://ec.europa.eu/growth/single-market/ce-marking/

CEA Canadian Electricity Association; www.electricity.ca

CFFA Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com

CFSEI Cold-Formed Steel Engineers Institute; www.cfsei.org

CGA Compressed Gas Association; www.cganet.com

CIMA..... Cellulose Insulation Manufacturers Association; www.cellulose.org

CISCA..... Ceilings & Interior Systems Construction Association; www.cisca.org

CISPI Cast Iron Soil Pipe Institute; www.cispi.org

CLFMI Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org

CPA Composite Panel Association; www.compositepanel.org

CRI..... Carpet and Rug Institute (The); www.carpet-rug.org

CRRC Cool Roof Rating Council; www.coolroofs.org

CRSI Concrete Reinforcing Steel Institute; www.crsi.org

CSA CSA Group; www.csa-group.org

CSI..... Construction Specifications Institute (The); www.csiresources.org

CSSB Cedar Shake & Shingle Bureau; www.cedarbureau.org

CTA..... Consumer Technology Association; www.cta.tech

CTI..... Cooling Technology Institute; (Formerly: Cooling Tower Institute);
www.coolingtechnology.org

CWC..... Composite Wood Council; (See CPA)

DASMA..... Door and Access Systems Manufacturers Association; www.dasma.com.

DHA..... Decorative Hardwoods Association; (Formerly: Hardwood Plywood & Veneer Association); www.decorativehardwoods.org

DHI..... Door and Hardware Institute; www.dhi.org

ECA..... Electronic Components Association; (See ECIA)

ECAMA..... Electronic Components Assemblies & Materials Association; (See ECIA)

ECIA..... Electronic Components Industry Association; www.eciaonline.org

EIA..... Electronic Industries Alliance; (See TIA)

EIMA..... EIFS Industry Members Association; www.eima.com

EJMA..... Expansion Joint Manufacturers Association, Inc.; www.ejma.org

EOS/ESD... Association; (Electrostatic Discharge Association); www.esda.org

ESTA..... Entertainment Services and Technology Association; (See PLASA)

ETL..... Intertek (See Intertek); www.intertek.com

EVO..... Efficiency Valuation Organization; www.evo-world.org

FCI..... Fluid Controls Institute; www.fluidcontrolsinstitute.org

FIBA..... Federation Internationale de Basketball; (The International Basketball Federation);
www.fiba.com

FIVB..... Federation Internationale de Volleyball; (The International Volleyball Federation);
www.fivb.org

FM..... Approvals - FM Approvals LLC; www.fmglobal.com

FM..... Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com

FRSA..... Florida Roofing, Sheet Metal Contractors Association, Inc.; www.floridarroof.com

FSA..... Fluid Sealing Association; www.fluidsealing.com

FSC..... Forest Stewardship Council U.S.; www.fscus.org

GA..... Gypsum Association; www.gypsum.org

GANNA..... Glass Association of North America; (See NGA)

GS..... Green Seal; www.greenseal.org

HI..... Hydraulic Institute; www.pumps.org

HI/GAMA ... Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI)

HMMA..... Hollow Metal Manufacturers Association; (See NAAMM)

HPVA..... Hardwood Plywood & Veneer Association; (See DHA)

HPW..... H. P. White Laboratory, Inc.; www.hpwhite.com

IAPSC..... International Association of Professional Security Consultants; www.iapsc.org

IAS..... International Accreditation Service; www.iasonline.org

ICBO..... International Conference of Building Officials; (See ICC)

ICC..... International Code Council; www.iccsafe.org

ICEA..... Insulated Cable Engineers Association, Inc.; www.icea.net

ICPA..... International Cast Polymer Alliance; www.icpa-hq.org

ICRI..... International Concrete Repair Institute, Inc.; www.icri.org

IEC..... International Electrotechnical Commission; www.iec.ch

IEEE..... Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org

IES..... Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org

IESNA..... Illuminating Engineering Society of North America; (See IES)

IENT..... Institute of Environmental Sciences and Technology; www.ient.org

IGMA..... Insulating Glass Manufacturers Alliance; www.igmaonline.org

IGSHPA..... International Ground Source Heat Pump Association; www.igshpa.org

II..... Infocomm International; (See AVIXA)

ILI..... Indiana Limestone Institute of America, Inc.; www.ili.ai

Intertek..... Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com

ISA..... International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org

ISAS..... Instrumentation, Systems, and Automation Society (The); (See ISA)

ISFA..... International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org

ISO..... International Organization for Standardization; www.iso.org

ISSFA..... International Solid Surface Fabricators Association; (See ISFA)

ITU..... International Telecommunication Union; www.itu.int/home

KCMA..... Kitchen Cabinet Manufacturers Association; www.kcma.org

LMA..... Laminating Materials Association; (See CPA)

LPI..... Lightning Protection Institute; www.lightning.org

MBMA..... Metal Building Manufacturers Association; www.mbma.com

MCA..... Metal Construction Association; www.metalconstruction.org

MFMA..... Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org

MFMA..... Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org

MHIA..... Material Handling Industry of America; www.mhia.org

MIA..... Marble Institute of America; (See NSI)

MMPA..... Moulding & Millwork Producers Association; www.wmmpa.com

MPI..... Master Painters Institute; www.paintinfo.com

MSS..... Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org

NAAMM..... National Association of Architectural Metal Manufacturers; www.naamm.org

NACE..... NACE International; (National Association of Corrosion Engineers International); www.nace.org

NADCA..... National Air Duct Cleaners Association; www.nadca.com

NAIMA..... North American Insulation Manufacturers Association; www.naima.org

NALP..... National Association of Landscape Professionals; www.landscapeprofessionals.org

NBGQA..... National Building Granite Quarries Association, Inc.; www.nbgqa.com

NBI..... New Buildings Institute; www.newbuildings.org

NCAA..... National Collegiate Athletic Association (The); www.ncaa.org

NCMA..... National Concrete Masonry Association; www.ncma.org

NEBB National Environmental Balancing Bureau; www.nebb.org

NECA National Electrical Contractors Association; www.necanet.org

NeLMA Northeastern Lumber Manufacturers Association; www.nelma.org

NEMA National Electrical Manufacturers Association; www.nema.org

NETA InterNational Electrical Testing Association; www.netaworld.org

NFHS National Federation of State High School Associations; www.nfhs.org

NFPA National Fire Protection Association; www.nfpa.org

NFPA NFPA International; (See NFPA)

NFRC National Fenestration Rating Council; www.nfrc.org

NGA National Glass Association (The); (Formerly: Glass Association of North America); www.glass.org

NHLA National Hardwood Lumber Association; www.nhla.com

NLGA National Lumber Grades Authority; www.nlga.org

NOFMA National Oak Flooring Manufacturers Association; (See NWFA)

NOMMA National Ornamental & Miscellaneous Metals Association; www.nomma.org

NRCA National Roofing Contractors Association; www.nrca.net

NRMCA National Ready Mixed Concrete Association; www.nrmca.org

NSF NSF International; www.nsf.org

NSI National Stone Institute; (Formerly: Marble Institute of America); www.naturalstoneinstitute.org

NSPE National Society of Professional Engineers; www.nspe.org

NSSGA National Stone, Sand & Gravel Association; www.nssga.org

NTMA National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com

NWFA National Wood Flooring Association; www.nwfa.org

PCI Precast/Prestressed Concrete Institute; www.pci.org

PDI Plumbing & Drainage Institute; www.pdionline.org

PLASA PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org

RCSC Research Council on Structural Connections; www.boltcouncil.org

RFCI Resilient Floor Covering Institute; www.rfci.com

RIS Redwood Inspection Service; www.redwoodinspection.com

SAE SAE International; www.sae.org

SCTE Society of Cable Telecommunications Engineers; www.scte.org

SDI Steel Deck Institute; www.sdi.org

SDI Steel Door Institute; www.steeldoor.org

SEFA Scientific Equipment and Furniture Association (The); www.sefalabs.com

SEI/ASCE .. Structural Engineering Institute/American Society of Civil Engineers; (See ASCE)

SIA Security Industry Association; www.siaonline.org

SJI Steel Joist Institute; www.steeljoist.org

SMA Screen Manufacturers Association; www.smainfo.org

SMACNA ... Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org

SMPTE Society of Motion Picture and Television Engineers; www.smpte.org
 SPFA Spray Polyurethane Foam Alliance; www.sprayfoam.org
 SPIB..... Southern Pine Inspection Bureau; www.spib.org
 SPRI Single Ply Roofing Industry; www.spri.org
 SRCC..... Solar Rating & Certification Corporation; www.solar-rating.org
 SSINA..... Specialty Steel Industry of North America; www.ssina.com
 SSPC..... SSPC: The Society for Protective Coatings; www.sspc.org
 STI Steel Tank Institute; www.steeltank.com
 SWI Steel Window Institute; www.steelwindows.com
 SWPA Submersible Wastewater Pump Association; www.swpa.org
 TCA..... Tilt-Up Concrete Association; www.tilt-up.org
 TCNA..... Tile Council of North America, Inc.; www.tileusa.com
 TEMA..... Tubular Exchanger Manufacturers Association, Inc.; www.tema.org
 TIA Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org
 TIA/EIA Telecommunications Industry Association/Electronic Industries Alliance; (See TIA)
 TMS The Masonry Society; www.masonrysociety.org
 TPI Truss Plate Institute; www.tpinst.org
 TPI Turfgrass Producers International; www.turfgrasssod.org
 TRI Tile Roofing Institute; www.tilerroofing.org
 UL Underwriters Laboratories Inc.; www.ul.com
 UNI..... Uni-Bell PVC Pipe Association; www.uni-bell.org
 USAV USA Volleyball; www.usavolleyball.org
 USGBC U.S. Green Building Council; www.usgbc.org
 USITT United States Institute for Theatre Technology, Inc.; www.usitt.org
 WA Wallcoverings Association; www.wallcoverings.org
 WASTEC ... Waste Equipment Technology Association; www.wastec.org
 WCLIB West Coast Lumber Inspection Bureau; www.wclib.org
 WCMA Window Covering Manufacturers Association; www.wcmanet.org
 WDMA Window & Door Manufacturers Association; www.wdma.com
 WI Woodwork Institute; www.wicnet.org
 WSRCA Western States Roofing Contractors Association; www.wsrca.com

- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

DIN..... Deutsches Institut für Normung e.V.; www.din.de
 IAPMO International Association of Plumbing and Mechanical Officials; www.iapmo.org
 ICC..... International Code Council; www.iccsafe.org
 ICC-ES ICC Evaluation Service, LLC; www.icc-es.org

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the

following list. Information is subject to change and is up to date as of the date of the Contract Documents.

COE..... Army Corps of Engineers; www.usace.army.mil
CPSC..... Consumer Product Safety Commission; www.cpsc.gov
DOC..... Department of Commerce; National Institute of Standards and Technology;
www.nist.gov
DOD..... Department of Defense; www.quicksearch.dla.mil
DOE..... Department of Energy; www.energy.gov
EPA..... Environmental Protection Agency; www.epa.gov
FAA..... Federal Aviation Administration; www.faa.gov
FG..... Federal Government Publications; www.gpo.gov/fdsys
GSA..... General Services Administration; www.gsa.gov
HUD..... Department of Housing and Urban Development; www.hud.gov
LBL..... Lawrence Berkeley National Laboratory; Environmental Energy Technologies
Division; www.eetd.lbl.gov
OSHA..... Occupational Safety & Health Administration; www.osha.gov
SD..... Department of State; www.state.gov
TRB..... Transportation Research Board; National Cooperative Highway Research
Program; The National Academies; www.trb.org
USDA..... Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory;
www.ars.usda.gov
USDA..... Department of Agriculture; Rural Utilities Service; www.usda.gov
USDOJ..... Department of Justice; Office of Justice Programs; National Institute of Justice;
www.ojp.usdoj.gov
USP..... U.S. Pharmacopeial Convention; www.usp.org
USPS..... United States Postal Service; www.usps.com

- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

CFR..... Code of Federal Regulations; Available from Government Printing Office;
www.govinfo.gov
DOD..... Department of Defense; Military Specifications and Standards; Available from DLA
Document Services; www.quicksearch.dla.mil
DSCC..... Defense Supply Center Columbus; (See FS)
FED-STD... Federal Standard; (See FS)
FS..... Federal Specification; Available from DLA Document Services;
www.quicksearch.dla.mil
Available from Defense Standardization Program; www.dsp.dla.mil
Available from General Services Administration; www.gsa.gov
Available from National Institute of Building Sciences/Whole Building Design
Guide; www.wbdg.org
MILSPEC... Military Specification and Standards; (See DOD)
USAB..... United States Access Board; www.access-board.gov
USATBCB.. U.S. Architectural & Transportation Barriers Compliance Board; (See USAB)

- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

CBHF State of California; Department of Consumer Affairs; Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov

CCR California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com

CDHS California Department of Health Services; (See CDPH)

CDPH California Department of Public Health; Indoor Air Quality Program; www.cal-iaq.org

CPUC California Public Utilities Commission; www.cpuc.ca.gov

SCAQMD ... South Coast Air Quality Management District; www.aqmd.gov

TFS Texas A&M Forest Service; Sustainable Forestry and Economic Development; www.txforestservation.tamu.edu

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections:
 - 1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service:
 - 1. The City offers to provide water for a charge to the Contractor for use on or in the Work. The water will be available from at least one central point convenient to the City. The Contractor shall be responsible for transportation of the water to the job site, by means of portable water tank, truck, or other conveyance.
- D. Electric Power Service:
 - 1. Individual building owners may provide 110v electric power free of charge to the Contractor for use on or in the Work to their building. The Contractor shall take reasonable precautions to conserve energy. Typical uses for the power provided include tools and temporary lighting. Power shall be feed from existing convenience receptacles without overloading the electrical capacity of the circuit.
 - 2. If the individual building owner decline to provide power, then the Contractor shall provide 110v electrical power themselves, using portable generators, at no additional charge to the Project.
 - 3. Contractor shall provide 220v electrical power themselves, using portable generators.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top rails.
- B. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10 mils minimum thickness unless otherwise indicated, with flame-spread rating of 15 or less per ASTM E 84.
- C. Dust Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.
- D. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.
- E. Plywood Wall Sheathing: DOC PS 1; Exterior sheathing.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
 - 1. Contractors Job trailer or Job office:
 - a. Contractor may use a portion of the city owned public parking lots to locate a Job trailer and/or Storage trailer(s).
 - 1) Coordinate temporary locations with city project manager. Potential locations will be within 2 blocks of the job site.
 - b. Contractor shall provide and pay for temporary electrical service and temporary heating or cooling to maintain uniform indoor temperature (as per terms of the lease agreement).
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with not less than 1 receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- square tack and marker boards.
 - 3. Drinking water and private toilet.
 - 4. Coffee machine and supplies.

5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 6. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
- C. Storage and Fabrication Sheds or Trailers: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
1. Use of electric-resistance heaters, gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 3. Existing HVAC System: During use of existing HVAC system, provide filters with MERV of 8 at each return air grille in system.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
1. Locate facilities to limit site disturbance as specified in Division 01 Section "Summary."
 2. Refer to Drawing Sheet A0.2 for designated staging areas.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 2. For buildings that existing services are relocated for the project, arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services. Keep the temporary service in place until the work on the building has been completed and then transfer back to the final connections.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- C. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting existing building and installed construction from adverse effects of low temperatures.
1. Temporary Construction Enclosures: Contractor shall provide and pay for heating devices and temporary heat required to maintain specified conditions of temporary

enclosures. Select equipment that will not have a harmful effect on existing installations, elements being installed, or completed construction.

- D. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust containment devices.
 - 2. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- E. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
 - 1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- F. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- H. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.
 - 1. Provide additional telephone lines for the following:
 - a. Provide a dedicated telephone line for each facsimile machine in each field office.
 - 2. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect's office.
 - e. Engineers' offices.
 - f. Owner's office.
 - g. Principal subcontractors' field and home offices.
 - 3. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 - 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.

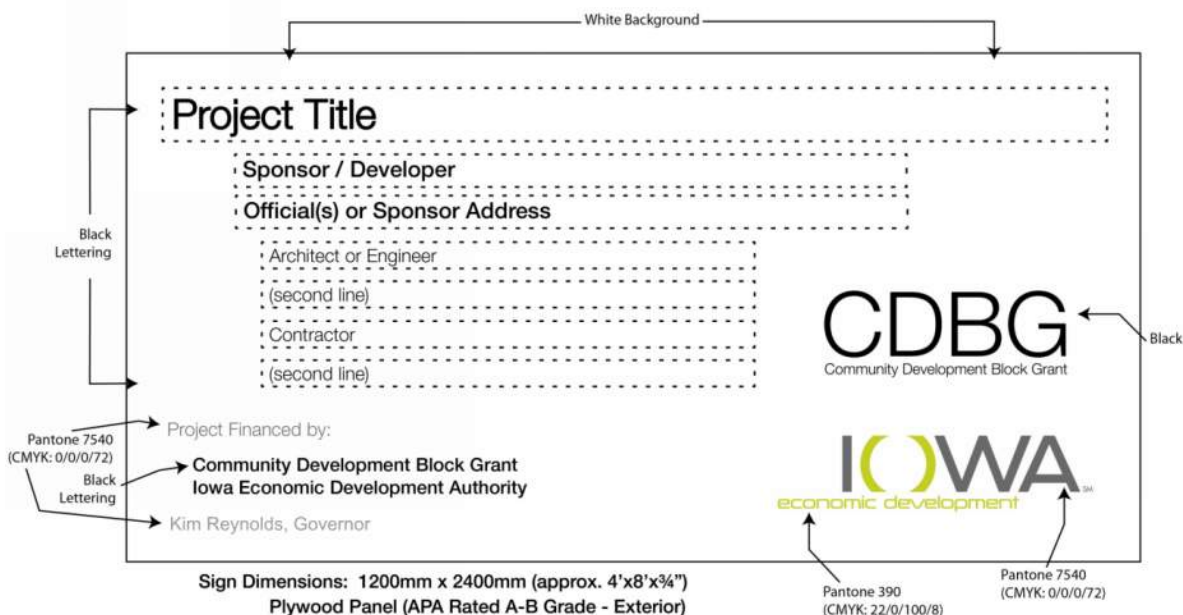
3. Signs, Signals, And Devices: Furnish, erect and maintain all signs, barricades, fencing, and other devices necessary to adequately mark and protect the construction area. Flashing lights shall be provided for nighttime marking.
 - a. Post Mounted and Wall Mounted Traffic Control and Informational Signs: As approved by authority having jurisdiction.
 - b. Traffic Control Signals: As approved by local jurisdictions.
 - c. Traffic Cones and Drums, Flares and Lights: As approved by authority having jurisdiction.
4. Flashing Lights: Use flashing lights during hours of low visibility and at night to delineate traffic obstructions, closings, traffic lanes and to warn and guide traffic.
5. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
 - a. Flagperson Equipment: As required by authority having jurisdiction.
6. Haul Routes:
 - a. Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.
 - b. Confine construction traffic to designated haul routes.
 - c. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.
7. Traffic Signs And Signals:
 - a. Provide signs at approaches to site and on site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
 - b. Relocate as Work progresses, to maintain effective traffic control.
8. Removal:
 - a. Remove equipment and devices when no longer required.
 - b. Repair damage caused by installation.

C. Parking: Provide temporary parking areas for construction personnel.

D. Project Signs:

1. Unauthorized signs are not permitted.
2. CDBG Program Identification Sign: Provide 4' x 8' x 3/4-inch, post-mounted structural panel, custom-painted Project sign with graphics and of design in compliance with signage requirements.

Project Construction Sign: Specifications



3. Temporary Signs: Provide other temporary informational, safety, and traffic signs as required to control site traffic and building access for construction personnel and public at Project site.
 4. Relocate project signs as Work progresses to maintain effective control.
 5. Maintain and touchup signs so they are legible at all times.
 6. Removal: Remove signs, framing, supports, and foundations at completion of Project and restore area.
- E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Construction Waste Management and Disposal" for progress cleaning requirements.
- G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 2. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from the project site during the course of the project.
- B. Tree and Plant Protection: Install temporary fencing outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- C. Security Enclosure and Lockup: Install temporary enclosures around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- F. Temporary Enclosures, Security; where indicated on the Drawings: Provide temporary enclosures for protection of tenant interiors, including wares, goods, and materials stored or displayed within, in progress and completed; protect from vandals and theft.

1. Secure temporary openings with exterior grade plywood (minimum 3/4" thick); minimum 2x4 wood studs; round head carriage bolts (3/8" minimum diameter, head oriented to the exterior face). OSB and particle board are not permitted. Exposed screws may be used where unauthorized removal would not affect overall security.
 2. Recycled or salvaged materials may be used. Contractor shall retain ownership of materials after the temporary use.
 3. Existing and new construction shall be undamaged by the temporary enclosure means and methods. Repair any damage resulting from the installation and removal of the temporary enclosure components.
- G. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 - 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 01 50 00

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Sections:
 - 1. Division 01 Section "Alternates" for products selected under an alternate.
 - 2. Division 01 Section "Substitution Procedures" for requests for substitutions.
 - 3. Division 01 Section "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, which is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product

request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
- b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 1. Store products to allow for inspection and measurement of quantity or counting of units.
 2. Store materials in a manner that will not endanger Project structure.
 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 6. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. Refer to Divisions 02 through 49. Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 - 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved equivalent," comply with requirements in Division 01 Section "Procurement Substitution Procedures" to obtain approval for use of an unnamed product. "Or Equal" Product substitution requests will not be considered after receipt of bids.
- B. Product Selection Procedures:
 - 1. Products: Where Specifications list a one or several manufacturers and products, provide one of the named products that comply with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - 2. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - 3. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 - 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.

- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, which it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.
- B. Related Sections:
 - 1. Division 02 Section "Selective Structure Demolition" for demolition and removal of selected portions of the building.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.3 INFORMATIONAL SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.4 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.

- h. Conveying systems.
 - i. Electrical wiring systems.
 - j. Operating systems of special construction.
 - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Equipment supports.
 - e. Piping, ductwork, vessels, and equipment.
 - f. Noise- and vibration-control elements and systems.
 - 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
 - C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.5 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.

2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 3. Inform installers of lines and levels to which they must comply.
 4. Check the location, level and plumb, of every major element as the Work progresses.
 5. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.

4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 01 Section "Summary."

- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 - 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 - 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction personnel.

- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Pre-installation Conferences: Include Owner's construction personnel at pre-installation conferences covering portions of the Work that are to receive Owner's work. Attend pre-installation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.8 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80° F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Utilize containers intended for holding waste materials of type to be stored.
 - 4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01 73 00

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 21 days of date established for the Notice of Award.

1.5 INFORMATIONAL SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit Waste Reduction Progress Report. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste salvaged, both estimated and actual in tons.
 - 5. Quantity of waste recycled, both estimated and actual in tons.
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

- B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

1.7 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 - 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 - 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
 - 1. Total quantity of waste.
 - 2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
 - 3. Total cost of disposal (with no waste management).
 - 4. Revenue from salvaged materials.
 - 5. Revenue from recycled materials.
 - 6. Savings in hauling and tipping fees by donating materials.
 - 7. Savings in hauling and tipping fees that are avoided.
 - 8. Handling and transportation costs. Include cost of collection containers for each type of waste.
 - 9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - 1. Comply with operation, termination, and removal requirements in Section 01 50 00 "Temporary Facilities and Controls."
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
 - 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work: Salvage items for reuse and handle as follows:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
 - 3. Store items in a secure area until installation.
 - 4. Protect items from damage during transport and storage.
 - 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Sale and Donation: Not permitted on Project sites.
- C. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area designated by Owner.
 - 5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Receivers and Processors: Hyperlink below is provided for informational purposes only:
 - 1. DNR list of Iowa Construction and Demolition Debris Management Resources:
<http://www.iowadnr.gov/Environment/LandStewardship/WasteManagement/Recycling/ConstructionDemolition.aspx>

- C. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- D. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- E. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - 4. Store components off the ground and protect from the weather.
 - 5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 - 1. Pulverize concrete a size required by the company which will perform the recycling.
- C. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- D. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
 - a. Comply with requirements in Section 32 93 00 "Plants" for use of clean sawdust as organic mulch.
- C. Gypsum Board: Comply with requirements of company which will perform the recycling.

3.6 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 01 74 19

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
- B. Related Sections:
 - 1. Division 01 Section "Photographic Documentation" for submitting final completion construction photographic documentation.
 - 2. Division 01 Section "Execution" for progress cleaning of Project site.
 - 3. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 4. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 5. Division 01 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
 - 6. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems.
 - 9. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 10. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 11. Complete final cleaning requirements, including touchup painting.
 - 12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for final completion.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
 - 1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
 - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 4. Submit pest-control final inspection report and warranty.
 - 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 - 4. Submit list of incomplete items in the following format:
 - a. PDF electronic file.

1.5 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 4. Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that meet Green Seal GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.

- f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- h. Sweep concrete floors broom clean in unoccupied spaces.
- i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- k. Remove labels that are not permanent.
- l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.
- m. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
- n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
- o. Leave Project clean and ready for occupancy.

END OF SECTION 01 77 00

SECTION 01 77 19 – CLOSEOUT REQUIREMENTS

The following list is general summary of closeout procedures in accordance with the Contract Documents. It is not intended to be all inclusive. Failure to list a closeout item in this summary does not relieve the Contractor of the requirements of the Contract Documents. Review the Project Manual thoroughly for closeout items. Some closeout items may be listed as secondary under a related heading.

Item	Description	Party	Date Complete
1	Equipment Startup & Maintenance		
1.1	Provide the Architect with seven days' notice to startup of equipment; Architect will attend start up when practical or required.	C	<i>Not Applicable.</i>
1.2	Perform start-up of all equipment and systems.	C	<i>Not Applicable.</i>
1.3	Submit written report that equipment or system has been properly installed, cleaned, tested, and adjusted, and is functioning properly.	C	<i>Not Applicable.</i>
1.4	Submit one copy of the Operation and Maintenance Manuals to Architect for review and comment.	C	
1.5	Provide demonstration and instruction to the Owner.	C, O	<i>Not Applicable.</i>
1.6	Architect returns the reviewed Operation and Maintenance Manuals within approximately one week after the Substantial Completion site visit, for making noted corrections.	A	
1.7	Submit the Final Operation and Maintenance (O & M) Manuals. Include Manufacturer's instructions for assembly, installation, and adjusting.	C	
1.8	Deliver maintenance materials, including spare parts, to designated storage location. Obtain receipt of delivery. Unless specified otherwise, the designated storage location is on site or at Owner's close by facility.	C	
2	Punch List & Substantial Completion		
2.1	Contractor self-performs Punch List and provides copy to the Architect, ahead of the request for the Architect's Substantial Completion site visit.	C	
2.2	Architect makes the Substantial Completion review site visit.	A	
2.3	Architect prepares the Substantial Completion Certificate and updated Punch List.	A	
2.4	Owner and Contractor sign the Certificate of Substantial Completion.	C, O	
3	Inspections and Warranties		
3.1	Provide submittals to Owner that are required by governing or other authorities. (inspection or safety certificates, certificate of occupancy, etc.)	C	
3.2	Submit Warranties (and Bonds, when required). All warranties shall be signed by the Contractor. Include subcontractor's signature when subcontractor Include subcontractor's signature when subcontractor shares responsibility.	C	

Item	Description	Party	Date Complete
4	Closeout Documents		
4.1	Provide the AIA-G706 - Contractor's Affidavit of Payment of Debts and Claims.	C	
4.2	Provide the AIA-G706A - Contractor's Affidavit of Release of Liens.	C	
4.3	Provide the AIA-G707 - Consent of Surety to Final Payment.	C	
4.4	Provide evidence that insurance is in force in accordance with A201-General Conditions Subparagraph 9.10.2.	C	
4.5	Provide State Tax Refund Form (Public or Private Not-for-Profit Owners)	C	<i>Not Applicable.</i>
5	Record Documents		
5.1	Provide Contract Drawings (As-builts) including all Addenda, Change Orders, ASI's, RFI's, and other changes posted.	C	
5.2	Provide Record Specifications.	C	
5.3	Provide copies of reviewed shop drawings and product data.	C	
6	Final Documents		
6.1	Contractor submits Final Punch List with all items marked "completed."	C	
6.2	Contractor submits written notice that the Work is fully completed and ready for Owner's Final Inspection. (Final Completion.)	C	
6.3	Contractor submits the Final Application for Payment and Retainage to the Architect for certification.	C	

A = Architect

O = Owner (City or individual building owners)

C = Contractor (General Contractor)

END OF SECTION 01 77 19

SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Product maintenance manuals.
- B. Related Sections:
 - 1. Division 01 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - 2. Divisions 02 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.2 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual specification sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Where applicable, clarify and update reviewed manual content to correspond to modifications and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Owner.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Documentation Format: Searchable, Read-Only, Portable Document Format (PDF); electronically convert paper documents using Optical Character Recognition (OCR) software to enable search capabilities in Adobe Acrobat.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 15 days before requesting inspection for Substantial Completion. Architect and Owner will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Final Completion.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.
 - 2. Provide product maintenance manual (PDF format).
 - 3. Provide copy on CD, DVD, USB flash drive, or other common portable memory device for owner, upon request.

1.3 REQUIREMENTS FOR OPERATION AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.

3. Manual contents.
- B. Title Page: Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Architect.
 7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 8. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

1.4 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.

- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - EXECUTION

2.1 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- C. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous record submittals.
- B. Related Sections:
 - 1. Division 01 Section "Execution" for final property survey.
 - 2. Division 01 Section "Closeout Procedures" for general closeout procedures.
 - 3. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 4. Divisions 02 through 49 Sections for specific requirements for project record documents of the Work in those Sections.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of marked-up record prints.
- B. Record Specifications: Submit one paper copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one paper copy of each submittal.
 - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: Refer to other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy of each submittal.
- E. PDF color scan(s) may be used in lieu of paper copy.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.

- e. Cross-reference record prints to corresponding archive photographic documentation.
 - 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Construction Change Directive.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
 - 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Utilize personnel proficient at recording graphic information in production of marked-up record prints.
 - 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- 1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Identification: As follows.
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
- 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 - 5. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as paper copy.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as paper copy.
 - 1. Include record Product Data directory organized by specification section number and title, electronically linked to each item of record Product Data.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as paper copy.
 - 1. Include miscellaneous record submittals directory organized by specification section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and modifications to project record documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 01 78 39

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected portions of building or structure.
- B. Related Requirements:
 - 1. Section 01 10 00 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
 - 2. Section 01 35 91 "Historic Treatment Procedures" for historic removal and dismantling.
 - 3. Section 01 73 00 "Execution" for cutting and patching procedures.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.5 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for dust control, and for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's other occupants' and tenants' on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of elevator and stairs.
 - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.
- D. Pre-demolition Photographs or Video: Submit before Work begins.
- E. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.7 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Historic Areas: Demolition and hauling equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 12 inches (300 mm) or more.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties. Notify warrantor before proceeding. Existing warranties include the following:
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
 - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- F. Survey of Existing Conditions: Record existing conditions by use of measured drawings, preconstruction photographs, and preconstruction videotapes.
 - 1. Comply with requirements specified in Section 01 32 33 "Photographic Documentation."
 - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Section 01 10 00 "Summary."
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Section 01 50 00 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 01 50 00 "Temporary Facilities and Controls."
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes

to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly. Comply with requirements in Section 01 74 19 "Construction Waste Management and Disposal."
- B. Work in Historic Areas: Selective demolition may be performed only in areas of the Project that are not designated as historic. In historic spaces, areas, and rooms or on historic surfaces, the terms "demolish" or "remove" shall mean historic "removal" or "dismantling" as specified in Section 01 35 91 "Historic Treatment Procedures."
- C. Reuse of Building Elements: Project has been designed to result in end-of-Project rates for reuse of building elements as follows. Do not demolish building elements beyond what is indicated on Drawings without Architect's approval.
- D. Removed and Salvaged Items:
 1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area designated by Owner.
 5. Protect items from damage during transport and storage.
- E. Removed and Reinstalled Items:
 1. Clean and repair items to functional condition adequate for intended reuse.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- F. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 4. Comply with requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

SECTION 04 01 20 - MAINTENANCE OF UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes maintenance of unit masonry consisting of brick clay masonry restoration and cleaning as follows:
 - 1. Repairing or replacing unit masonry, including replacing units.
 - 2. Repairing or replacing glass unit masonry, including replacing units.
 - 3. Painting steel uncovered during the work.
 - 4. Repointing joints.
 - 5. Preliminary cleaning, including removing plant growth.
 - 6. Cleaning exposed unit masonry surfaces.
 - 7. Parging unit masonry.
- B. Related Sections:
 - 1. Division 01 Section "Historic Treatment Procedures."
 - 2. Division 07 Section "Sheet Metal Flashing and Trim" for metal flashing installed in or on restored clay masonry.

1.2 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi.
- B. Low-Pressure Spray: 100 to 400 psi.
- C. Medium-Pressure Spray: 400 to 800 psi.
- D. High-Pressure Spray: 800 to 1200 psi.
- E. Saturation Coefficient: Ratio of the weight of water absorbed during immersion in cold water to weight absorbed during immersion in boiling water; used as an indication of resistance of masonry units to freezing and thawing.

1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on masonry units as follows:
 - 1. Provide test specimens as indicated and representative of proposed materials and existing construction.
 - 2. Existing Mortar: Test according to ASTM C 295/C 295M, modified as agreed by testing service and Architect for Project requirements, to determine proportional composition of original ingredients, sizes and colors of aggregates, and approximate strength.
 - a. Provide 2 test specimens for each building shown on the drawings to receive masonry repair or repointing work. Architect will assist in locating sample locations indicative of original or historic mortar materials.
 - b. Contractor shall provide (and pay for) collection, labeling, shipping and testing of specimens.
 - c. Contractor shall furnish test results to the Owner and Architect.
 - d. Test specimens shall each be standard 20 grams in size, minimum.
- B. The current approach for the masonry mortar, without testing, indicates that lime putty material should be used on the buildings.

1. The Bid shall be based on the use of lime putty material and labor.
2. If the test results indicate materials other than lime putty in one or more locations, then the Contractor shall propose a Change in the Work to include a change in materials, cost of materials, and labor, based on the test results, for use at the locations indicated by the results.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.
- B. Samples for Verification: For the following:
 1. Each type of masonry unit to be used for replacing existing units. Include sets of Samples as necessary to show the full range of shape, color, and texture to be expected.
 - a. For each brick type, provide straps or panels containing at least four bricks. Include multiple straps for brick with a wide range.
 2. Each type, color, and texture of pointing mortar in the form of sample mortar strips, 6 inches long by 1/2-inch-wide, set in aluminum or plastic channels.
 - a. Include with each Sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.
 3. Sealant Materials: See Division 07 Section "Joint Sealants."
 4. Accessories: Each type of anchor, accessory, and miscellaneous support.
- C. Cleaning Program describes the process and work flow for the project and weather limitations.

1.5 QUALITY ASSURANCE

- A. Perform the work in compliance with historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties, unless otherwise indicated. Reference the following National Park Service publications:
 1. Preservation Brief 1, "Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings."
 2. Preservation Brief 2, "Repointing Mortar Joints in Historic Masonry Buildings."
- B. Restoration Specialist Qualifications: Engage an experienced masonry restoration and cleaning firm to perform work of this Section. Firm shall have completed work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance for at least ten years. Experience installing standard unit masonry is not sufficient experience for masonry restoration work.
 1. At Contractor's option, work may be divided between two specialist firms; one for cleaning work and one for repair work.
 2. Field Supervision: Restoration specialist firms shall maintain experienced full-time supervisors on Project site during times that clay masonry restoration and cleaning work is in progress. Supervisors shall not be changed during Project except for causes beyond the control of restoration specialist firm.
 3. Restoration Worker Qualifications: Persons who are experienced and specialize in restoration work of types they will be performing.
 4. Provide project certificate training according to ASTM E2659-09 for the masons involved in the historical restoration. Submit certificate training for individuals in contact with the masonry restoration.
- C. Chemical-Cleaner Manufacturer Qualifications: A firm regularly engaged in producing masonry cleaners that have been used for similar applications with successful results, and with factory-

trained representatives who are available for consultation and Project-site inspection and assistance at no additional cost.

- D. Source Limitations: Obtain each type of material for masonry restoration (face brick, cement, sand, etc.) from one source with resources to provide materials of consistent quality in appearance and physical properties.
- E. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising performance and preventing damage due to worker fatigue.
- F. Restoration Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each building of the restoration work including protection of surrounding materials and Project site.
 - 1. Perform the work in compliance with historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties, unless otherwise indicated. Notify Architect of any discrepancies that may exist.
 - 2. Include methods for keeping pointing mortar damp during curing period.
 - 3. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- G. Cleaning Program: Prepare a written cleaning program for both buildings that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations.
 - 1. Perform the work in compliance with historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties, unless otherwise indicated. Notify Architect of any discrepancies that may exist.
 - 2. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- H. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 30 feet away by Architect. Perform additional paint and stain removal, general cleaning, and spot cleaning of small areas that are noticeably different, so that surface blends smoothly into surrounding areas.
- I. Mockups: Prepare mockups of restoration and cleaning to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation.
 - 1. Masonry Repair: Prepare sample areas for each type of masonry material for each building indicated to have repair work performed. If not otherwise indicated, size each mockup not smaller than 2 adjacent whole units or approximately 48 inches in least dimension. Erect sample areas in existing walls unless otherwise indicated, to demonstrate quality of materials, workmanship, and blending with existing work.
 - 2. Repointing: Rake out joints in 2 separate areas, each approximately 36 inches high by 48 inches wide for each type of repointing required and repoint for both existing buildings.
 - 3. Cleaning: Clean an area as indicated for each type of masonry and surface condition on each building.

4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 5. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- J. Pre-installation Conference: Conduct conference at project site.
1. Review methods and procedures related to masonry restoration and cleaning including, but not limited to, the following:
 - a. Construction schedule for both buildings and link structure. Verify availability of materials, Restoration Specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons.
- B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- D. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- E. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit masonry restoration and cleaning work to be performed according to manufacturers' written instructions and specified requirements.
- B. Repair masonry units and repoint mortar joints only when air temperature is between 40° and 90° F and is predicted to remain so for at least 7 days after completion of the Work unless otherwise indicated.
- C. Cold-Weather Requirements: Comply with the following procedures for masonry repair and mortar-joint pointing unless otherwise indicated:
 1. When air temperature is below 40° F, heat mortar ingredients, masonry repair materials, and existing masonry walls to produce temperatures between 40° and 120° F.
 2. When mean daily air temperature is below 40° F, provide enclosure and heat to maintain temperatures above 32° F within the enclosure for 7 days after repair and pointing.
- D. Hot-Weather Requirements: Protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90° F and above unless otherwise indicated.

- E. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.
- F. Clean masonry surfaces only when air temperature is 40 deg F and above and is predicted to remain so for at least 7 days after completion of cleaning.

1.8 COORDINATION

- A. Coordinate masonry restoration and cleaning with public circulation patterns at Project site. Some work is near public circulation patterns and active city streets. Public circulation patterns cannot be closed off entirely, and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

1.9 SEQUENCING AND SCHEDULING

- A. Order replacement materials at earliest possible date to avoid delaying completion of the Work.
- B. Order lime putty and sand for pointing mortar immediately after approval of mockups. Take delivery of and store at Project site a sufficient quantity to complete Project.
- C. Perform masonry restoration work in the following sequence:
 - 1. Remove plant growth.
 - 2. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
 - 3. Remove paint.
 - 4. Clean masonry surfaces.
 - 5. Where water repellents, specified in Division 07, are to be used on or near masonry work, delay application of these chemicals until after pointing.
 - 6. Rake out mortar from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
 - 7. Repair masonry, including replacing existing masonry with new masonry materials.
 - 8. Rake out mortar from joints to be repointed.
 - 9. Point mortar and sealant joints.
 - 10. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.
 - 11. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
 - 12. Remove paint.
 - 13. Clean masonry surfaces.
- D. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units to comply with "Masonry Unit Patching" Article. Patch holes in mortar joints to comply with "Repointing Masonry" Article.

PART 2 - PRODUCTS

2.1 MASONRY MATERIALS

- A. Face Brick: Provide face brick, cut, or sawed shapes where required to complete masonry restoration work.
 - 1. Provide units with colors, color variation within units, surface texture, size, and shape to match existing brickwork and with physical properties as listed below:
 - a. Physical Properties per ASTM C 67:

- b. For existing brickwork that exhibits a range of colors or color variation within units, provide brick that proportionally matches that range and variation rather than brick that matches an individual color within that range.
- 2. Tolerances as Fabricated: Comply with tolerance requirements in ASTM C 216, Type FBS.
- B. Building Brick: Provide building brick complying with ASTM C 62, of same vertical dimension as face brick, for masonry work concealed from view.
 - 1. Grade SW where in contact with earth.
 - 2. Grade SW, MW, or NW for concealed backup.
- C. Salvaged Brick: Obtain salvaged brick from the existing building in the areas of demolition and sort by each brick type. Clean off residual mortar.

2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150/C 150M, Type I or Type II, except Type III may be used for cold-weather construction; white or gray, or both where required for color matching of mortar.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Lime Putty: ASTM C1713 - 11 Standard Specifications for Mortars for the Repair of Historic Masonry. To conform to ASTM C5 and mixed to ASTM C 270 proportion speciation. ASTM C 1489 for factory prepared Lime Putty.
- D. Mortar Sand: ASTM C 144 unless otherwise indicated.
 - 1. Color: Provide natural sand of the color necessary to produce required mortar color.
 - 2. For pointing mortar, provide sand with rounded edges.
 - 3. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
- E. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.
- F. Hydraulic Lime Stucco/Plaster: Prepackaged, dry-mix containing aggregate to which only water must be added at Project site.
 - 1. Basis of Design Product: US Heritage Group, Inc; Heritage Hydraulic Lime Stucco/Plaster.
- G. Water: Potable.

2.3 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140° to 160° F.
- C. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 1/2 cup of laundry detergent, and 20 quarts of hot water for every 5 gal. of solution required.
- D. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of hot water for every 5 gal. of solution required.

- E. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, with pH between 6 and 9, that contains detergents with chelating agents and is specifically formulated for cleaning masonry surfaces.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Price Research, Ltd.; Price Marble Cleaner-Gel.
 - b. PROSOCO; Sure Klean 942 Limestone and Marble Cleaner.
 - c. Cathedral Stone Products (equivalent).
- F. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cathedral Stone Products; Bio-Cleaner.
 - b. Diedrich Technologies Inc.; Diedrich 910PM Polished Marble Cleaner.
 - c. Dominion Restoration Products, Inc.; Bio-Cleanse.
 - d. Dumond Chemicals, Inc.; Safe n' Easy Architectural Cleaner/Restorer.
 - e. Price Research, Ltd.; Price Non-Acid Masonry Cleaner.
 - f. PROSOCO; Enviro Klean 2010 All Surface Cleaner.
- G. Mild Acidic Cleaner: Manufacturer's standard mildly acidic cleaner containing no muriatic (hydrochloric), hydrofluoric, or sulfuric acid; or ammonium bifluoride or chlorine bleaches.
1. Products: Subject to compliance with requirements, provide the following
 2. available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; X-190 Limestone & Concrete Cleaner.
 - b. Diedrich Technologies Inc.; Envirorestore 100.
 - c. Dominion Restoration Products, Inc.; DR-60 Stone and Masonry Cleaner.
 - d. PROSOCO; Enviro Klean BioWash.
 - e. Cathedral Stone Products (equivalent).
- H. Acidic Cleaner: Manufacturer's standard acidic masonry cleaner composed of hydrofluoric acid or ammonium bifluoride blended with other acids, detergents, wetting agents, and inhibitors.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; 801 Heavy Duty Masonry Cleaner.
 - b. Diedrich Technologies Inc.; Diedrich 101 Masonry Restorer or Diedrich 101G Granite, Terra Cotta, and Brick Cleaner.
 - c. Dumond Chemicals, Inc.; Safe n' Easy Ultimate Stone and Masonry Cleaner or Safe n' Easy Heavy Duty Restoration Cleaner.
 - d. EaCo Chem, Inc.; GS-Restoration or HD-Acid.
 - e. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean Brick, Granite, Sandstone and Terra Cotta Cleaner (HT-626).
 - f. Price Research, Ltd.; Price Heavy Duty Restoration Cleaner or Price Restoration Cleaner.
 - g. PROSOCO; Enviro Klean Restoration Cleaner or Sure Klean Heavy-Duty Restoration Cleaner.
 - h. Cathedral Stone Products (equivalent).

2.4 PAINT REMOVERS

- A. Alkaline Paste Paint Remover: Manufacturer's standard alkaline paste or gel formulation, for removing paint from masonry; and containing no methylene chloride.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.: Citrus Paint Remover
 - b. Diedrich Technologies, Inc. (Sandell Construction Solutions): 606 Multi-Layer Paint Remover or 606X Extra Thick Multi-Layer Paint Remover.
 - c. EaCo Chem, Inc.
 - d. Hydroclean (Hydrochemical Techniques, Inc.): HT-716 Heavy Duty Paint Remover.
 - e. PROSOCO, Inc.: Sure Klean Heavy Duty Paint Stripper.
 - f. Shore Corporation.
 - g. Cathedral Stone Products (equivalent).
- B. Covered or Skin-Forming Alkaline Paint Remover: Manufacturer's standard covered or skin-forming, alkaline paste or gel formulation, for removing paint from masonry; and containing no methylene chloride.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.
 - b. Diedrich Technologies, Inc. (Sandell Construction Solutions): 404 Rip-Strip.
 - c. Dumond Chemicals, Inc.: Peel Away 1.
 - d. PROSOCO, Inc.: Enviro Klean Safety Peel
 - e. EaCo Chem: InStrip
 - f. Cathedral Stone Products (equivalent).
- C. Solvent-Type Paste Paint Remover: Manufacturer's standard water-rinsable, solvent-type paste or gel formulation, for removing paint from masonry.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Diedrich Technologies, Inc. (Sandell Construction Solutions): 505 Special Coatings Stripper.
 - b. Dumond Chemicals, Inc.: Peel Away 2.
 - c. Hydroclean (Hydrochemical Techniques, Inc.): HT-300 Solvent Paint Remover.
 - d. PROSOCO, Inc.: Sure Klean Fast Acting Stripper
 - e. Shore Corporation.
 - f. EaCo Chem: AcryliStrip
 - g. Cathedral Stone Products (equivalent).
- D. Low-Odor, Solvent-Type Paste Paint Remover: Manufacturer's standard low-odor, water-rinsable, solvent-type paste, gel, or foamed emulsion formulation for removing paint from masonry; and containing no methanol or methylene chloride.
1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.
 - b. Cathedral Stone Products, Inc.
 - c. Dumond Chemicals, Inc.: Peel Away 6, 7 or 21.
 - d. EaCo Chem, Inc.
 - e. PROSOCO, Inc.: Enviro Klean Safety Peel 1

- f. Cathedral Stone Products (equivalent).
- E. Covered, Solvent-Type Paste Paint Remover: Manufacturer's standard, low-odor, covered, water-rinsable, solvent-type paste or gel formulation for removing paint from masonry; and containing no methanol or methylene chloride.
 - 1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Dumond Chemicals, Inc.
 - b. PROSOCO, Inc.
 - c. Cathedral Stone Products (equivalent).

2.5 ACCESSORY MATERIALS

- A. Masonry Repair Anchors, Expansion Type: Mechanical fasteners designed for masonry veneer stabilization consisting of 1/4-inch- diameter, Type 304 stainless-steel rod with brass expanding shells at each end and water-shedding washer in the middle. Expanding shells shall be designed to provide positive mechanical anchorage to veneer on one end and backup masonry on the other.
 - 1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Dur-O-Wal (Hohman & Barnard, Inc): DA5000 Repair Anchor.
 - b. BLOK-LOK (Hohman & Barnard, Inc):; Torq-Lok 500 Series anchor.
 - c. Hohmann & Barnard, Inc.: Torq-Lik 500 Series anchor for solid backup.
 - d. Helifix (Halfen USA): TorkFix.
- B. Masonry Repair Anchors, Helical Type: Mechanical fasteners designed for masonry veneer stabilization consisting of 1/4-inch- diameter, Type 304 stainless-steel rod helical design. Anchors shall be designed to provide friction anchorage to veneer on one end and backup masonry on the other.
 - 1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Simpson Strong-Tie: Heli-Tie.
 - b. Hohmann & Barnard, Inc.: Spira-Lok.
 - c. Helifix (Halfen USA): DryFix.
 - d. CTP (Construction Tie Products): Stich-Tie.
- C. Sealant Materials:
 - 1. Provide manufacturer's standard chemically curing, elastomeric sealant(s) of base polymer and characteristics indicated below that comply with applicable requirements in Division 07 Section "Joint Sealants."
 - 2. Colors: Provide colors of exposed sealants to match colors of masonry adjoining installed sealant unless otherwise indicated.
 - 3. Ground-Mortar Aggregate: Custom crushed and ground pointing mortar sand or existing mortar retrieved from joints. Grind to a particle size that matches the adjacent mortar aggregate and color. Remove all fines passing the 100 sieve.
- D. Setting Buttons: Resilient plastic buttons, nonstaining to masonry, sized to suit joint thicknesses and bed depths of masonry units without intruding into required depths of pointing materials.
- E. Masking Tape: Nonstaining, nonabsorbent material, compatible with pointing mortar, joint primers, sealants, and surfaces adjacent to joints; that will easily come off entirely, including adhesive.

- F. Miscellaneous Products: Select materials and methods of use based on the following, subject to approval of a mockup:
1. Previous effectiveness in performing the work involved.
 2. Little possibility of damaging exposed surfaces.
 3. Consistency of each application.
 4. Uniformity of the resulting overall appearance.
 5. Do not use products or tools that could do the following:
 - a. Remove, alter, or in any way harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
 - b. Leave a residue on surfaces.
- G. Thru-Wall Flashing: Perm-A-Barrier, 40 mil., self-adhesive, cold applied sheet consisting of 32 mil. of rubberized asphalt integrally bonded to an 8 mil., high-density, cross laminated polyethylene film as manufactured by GRACE Construction Products or equivalent. Provide stainless steel metal drip per manufacturer's details.
1. Install thru-wall flashing with manufacturer's recommended caulk adhesive and mechanically attach with SS screws 12" on center through continuous SS termination bar.
- H. Weeps: use Cell Vent Weephole Ventilator to form weeps/drains.
1. Install weeps in the head joints in exterior wythes of masonry where shown on drawings, as follows:
 - a. Space weepholes formed at 24" on center.
 - b. Place cavity drainage material immediately above flashing in cavities.
- I. Masonry Cavity Drainage Material: Mortar Net MN10-2 10" high x 1" thick open weave recycled polyester in a dovetail pattern, as manufactured by Mortar Net USA (800-664-6638) or equal. Install in accordance with manufacturer's printed instructions.

2.6 MORTAR MIXES

- A. Measurement and Mixing: Measure materials and sand by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean mortar pan mill or premixed ahead of time for each building.
1. Mixing Pointing Mortar: Thoroughly mix materials and sand together until the sand is coated with the lime putty. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.
- B. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Architect's approval.
1. Mortar Pigments: Where mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.
- C. Do not use admixtures in mortar unless otherwise indicated.
- D. Mortar Proportions: Mix mortar materials in the following proportions:
1. Pointing Mortar for Brick: 1 part lime putty and 2.5 parts sand. Actual proportion will be verified with the final mortar analysis for each building. The range is likely 1 part lime putty and 2 to 3 parts sand.
 - a. Add mortar pigments to produce mortar colors required.
 - b. Verify mortar proportion with the provided preconstruction testing of the existing mortar and submit for review to the architect before starting the pointing operations.
 2. Pointing Mortar by Brick, only where indicated and with documented historic use of portland cement based mortars: ASTM C 270, Property Specification, Type N; with

- cementitious material limited to portland cement and lime. Add mortar pigments to produce mortar colors required.
3. Rebuilding (Setting) Mortar: Same as pointing mortar except mortar pigments are not required.

2.7 CHEMICAL CLEANING SOLUTIONS

- A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended by chemical-cleaner manufacturer.
- B. Acidic Cleaner Solution for Brick: Dilute with water to produce hydrofluoric acid content of 3 percent or less, but not greater than that recommended by chemical-cleaner manufacturer.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored and building site from harm resulting from masonry restoration work.
- B. Comply with chemical-cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical-cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
 1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
 2. Keep wall wet below area being cleaned to prevent streaking from runoff.
 3. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
 4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
 5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- C. Prevent mortar from staining face of surrounding masonry and other surfaces.
 1. Cover sills, ledges, and projections to protect from mortar droppings.
 2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
 3. Immediately remove mortar in contact with exposed masonry and other surfaces.
 4. Clean mortar splatters from scaffolding at end of each day.
- D. Remove gutters and downspouts adjacent to masonry and store during masonry restoration and cleaning. Reinstall when masonry restoration and cleaning are complete.
 1. Provide temporary rain drainage during work to direct water away from building.

3.2 UNUSED ANCHOR REMOVAL

- A. Remove masonry anchors, brackets, wood nailers, and other extraneous items no longer in use unless identified as historically significant or indicated to remain.
 1. Remove items carefully to avoid spalling or cracking masonry.

2. Where directed, if an item cannot be removed without damaging surrounding masonry, do the following:
 - a. Cut or grind off item approximately 3/4 inch beneath surface and core drill a recess of same depth in surrounding masonry as close around item as practical.
 - b. Immediately paint exposed end of item with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended dry film thickness per coat. Keep paint off sides of recess.
3. Patch the hole where each item was removed unless directed to remove and replace the masonry unit.

3.3 BRICK REMOVAL AND REPLACEMENT

- A. At locations indicated, remove bricks that are damaged, spalled, or deteriorated or are to be reused. Remove no more than 4'-0" of brick at one time. Carefully demolish or remove entire units from joint to joint, without damaging surrounding masonry, in a manner that permits replacement with full-size units.
 1. When removing single bricks, remove material from center of brick and work toward outside edges.
- B. Support and protect remaining masonry that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.
- C. Notify Architect of unforeseen detrimental conditions including voids, cracks, bulges, and loose units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.
- D. Remove in an undamaged condition as many whole bricks as possible.
 1. Remove mortar, loose particles, and soil from brick by cleaning with hand chisels, brushes, and water.
 2. Remove sealants by cutting close to brick with utility knife and cleaning with solvents.
 3. Store brick for reuse. Store off ground, on skids, and protected from weather.
 4. Deliver cleaned brick not required for reuse to Owner unless otherwise indicated.
- E. Clean bricks surrounding removal areas by removing mortar, dust, and loose particles in preparation for replacement.
- F. Replace removed damaged brick with other removed brick and salvaged brick in good quality, where possible, or with new brick matching existing brick, including size. Do not use broken units unless they can be cut to usable size.
- G. Install replacement brick into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.
 1. Maintain joint width for replacement units to match existing joints.
 2. Use setting buttons or shims to set units accurately spaced with uniform joints.
- H. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet both replacement and surrounding bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 g/30 sq. in. per min. Use wetting methods that ensure that units are nearly saturated but surface is dry when laid.
 1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
 2. Rake out mortar used for laying brick before mortar sets and point new mortar joints in repaired area to comply with requirements for repointing existing masonry, and at same time as repointing of surrounding area.

3. When mortar is sufficiently hard to support units, remove shims and other devices interfering with pointing of joints.

3.4 CLEANING MASONRY, GENERAL

- A. Proceed with cleaning in an orderly manner; work from bottom to top of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.
- B. Use only those cleaning methods indicated for each masonry material and location.
 1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being used. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.
 2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.
 - a. Equip units with pressure gages.
 3. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
 4. For water-spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.
 5. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F at flow rates indicated.
 6. For steam application, use steam generator capable of delivering live steam at nozzle.
- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- D. Water Application Methods:
 1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.
 2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- E. Steam Cleaning: Apply steam to masonry surfaces at the very low pressures indicated for each type of masonry material. Hold nozzle at least 6 inches from surface of masonry and apply steam in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- F. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces to comply with chemical-cleaner manufacturer's written instructions; use brush application. Do not spray apply at pressures exceeding 50 psi. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.
- G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
 1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.

- H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.5 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible before removal. Remove loose soil and debris from open masonry joints to whatever depth they occur.
- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, calking, asphalt, and tar.
 - 1. Carefully remove heavy accumulations of material from surface of masonry with a sharp chisel. Do not scratch or chip masonry surface.
 - 2. Remove paint and calking with alkaline paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Repeat application up to two times if needed.
 - 3. Remove asphalt and tar with solvent-type paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Apply paint remover only to asphalt and tar by brush without prewetting.
 - c. Allow paint remover to remain on surface for 10 to 30 minutes.
 - d. Repeat application if needed.

3.6 PAINT REMOVAL

- A. Paint-Remover Application, General: Apply paint removers according to paint-remover manufacturer's written instructions. Do not allow paint removers to remain on surface for periods longer than those indicated or recommended in writing by manufacturer.
- B. Paint Removal with Alkaline Paste Paint Remover:
 - 1. Remove loose and peeling paint using low or medium-pressure water spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
 - 2. Apply paint remover to dry, painted surface with brushes.
 - 3. Allow paint remover to remain on surface for period recommended in writing by manufacturer or as determined by preconstruction testing.
 - 4. Rinse with **hot** water applied by low or medium-pressure spray to remove chemicals and paint residue.
 - 5. Repeat process if necessary to remove all paint.
 - 6. Apply acidic cleaner or manufacturer's recommended afterwash to surface, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended in writing by chemical-cleaner or afterwash manufacturer.
 - 7. Rinse with cold water applied by low or medium-pressure spray to remove chemicals and soil.
- C. Paint Removal with Covered or Skin-Forming Alkaline Paint Remover:
 - 1. Remove loose and peeling paint using low or medium-pressure water spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
 - 2. Apply paint remover to dry, painted surface with trowel, spatula, or as recommended in writing by manufacturer.
 - 3. Apply cover according to manufacturer's written instructions.

4. Allow paint remover to remain on surface for period recommended in writing by manufacturer or as determined by preconstruction testing.
5. Scrape off paint and remover.
6. Rinse with hot water applied by low or medium-pressure spray to remove chemicals and paint residue.
7. Apply acidic cleaner or manufacturer's recommended afterwash to surface, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended in writing by chemical-cleaner or afterwash manufacturer.
8. Rinse with cold water applied by low or medium-pressure spray to remove chemicals and soil.
9. For spots of remaining paint, apply alkaline paste paint remover according to "Paint Removal with Alkaline Paste Paint Remover" Paragraph.

D. Paint Removal with Solvent-Type Paste Paint Remover:

1. Remove loose and peeling paint using low or medium-pressure water spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
2. Apply thick coating of paint remover to painted surface with natural-fiber cleaning brush, deep-nap roller, or large paint brush. Apply in one or two coats according to manufacturer's written instructions.
3. Allow paint remover to remain on surface for period recommended in writing by manufacturer or as determined by preconstruction testing.
4. Rinse with cold or hot water applied by low or medium-pressure spray to remove chemicals and paint residue.

E. Paint Removal with Covered, Solvent-Type Paste Paint Remover:

1. Remove loose and peeling paint using low or medium-pressure water spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
2. Apply paint remover to dry, painted surface with trowel, spatula, or as recommended in writing by manufacturer.
3. Apply cover according to manufacturer's written instructions.
4. Allow paint remover to remain on surface for period recommended in writing by manufacturer or as determined by preconstruction testing.
5. Scrape off paint and remover.
6. Rinse with cold or hot water applied by low or medium-pressure spray to remove chemicals and paint residue.

3.7 CLEANING BRICKWORK

A. Cold-Water Soak:

1. Apply cold water by intermittent spraying to keep surface moist.
2. Use perforated hoses or other means that will apply a fine water mist to entire surface being cleaned.
3. Apply water in cycles with at least 30 minutes between cycles.
4. Continue spraying until surface encrustation has softened sufficiently to permit its removal by water wash, as indicated by cleaning tests.
5. Continue spraying for 72 hours.
6. Remove soil and softened surface encrustation from masonry with cold water applied by low-pressure spray.

B. Hot-Water Wash: Use hot water applied by low-pressure spray.

- C. Steam Cleaning: Apply steam at very low pressures not exceeding 80 psi. Remove dirt softened by steam with wood scrapers, stiff-nylon or -fiber brushes, or cold-water wash, as indicated by cleaning tests.
- D. Detergent Cleaning:
1. Wet masonry with cold water applied by low-pressure spray.
 2. Scrub masonry with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that masonry surface remains wet.
 3. Rinse with hot water applied by low-pressure spray to remove detergent solution and soil.
 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- E. Mold, Mildew, and Algae Removal:
1. Wet masonry with cold water applied by low-pressure spray.
 2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
 3. Scrub masonry with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that masonry surface remains wet.
 4. Rinse with hot water applied by low-pressure spray to remove mold, mildew, and algae remover and soil.
- F. Nonacidic Gel Chemical Cleaning:
1. Wet masonry with water applied by low-pressure spray.
 2. Apply nonacidic gel cleaner in 1/8-inch thickness by brush, working into joints and crevices. Apply quickly and do not brush out excessively so area will be uniformly covered with fresh cleaner and dwell time will be uniform throughout area being cleaned.
 3. Let cleaner remain on surface for period indicated below:
 - a. As recommended by chemical-cleaner manufacturer.
 - b. As established by mockup.
 4. Remove bulk of nonacidic gel cleaner by squeegeeing into containers for disposal.
 5. Rinse with water applied by low-pressure spray to remove chemicals and soil.
 6. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.
- G. Nonacidic Liquid Chemical Cleaning:
1. Wet masonry with water applied by low-pressure spray.
 2. Apply cleaner to masonry in two applications by brush or low-pressure spray. Let cleaner remain on surface for period indicated below:
 - a. As recommended by chemical-cleaner manufacturer.
 - b. As established by mockup.
 3. Rinse with water applied by low-pressure spray to remove chemicals and soil.
 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.
- H. Mild Acidic Chemical Cleaning:
1. Wet masonry with cold water applied by low-pressure spray.
 2. Apply cleaner to masonry in two applications by brush or low-pressure spray. Let cleaner remain on surface for period indicated below:
 - a. As recommended by chemical-cleaner manufacturer.
 - b. As established by mockup.

3. Rinse with cold water applied by low-pressure spray to remove chemicals and soil.
4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use a steam cleaning.

3.8 REPOINTING MASONRY

- A. Rake out and repoint joints to the following extent:
 1. All joints in the exterior elevations or in the areas indicated.
 2. Joints where mortar is missing or where they contain holes.
- B. Rake out joints as follows, according to procedures demonstrated in approved mockup:
 1. Remove mortar from joints to depth of 2 times joint width, but not less than 1/2 inch or not less than that required to expose sound, unweathered mortar.
 2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
 3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Architect.
 - a. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades. Remove remaining mortar by hand with chisel and resilient mallet. Strictly adhere to approved quality-control program.
- C. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.
- D. Pointing with Mortar:
 1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
 2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
 3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.
 4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
 5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours including weekends and holidays.
 - a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
 - b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.
 6. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.
- E. Pointing with Sealant:
 1. After raking out, keep joints dry and free of mortar and debris.

2. Clean and prepare joint surfaces according to Division 07 Section "Joint Sealants." Prime joint surfaces unless sealant manufacturer recommends against priming. Do not allow primer to spill or migrate onto adjoining surfaces.
 3. Fill sealant joints with specified joint sealant according to Division 07 Section "Joint Sealants" and the following:
 - a. Install cylindrical sealant backing beneath the sealant, except where space is insufficient. There, install bond-breaker tape.
 - b. Install sealant using only proven installation techniques that will ensure that sealant will be deposited in a uniform, continuous ribbon, without gaps or air pockets, and with complete wetting of the joint bond surfaces equally on both sides. Fill joint flush with surrounding masonry and matching the contour of adjoining mortar joints.
 - c. Install sealant as recommended by sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead:
 - 1) Fill joints to a depth equal to joint width, but not more than 1/2 inch deep or less than 1/4 inch deep.
 - d. Immediately after first tooling, apply ground-mortar aggregate to sealant, gently pushing aggregate into the surface of sealant. Retool sealant to form smooth, uniform beads, slightly concave. Remove excess sealant and aggregate from surfaces adjacent to joint.
 - e. Do not allow sealant to overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces, particularly rough textures. Remove excess and spillage of sealant promptly as the work progresses. Clean adjoining surfaces by the means necessary to eliminate evidence of spillage, without damage to adjoining surfaces or finishes, as demonstrated in an approved mockup.
 4. Cure sealant according to Division 07 Section "Joint Sealants."
- F. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

3.9 PARGING

- A. Parge exterior masonry, where indicated. Dampen surface before applying first coat and scarify base coat(s) to ensure full bond to subsequent coat.
1. Follow manufacturer's preparation, installation, and curing procedures.
 2. Remove all paint, waterproofing coatings, biological growth
 3. Remove all loose/deteriorated parging.
 4. Remove all portland cement based repairs.
 5. Remove loose pointing mortar.
 6. Cut edges of damaged parging areas perpendicular to direction of wall (do not feather edge patch).
 7. Remove dust and debris (wash with low pressure water only and brush if necessary).
 8. Allow areas that need repair to dry to 15% WME (wood moisture equivalent).
 9. Repoint as necessary using lime putty mortar, for finish rake back new pointing mortar to leave enough of the brick edges exposed for a parging key (1/4"). Follow specified lime mortar pointing and curing procedures.
 10. Parge using lime putty stucco or natural hydraulic lime stucco.
 - a. Apply base coat to minimum 3/8-inch, maximum 3/4-inch thickness. If greater than 3/4-inch base coat thickness is required, apply intermediate coats, each not greater than 3/4-inch in thickness.
 - b. Apply finish coat of 1/4-inch (6 mm).
 11. Provide a trowel finish with smooth, flat, dense surface and maximum surface variation of 1/8 inch per foot. Form a wash at top of parging and a cove at bottom where applicable.
 12. Cure for a minimum of 72 hours after application, following manufacturers recommended curing procedures.

3.10 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure.
 - 1. Do not use metal scrapers or brushes.
 - 2. Do not use acidic or alkaline cleaners.
- B. Wash adjacent woodwork and other non-masonry surfaces. Use detergent and soft brushes or cloths.
- C. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- D. Sweep and rake adjacent pavement and grounds to remove mortar and debris. Where necessary, pressure wash pavement surfaces to remove mortar, dust, dirt, and stains.

3.11 FIELD QUALITY CONTROL

- A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare test reports. Allow inspectors use of lift devices and scaffolding, as needed, to perform inspections.
- B. Architect's Project Representatives: Architect will assign Project representatives to help carry out Architect's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Architect's Project representatives use of lift devices and scaffolding, as needed, to observe progress and quality of portion of the Work completed.
- C. Notify Architect's Project representatives in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until Architect's Project representatives have had reasonable opportunity to make observations of work areas at lift device or scaffold location.

END OF SECTION 04 01 20

SECTION 04 01 40 - MAINTENANCE OF STONE ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes maintenance of stone assemblies consisting of stone restoration and cleaning as follows:
 - 1. Paint removal from stone.
 - 2. Repointing joints.
 - 3. Stone patching compound.
 - 4. Preliminary cleaning, including removing plant growth.
 - 5. Cleaning exposed stone surfaces.
- B. Related Sections:
 - 1. Division 01 Section "Historic Treatment Procedures."

1.2 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi.
- B. Low-Pressure Spray: 100 to 400 psi; 4 to 6 gpm.
- C. Medium-Pressure Spray: 400 to 800 psi; 4 to 6 gpm.
- D. High-Pressure Spray: 800 to 1200 psi; 4 to 6 gpm.
- E. Stone Terminology: ASTM C 119.
- F. Face Bedding: Setting of stone with the natural bedding planes (strata) vertical and parallel to the wall plane rather than horizontal or "naturally bedded," which holds bedding planes together by gravity.

1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on masonry units as follows:
 - 1. Provide test specimens as indicated and representative of proposed materials and existing construction.
 - 2. Existing Mortar: Test according to ASTM C 295/C 295M, modified as agreed by testing service and Architect for Project requirements, to determine proportional composition of original ingredients, sizes and colors of aggregates, and approximate strength.
 - a. Provide 2 test specimens for each building shown on the drawings to receive masonry repair or repointing work. Architect will assist in locating sample locations indicative of original or historic mortar materials.
 - b. Contractor shall provide (and pay for) collection, labeling, shipping and testing of specimens.
 - c. Contractor shall furnish test results to the Owner and Architect.
- B. The current approach for the masonry mortar, without testing, indicates that **lime putty** material should be used on the buildings.
 - 1. The Bid shall be based on the use of **lime putty** material and labor.
 - 2. If the test results indicate materials other than lime putty in one or more locations, then the Contractor shall propose a Change in the Work to include a change in materials, cost

of materials, and labor, based on the test results, for use at the locations indicated by the results.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.
- B. Shop Drawings: For the following:
 - 1. Provisions for expansion joints or other sealant joints.
 - 2. Provisions for flashing, lighting fixtures, conduits, and weep holes as required.
 - 3. Replacement and repair anchors, including drilled-in pins. Include details of anchors within individual stone units, with locations of anchors and dimensions of holes and recesses in stone required for anchors, including direction and angle of holes for pins.
- C. Samples for Verification: For the following:
 - 1. Each type, color, and texture of pointing mortar in the form of sample mortar strips, 6 inches long by 1/4 inch wide, set in aluminum or plastic channels.
 - a. Include with each Sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.
 - 2. Each type of stone patching compound in form of briquettes, at least 3 inches long by 1-1/2 inches wide. Document each Sample with manufacturer and stock number or other information necessary to order additional material.
 - 3. Each type of adhesive.
 - 4. Sealant Materials: See Division 07 Section "Joint Sealants."
 - 5. Accessories: Each type of anchor, accessory, and miscellaneous support.

1.5 QUALITY ASSURANCE

- A. Restoration Specialist Qualifications: Engage an experienced stone restoration and cleaning firm to perform work of this Section. Firm shall have completed work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance. Experience installing standard unit masonry or new stone masonry is not sufficient experience for stone restoration work.
 - 1. At Contractor's option, work may be divided between two specialist firms: one for cleaning work and one for repair work.
 - 2. Field Supervision: Restoration specialist firms shall maintain experienced full-time supervisors on Project site during times that stone restoration and cleaning work is in progress. Supervisors shall not be changed during Project except for causes beyond control of restoration specialist firm.
 - 3. Restoration Worker Qualifications: Persons who are experienced and specialize in restoration work of types they will be performing. When stone units are being patched, assign at least one worker among those performing patching work who is trained and certified by manufacturer of patching compound to apply its products.
- B. Chemical-Cleaner Manufacturer Qualifications: A firm regularly engaged in producing masonry cleaners that have been used for similar applications with successful results, and with factory-trained representatives who are available for consultation and Project-site inspection and assistance at no additional cost.
- C. Source Limitations: Obtain each type of material for stone restoration (stone, cement, sand, etc.) from one source with resources to provide materials of consistent quality in appearance and physical properties.

- D. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising performance and preventing damage due to worker fatigue.
- E. Restoration Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of restoration work including protection of surrounding materials and Project site.
 - 1. Include methods for keeping pointing mortar damp during curing period.
 - 2. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- F. Cleaning Program: Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations.
 - 1. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- G. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 20 feet away by Architect. Perform additional paint and stain removal, general cleaning, and spot cleaning of small areas that are noticeably different, so that surface blends smoothly into surrounding areas.
- H. Mockups: Prepare mockups of restoration and cleaning to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation.
 - 1. Stone Repair: Prepare sample areas for each type of stone indicated to have repair work performed. If not otherwise indicated, size each mockup not smaller than 2 adjacent whole units or approximately 48 inches in least dimension. Erect sample areas in existing walls unless otherwise indicated, to demonstrate quality of materials, workmanship, and blending with existing work. Include the following as a minimum:
 - a. Replacement: Four stone units replaced.
 - b. Partial Stone Replacement: Two partial stone replacements (dutchman repairs).
 - c. Patching: Three small holes at least 1 inch in diameter.
 - 2. Repointing: Rake out joints in 2 separate areas, each approximately 36 inches high by 48 inches wide for each type of repointing required and repoint one of the areas.
 - 3. Cleaning: Clean an area approximately 25 square feet for each type of stone and surface condition.
 - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not use cleaners and methods known to have deleterious effect.
 - b. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.
 - 4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 5. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- I. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to stone restoration and cleaning including, but not limited to, the following:
 - a. Construction Schedule: Verify availability of materials, Restoration Specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Replacement stone
 - d. Pointing samples

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver stone units to Project site strapped together in suitable packs or pallets or in heavy-duty crates.
- B. Deliver each piece of limestone with code mark or setting number on unexposed face, corresponding to Shop Drawings, using non-staining paint.
- C. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- D. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- E. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- F. Store lime putty covered with water in sealed containers.
- G. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit stone restoration and cleaning work to be performed according to manufacturers' written instructions and specified requirements.
- B. Repair stone units and repoint mortar joints only when air temperature is between 40° and 90° F and is predicted to remain so for at least 7 days after completion of the Work unless otherwise indicated.
- C. Cold-Weather Requirements: Comply with the following procedures for stone repair and mortar-joint pointing unless otherwise indicated:
 1. When air temperature is below 40° F, heat mortar ingredients, repair materials, and existing stone to produce temperatures between 40° and 120° F.
 2. When mean daily air temperature is below 40° F, provide enclosure and heat to maintain temperatures above 32° F within the enclosure for 7 days after repair and pointing.
- D. Hot-Weather Requirements: Protect stone repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and patching materials. Provide artificial shade and wind breaks and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90° F and above unless otherwise indicated.
- E. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.

- F. Clean stone surfaces only when air temperature is 40° F and above and is predicted to remain so for at least 7 days after completion of cleaning.
- G. Apply stone consolidation treatment only when surface and air temperatures are between 50° and 90° F and rain is not expected within 24 hours.

1.8 COORDINATION

- A. Coordinate stone restoration and cleaning with public circulation patterns at Project site. Some work may be near public circulation patterns. Public circulation patterns cannot be closed off entirely, and in places can be only temporarily redirected around small areas of work.
- B. Where the Work is adjacent to building electrical service or other equipment, work with power company and owner to safely access this work. Plan and execute the Work accordingly.

1.9 SEQUENCING AND SCHEDULING

- A. Order replacement materials at earliest possible date to avoid delaying completion of the Work.
- B. Order lime putty and sand for pointing mortar immediately after approval of samples. Take delivery of and store at Project site a sufficient quantity to complete Project.
- C. Perform stone restoration work in the following sequence:
 - 1. Remove plant growth.
 - 2. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
 - 3. Remove paint.
 - 4. Clean stone surfaces.
 - 5. Where water repellents, specified in Division 07, are to be used on or near stonework, delay application of these chemicals until after pointing.
 - 6. Rake out mortar from joints surrounding stone to be replaced and from joints adjacent to stone repairs along joints.
 - 7. Repair stonework, including replacing existing stone with new stone.
 - 8. Rake out mortar from joints to be repointed.
 - 9. Point mortar and sealant joints.
 - 10. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.
 - 11. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
 - 12. Remove paint.
- D. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in stone to comply with "Stone Patching" Article. Patch holes in mortar joints to comply with "Repointing Stonework" Article.

PART 2 - PRODUCTS

2.1 MORTAR MATERIALS

- A. Hydrated Lime: ASTM C 207, Type S.
- B. Factory-Prepared Lime Putty: ASTM C 1489.
- C. Quicklime: ASTM C 5, pulverized lime.

- D. Mortar Sand: ASTM C 144 unless otherwise indicated.
 - 1. Color: Provide natural sand of color necessary to produce required mortar color.
 - 2. For pointing mortar, provide sand with rounded edges.
 - 3. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
- E. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.
- F. Water: Potable.

2.2 MANUFACTURED REPAIR MATERIALS

- A. Stone Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching stone.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cathedral Stone Products, Inc.
 - b. Conproco Corporation; Mimic.
 - c. Edison Coatings, Inc.; Custom System 45.
 - d. KEIM Mineral Coatings of America.
 - e. Jahn Restoration Mortars.
 - 2. Use formulation that is vapor- and water permeable (equal to or more than the stone), exhibits low shrinkage, has lower modulus of elasticity than the stone units being repaired, and develops high bond strength to all types of stone.
 - 3. Use formulation having working qualities and retardation control to permit forming and sculpturing where necessary.
 - 4. Formulate patching compound in colors, textures, and grain to match stone being patched. Provide sufficient number of colors to enable matching each piece of stone.

2.3 PAINT REMOVERS

- A. Alkaline Paste Paint Remover: Manufacturer's standard alkaline paste formulation for removing paint coatings from masonry.
 - 1. Products: Subject to compliance with requirements, provide available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; 800 Brush Grade.
 - b. Diedrich Technologies Inc.; 606 Multi-Layer Paint Remover or 606X Extra Thick Multi-Layer Paint Remover.
 - c. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean HT-716 Heavy Duty Paint Remover.
 - d. Price Research, Ltd.; Price Heavy Duty Paint Stripper.
 - e. PROSOCO; Sure Klean Heavy-Duty Paint Stripper.
 - f. Cathedral Stone Products (equivalent).
- B. Covered or Skin-Forming Alkaline Paint Remover: Manufacturer's standard covered or skin-forming alkaline formulation for removing paint coatings from masonry.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; Grip 'N Strip 800 Fast Acting.
 - b. Diedrich Technologies Inc.; 606 Multi-Layer Paint Remover or 606X Extra Thick Multi-Layer Paint Remover with pull-off removal system.
 - c. Dumond Chemicals, Inc.; Peel Away 1 System.
 - d. PROSOCO; Enviro Klean Safety Peel 1 or Enviro Klean Safety Peel 3 with Enviro Klean Overcoat.

- e. Cathedral Stone Products (equivalent).
- C. Solvent-Type Paint Remover: Manufacturer's standard water-rinsable, solvent-type gel formulation for removing paint coatings from masonry.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; Super Bio Strip Gel.
 - b. Diedrich Technologies Inc.; 505 Special Coatings Stripper.
 - c. Dumond Chemicals, Inc.; Peel Away 2.
 - d. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean HT-300 Solvent Paint Remover.
 - e. Price Research, Ltd.; Price Strip-All.
 - f. PROSOCO; Sure Klean Fast Acting Stripper.
 - g. Cathedral Stone Products (equivalent).

2.4 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140° to 160° F.
- C. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 1/2 cup of laundry detergent, and 20 quarts of hot water for every 5 gal. of solution required.
- D. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of hot water for every 5 gal. of solution required.
- E. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, with pH between 6 and 9, that contains detergents with chelating agents and is specifically formulated for cleaning masonry surfaces.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Price Research, Ltd.; Price Marble Cleaner-Gel.
 - b. PROSOCO; Sure Klean 942 Limestone and Marble Cleaner.
 - c. Cathedral Stone Products (equivalent).
- F. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Diedrich Technologies Inc.; Diedrich 910PM Polished Marble Cleaner.
 - b. Dominion Restoration Products, Inc.; Bio-Cleanse.
 - c. Dumond Chemicals, Inc.; Safe n' Easy Architectural Cleaner/Restorer.
 - d. Price Research, Ltd.; Price Non-Acid Masonry Cleaner.
 - e. PROSOCO; Enviro Klean 2010 All Surface Cleaner.
 - f. Cathedral Stone Products (equivalent).
- G. One-Part Limestone Cleaner: Manufacturer's standard one-part acidic formulation for cleaning limestone.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; X-190 Limestone & Concrete Cleaner.

- b. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean Limestone and Marble Cleaner and Brightener (HT-907).
 - c. Price Research, Ltd.; Price Limestone Restorer.
 - d. PROSOCO; Sure Klean Limestone Restorer.
 - e. Cathedral Stone Products (equivalent).
- H. Two-Part Limestone Cleaner: Manufacturer's standard system consisting of potassium or sodium hydroxide based, alkaline prewash cleaner and acidic afterwash cleaner that does not contain hydrofluoric acid.
 - 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; 500 Limestone Prewash Cleaner followed by 500 Limestone Afterwash.
 - b. Diedrich Technologies Inc.; Diedrich 707X Limestone Cleaner Pre-Rinse followed by 707N Limestone Neutralizer After-Rinse.
 - c. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean Limestone and Marble Precleaner (HT-704) and Hydroclean Limestone and Marble Cleaner and Brightener (HT-907).
 - d. Price Research, Ltd.; Price Limestone Pre-Wash followed by Limestone After-Wash System.
 - e. PROSOCO; Enviro Klean BioKlean followed by Sure Klean Limestone & Masonry Afterwash
 - f. Cathedral Stone Products (equivalent).

2.5 EMBEDDED FLASHING MATERIALS

- A. Flexible Flashing: Use one of the following, unless otherwise indicated:
 - 1. Copper-Laminated Flashing: 5-oz./sq. ft. copper sheet bonded between 2 layers of asphalt-free glass-fiber cloth. Use only where flashing is fully concealed in masonry.
 - a. Products: Subject to compliance with requirements, provide one of the following:
 - 1) Advanced Building Products Inc.; Copper Sealtite 2000.
 - 2) Hohmann & Barnard, Inc.; H & B Copper-Tuff Flashing.
 - 3) Sandell Manufacturing Co., Inc.; Copper Fabric NA Flashing.
 - 4) York Manufacturing, Inc.; Multi-Flash 500.
 - 2. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy.
 - a. Products: Subject to compliance with requirements, provide one of the following:
 - 1) DuPont; Thru-Wall Flashing.
 - 2) Hohmann & Barnard, Inc.; Flex-Flash.
 - 3) Hyload, Inc.; Hyload Flashing Membrane.
 - b. Monolithic Sheet: Elastomeric thermoplastic flashing, 0.040 inch thick.
 - c. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.
- B. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.6 ACCESSORY MATERIALS

- A. Stone Anchors: Type and size indicated or, if not indicated, to match existing anchors in size and type. Fabricate anchors from Type 316 stainless steel.
- B. Sealant Materials:

1. Provide manufacturer's standard chemically curing, elastomeric sealant(s) of base polymer and characteristics indicated below that comply with applicable requirements in Division 07 Section "Joint Sealants."
 - a. Single-component, non-sag urethane sealant.
 2. Colors: Provide colors of exposed sealants to match colors of stonework adjoining installed sealant unless otherwise indicated.
- C. Joint-Sealant Backing:
1. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
 2. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.
- D. Setting Buttons: Resilient plastic buttons, non-staining to stone, sized to suit joint thicknesses and bed depths of stone units without intruding into required depths of pointing materials.
- E. Masking Tape: Non-staining, nonabsorbent material, compatible with pointing mortar, joint primers, sealants, and surfaces adjacent to joints; that will easily come off entirely, including adhesive.
- F. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer.
1. Use coating requiring by manufacturer's literature or certified statement.
- G. Miscellaneous Products: Select materials and methods of use based on the following, subject to approval of a mockup:
1. Previous effectiveness in performing the work involved.
 2. Little possibility of damaging exposed surfaces.
 3. Consistency of each application.
 4. Uniformity of the resulting overall appearance.
 5. Do not use products or tools that could do the following:
 - a. Remove, alter, or in any way harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
 - b. Leave a residue on surfaces.

2.7 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
1. Mixing Pointing Mortar: See Section 04 01 20 Maintenance of Unit Masonry.
- B. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Architect's approval.
1. Mortar Pigments: Where mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.
- C. Do not use admixtures in mortar unless otherwise indicated.
- D. Mortar Proportions: See Section 04 01 20 Maintenance of Unit Masonry

2.8 CHEMICAL CLEANING SOLUTIONS

- A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended by chemical-cleaner manufacturer.
- B. Acidic Cleaner Solution for Unpolished Stone: Dilute with water to produce hydrofluoric acid content of 3 percent or less, but not greater than that recommended by chemical-cleaner manufacturer.
 - 1. Use only on unpolished granite, unpolished dolomite marble, and siliceous sandstone.
- C. Acidic Cleaner for Polished Stone: Dilute with water to concentration demonstrated by testing that does not etch or otherwise damage polished surface, but not greater than that recommended by chemical-cleaner manufacturer.
 - 1. Use only on polished granite and polished dolomite marble.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from stone restoration work.
 - 1. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.
- B. Comply with chemical-cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
 - 1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
 - 2. Keep wall wet below area being cleaned to prevent streaking from runoff.
 - 3. Do not clean stone during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
 - 4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
 - 5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- C. Prevent mortar from staining face of surrounding stone and other surfaces.
 - 1. Cover sills, ledges, and projections to protect from mortar droppings.
 - 2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
 - 3. Immediately remove mortar in contact with exposed stone and other surfaces.
 - 4. Clean mortar splatters from scaffolding at end of each day.
- D. Remove gutters and downspouts adjacent to stone and store during stone restoration and cleaning. Reinstall when stone restoration and cleaning are complete.
 - 1. Provide temporary rain drainage during work to direct water away from building.

3.2 PARTIAL STONE REPAIR FOR PATCHING

- A. Remove defective portion of existing stone unit. Carefully remove defective portion of stone by making vertical and horizontal saw cuts and demolishing defective material to depth required for stone patting compound.
 - 1. Make edges of backing stone at cuts smooth and square to each other and to finished surface; essentially rectangular. Make back of removal area flat and parallel to stone face.
 - 2. Do not overcut at corners and intersections. Hand trim to produce clean sharp corners with no rounding and no damage to existing work to remain.
 - 3. If existing stone that is to remain becomes damaged, remove damaged area and enlarge partial replacement as required.
- B. Apply stone patching compound to comply with manufacturer's written instructions. Build surface to match proposed profile.
- C. Clean residue from exposed surfaces and patch chipped areas as specified in "Stone Patching" Article.

3.3 CLEANING STONE, GENERAL

- A. Proceed with cleaning in an orderly manner; work from bottom to top of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.
- B. Use only those cleaning methods indicated for each stone material and location.
 - 1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being used. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.
 - 2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage stone.
 - a. Equip units with pressure gages.
 - 3. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
 - 4. For water-spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.
 - 5. For high-pressure water-spray application, use fan-shaped spray tip that disperses water at an angle of at least 40 degrees.
 - 6. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F at flow rates indicated.
 - 7. For steam application, use steam generator capable of delivering live steam at nozzle.
- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging stone surfaces.
- D. Water Application Methods:
 - 1. Water-Soak Application: Soak stone surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.
 - 2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches from surface of stone and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.

- E. Steam Cleaning: Apply steam to stone surfaces at the very low pressures indicated for each type of stonework. Hold nozzle at least 6 inches from surface of stone and apply steam in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- F. Chemical-Cleaner Application Methods: Apply chemical cleaners to stone surfaces to comply with chemical-cleaner manufacturer's written instructions; use brush application. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.
- G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
 - 1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.
- H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.4 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from stone surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible before removal. Remove loose soil or debris from open joints to whatever depth they occur.
- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, calking, asphalt, and tar.
 - 1. Carefully remove heavy accumulations of material from surface of stone with sharp chisel. Do not scratch or chip stone surface.
 - 2. Remove paint and calking with alkaline paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Repeat application up to two times if needed.
 - 3. Remove asphalt and tar with solvent-type paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Apply paint remover only to asphalt and tar by brush without prewetting.
 - c. Allow paint remover to remain on surface for 10 to 30 minutes.
 - d. Repeat application if needed.

3.5 PAINT REMOVAL

- A. Paint Removal with Alkaline Paste Paint Remover:
 - 1. Remove loose and peeling paint using low-pressure spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
 - 2. Apply paint remover to dry, painted stone with brushes.
 - 3. Allow paint remover to remain on surface for period recommended by manufacturer.
 - 4. Rinse with water applied by low-pressure spray to remove chemicals and paint residue.
 - 5. Repeat process if necessary to remove all paint.
 - 6. Apply acidic cleaner or manufacturer's recommended after-wash to stone, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or after-wash remain on surface as a neutralizing agent for period recommended by chemical-cleaner or after-wash manufacturer.
 - 7. Rinse with cold water applied by low-pressure spray to remove chemicals and soil.

- B. Paint Removal with Solvent-Type Paint Remover:
 - 1. Remove loose and peeling paint using low-pressure spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
 - 2. Apply thick coating of paint remover to painted stone with natural-fiber cleaning brush, deep-nap roller, or large paint brush.
 - 3. Allow paint remover to remain on surface for period recommended by manufacturer.
 - 4. Rinse with water applied by low-pressure spray to remove chemicals and paint residue.

3.6 CLEANING STONEWORK

- A. Detergent Cleaning:
 - 1. Wet stone with cold water applied by low-pressure spray.
 - 2. Scrub stone with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that stone surface remains wet.
 - 3. Rinse with cold water applied by low-pressure spray to remove detergent solution and soil.
 - 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- B. Mold, Mildew, and Algae Removal:
 - 1. Wet stone with cold water applied by low-pressure spray.
 - 2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
 - 3. Scrub stone with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that stone surface remains wet.
 - 4. Rinse with cold water applied by low-pressure spray to remove mold, mildew, and algae remover and soil.
 - 5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- C. Two-Part Limestone Chemical Cleaning:
 - 1. Wet stone with cold water applied by low-pressure spray.
 - 2. Apply alkaline prewash cleaner to stone by brush or roller. Let cleaner remain on surface for period recommended by chemical-cleaner manufacturer unless otherwise indicated.
 - 3. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.
 - 4. Apply acidic after-wash cleaner to stone in two applications, while surface is still wet, using low-pressure spray equipment, deep-nap roller or soft-fiber brush. Let neutralizer remain on surface for period recommended by manufacturer unless otherwise indicated.
 - 5. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.
 - 6. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once.

3.7 REPOINTING STONEWORK

- A. Rake out and repoint joints to the following extent:
 - 1. All joints for both buildings in areas indicated.
- B. Rake out joints as follows, according to procedures demonstrated in approved mockup:
 - 1. Remove mortar from joints to depth of 2 times joint width, but not less than 1/2 inch or not less than that required to expose sound, un-weathered mortar.

2. Remove mortar from stone surfaces within raked-out joints to provide reveals with square backs and to expose stone for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
 3. Do not spall edges of stone units or widen joints. Replace or patch damaged stone units as directed by Architect.
 - a. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades. Remove remaining mortar by hand with chisel and resilient mallet. Strictly adhere to approved quality-control program.
- C. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose stone, rotted wood, rusted metal, and other deteriorated items.
- D. Pointing with Mortar:
1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
 2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
 3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing stone has worn or rounded edges, slightly recess finished mortar surface below face of stone to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed stone surfaces or to featheredge the mortar.
 4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
 5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours, including weekends and holidays.
 - a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
 - b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.
 6. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.
- E. Where repointing work precedes cleaning of existing stone, allow mortar to harden at least 30 days before beginning cleaning work.

3.8 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed stone surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure.
 1. Do not use metal scrapers or brushes.
 2. Do not use acidic or alkaline cleaners.
- B. Wash adjacent woodwork and other non-stone surfaces. Use detergent and soft brushes or cloths.
- C. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.

- D. Sweep and rake adjacent pavement and grounds to remove mortar and debris. Where necessary, pressure wash pavement surfaces to remove mortar, dust, dirt, and stains.

3.9 FIELD QUALITY CONTROL

- A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare test reports. Allow inspectors use of lift devices and scaffolding, as needed, to perform inspections.
- B. Architect's Project Representatives: Architect will assign Project representatives to help carry out Architect's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Architect's Project representatives use of lift devices and scaffolding, as needed, to observe progress and quality of portion of the Work completed.
- C. Notify Architect's Project representatives in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until Architect's Project representatives have had reasonable opportunity to make observations of work areas at lift device or scaffold location.

END OF SECTION 04 01 40

SECTION 04 03 21 – CONSERVATION OF HISTORIC TERRA COTTA MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

1.2 SUMMARY

- A. Section includes historic treatment work consisting of repairing historic terra cotta masonry as follows:
 - 1. Cleaning surfaces.
- B. Related Requirements:
 - 1. Section 01 35 91 "Historic Treatment Procedures" for general historic treatment requirements.

1.3 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi.
- B. Low-Pressure Spray: 100 to 400 psi.
- C. Medium-Pressure Spray: 400 to 800 psi.
- D. High-Pressure Spray: 800 to 1200 psi.
- E. Saturation Coefficient: Ratio of the weight of water absorbed during immersion in cold water to weight absorbed during immersion in boiling water; used as an indication of resistance of masonry units to freezing and thawing.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review minutes of Preliminary Historic Treatment Conference that pertain to masonry historic treatment and repair.
 - 2. Review methods and procedures related to repairing historic terra cotta masonry, including, but not limited to, the following:
 - a. Historic treatment specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Quality-control program.
 - d. Fire-protection plan.
 - e. Terra cotta historic treatment program.
 - f. Coordination with building occupants.

1.5 SEQUENCING AND SCHEDULING

- A. Work Sequence: Perform masonry historic treatment work in the following sequence, which includes work specified in this and other Sections:
 - 1. Remove plant growth.
 - 2. Inspect masonry for open mortar joints and permanently or temporarily point them before cleaning to prevent intrusion of water and other cleaning materials into the wall.
 - 3. Remove paint.
 - 4. Clean masonry.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 - 2. Include recommendations for product application and use.
 - 3. Include test data substantiating that products comply with requirements.

1.7 INFORMATIONAL SUBMITTALS

- A. Quality-control program.
- B. Terra cotta historic treatment program.

1.8 QUALITY ASSURANCE

- A. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising worker performance and preventing damage.
- B. Terra Cotta Historic Treatment Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of historic treatment work, including protection of surrounding materials and Project site.
 - 1. If materials and methods other than those indicated are proposed for any phase of historic treatment work, add to the quality-control program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project.
- C. Cleaning Program: Prepare a written cleaning program for both buildings that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations.
 - 1. Perform the work in compliance with historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties, unless otherwise indicated. Notify Architect of any discrepancies that may exist.
 - 2. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- D. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 30 feet away by Architect. Perform additional paint and stain removal, general cleaning, and spot cleaning of small areas that are noticeably different, so that surface blends smoothly into surrounding areas.
- E. Mockups: Prepare mockups of historic treatment to demonstrate aesthetic effects and to set quality standards for materials and execution and for fabrication and installation.
 - 1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver packaged materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- B. Handle terra cotta units to prevent overstressing, chipping, defacement, and other damage.

1.10 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit repair work to be performed according to product manufacturers' written instructions and specified requirements.
- B. Temperature Limits: Repair terra cotta masonry only when air temperature is between 40 and 90 deg F (4 and 32 deg C) and is predicted to remain so for at least seven days after completion of the Work unless otherwise indicated.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Source Limitations: Obtain each type of material for repairing historic masonry (terra cotta, cement, sand, etc.) from single source with resources to provide materials of consistent quality in appearance and physical properties.

2.2 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140° to 160° F.
- C. Mild Acidic Cleaner: Manufacturer's standard mildly acidic cleaner containing no muriatic (hydrochloric), hydrofluoric, or sulfuric acid; or ammonium bifluoride or chlorine bleaches.
 - 1. Products: Subject to compliance with requirements, provide the following
 - 2. available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABR Products, Inc.; X-190 Limestone & Concrete Cleaner.
 - b. Diedrich Technologies Inc.; Envirorestore 100.
 - c. Dominion Restoration Products, Inc.; DR-60 Stone and Masonry Cleaner.
 - d. PROSOCO: Enviro Klean SafRestorer restoration cleaner.
 - e. Cathedral Stone Products (equivalent).

2.3 ACCESSORY MATERIALS

- A. Masking Tape: Nonstaining, nonabsorbent material; compatible with mortar, joint primers, sealants, and surfaces adjacent to joints; and that easily comes off entirely, including adhesive.
- B. Other Products: Select materials and methods of use based on the following, subject to approval of a mockup:
 - 1. Previous effectiveness in performing work involved.
 - 2. Minimal possibility of damaging exposed surfaces.
 - 3. Consistency of each application.
 - 4. Uniformity of the resulting overall appearance.
 - 5. Do not use products or tools that could do the following:

- a. Remove, alter, or harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in Contract.
- b. Leave residue on surfaces.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored and building site from harm resulting from masonry restoration work.
- B. Comply with chemical-cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical-cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
 - 1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
 - 2. Keep wall wet below area being cleaned to prevent streaking from runoff.
 - 3. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
 - 4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
 - 5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- C. Remove gutters and downspouts adjacent to masonry and store during masonry restoration and cleaning. Reinstall when masonry restoration and cleaning are complete.
 - 1. Provide temporary rain drainage during work to direct water away from building.

3.2 CLEANING MASONRY, GENERAL

- A. Proceed with cleaning in an orderly manner; work from bottom to top of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.
- B. Use only those cleaning methods indicated for each masonry material and location.
 - 1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being used. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.
 - 2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.
 - a. Equip units with pressure gages.
 - 3. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
 - 4. For water-spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.
 - 5. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F at flow rates indicated.
 - 6. For steam application, use steam generator capable of delivering live steam at nozzle.

- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- D. Water Application Methods:
 - 1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.
 - 2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- E. Steam Cleaning: Apply steam to masonry surfaces at the very low pressures indicated for each type of masonry material. Hold nozzle at least 6 inches from surface of masonry and apply steam in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- F. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces to comply with chemical-cleaner manufacturer's written instructions; use brush application. Do not spray apply at pressures exceeding 50 psi. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.
- G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
 - 1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.
- H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.3 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible before removal. Remove loose soil and debris from open masonry joints to whatever depth they occur.
- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, calking, asphalt, and tar.
 - 1. Carefully remove heavy accumulations of material from surface of masonry with a sharp chisel. Do not scratch or chip masonry surface.
 - 2. Remove paint and calking with alkaline paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Repeat application up to two times if needed.
 - 3. Remove asphalt and tar with solvent-type paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Apply paint remover only to asphalt and tar by brush without prewetting.
 - c. Allow paint remover to remain on surface for 10 to 30 minutes.
 - d. Repeat application if needed.

3.4 CLEANING MASONRY

- A. Mild Acidic Chemical Cleaning:
 - 1. Wet masonry with cold water applied by low-pressure spray.
 - 2. Apply cleaner to masonry in two applications by brush or low-pressure spray. Let cleaner remain on surface for period indicated below:
 - a. As recommended by chemical-cleaner manufacturer.
 - b. As established by mockup.
 - 3. Rinse with cold water applied by low-pressure spray to remove chemicals and soil.
 - 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use a steam cleaning.

3.5 FINAL CLEANING

- A. Clean adjacent non-masonry surfaces. Use detergent and soft brushes or cloths.
- B. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- C. Remove masking materials, leaving no residues that could trap dirt.

END OF SECTION 04 03 21

SECTION 04 03 42 – CONSERVATION OF HISTORIC STONE MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes historic treatment work consisting of repairing or selective replacement of historic stone assemblies as follows:
 - 1. Repairing stone masonry, including crack injection, and replacing whole and partial units.
 - 2. Stone patching compound.
 - 3. Removing abandoned anchors.
 - 4. Painting steel uncovered during the Work.
- B. Related Requirements:
 - 1. Division 01 Section "Historic Treatment Procedures."
 - 2. Division 04 Section "Historic Stone Consolidation Treatment" for repair of stone using chemical consolidation.

1.2 DEFINITIONS

- A. Low-Pressure Spray: 100 to 400 psi; 4 to 6 gpm.
- B. Face Bedding: Setting of stone with the rift or natural bedding planes (strata) vertical and parallel to the wall plane rather than horizontal or "naturally bedded," which holds bedding planes together by gravity.
- C. Rebuilding (Setting) Mortar: Mortar used to set and anchor masonry in a structure, distinct from pointing mortar installed after masonry is set in place.
- D. Rift: The most pronounced direction of splitting or cleavage of a stone.
- E. Stone Terminology: ASTM C 119.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review minutes of Preliminary Historic Treatment Conference that pertain to stone historic treatment and repair.
 - 2. Review methods and procedures related to repairing historic stone masonry including, but not limited to, the following:
 - a. Verify historic treatment specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Quality-control program.
 - d. Fire-protection plan.
 - e. Stone historic treatment program.
 - f. Coordination with building occupants.

1.4 SEQUENCING AND SCHEDULING

- A. Order sand and gray Portland cement for colored mortar immediately after approval of mockups. Take delivery of and store at Project site a sufficient quantity to complete Project.

- B. Work Sequence: Perform stone historic treatment work in the following sequence, which includes work specified in this and other Sections:
1. Remove plant growth.
 2. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
 3. Remove paint.
 4. Clean stone.
 5. Rake out mortar from joints surrounding stone to be replaced and from joints adjacent to stone repairs along joints.
 6. Repair stonework, including replacing existing stone with new stone. If required, repair backup masonry.
 7. Rake out mortar from joints to be repointed.
 8. Point mortar and sealant joints.
 9. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.
 10. Where water repellents are to be used on or near stonework, delay application of these chemicals until after pointing and cleaning.
- C. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in stone according to "Stone Patching" Article. Patch holes in mortar joints according to Section 04 03 43 "Historic Stone Masonry Repointing."

1.5 SUBMITTALS

- A. Product Data: For each type of product.
1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 2. Include recommendations for product application and use. Include test data substantiating that products comply with requirements.
- B. Shop Drawings:
1. Include plans, elevations, sections, and locations of stone repair work on the structure.
 2. Indicate complete dimensions for new stone units and their jointing, showing relation of existing to new units.
 3. Show partial replacement stone units (dutchmen).
 4. Indicate setting number of each new stone unit and its location on the structure in annotated plans and elevations.
 5. Show provisions for expansion joints or other sealant joints.
 6. Show provisions for flashing, lighting fixtures, conduits, and weep holes as required.
 7. Show replacement and repair anchors, including drilled-in pins. Include details of anchors within individual stone units, with locations of anchors and dimensions of holes and recesses in stone required for anchors, including direction and angle of holes for pins.
 8. Show locations of scaffolding and points of scaffolding in contact with masonry. Include details of each point of contact or anchorage.
- C. Samples for Initial Selection: For the following:
1. Colored Mortar: Submit sets of mortar that will be left exposed in the form of sample mortar strips, 6 inches long by 1/4 inch or 1/2-inch-wide, set in aluminum or plastic channels.
 - a. Have each set contain a close color range of at least three Samples of different mixes of colored sands and cements that produce a mortar matching the existing, cleaned mortar when cured and dry.
 - b. Submit with precise measurements on ingredients, proportions, gradations, and sources of colored sands from which each Sample was made.
 2. Each type of sand used for mortar; minimum 8 oz. of each in plastic screw-top jars.

- a. For blended sands, provide Samples of each component and blend. Identify blend ratio.
 - b. Identify sources, both supplier and quarry, of each type of sand.
- 3. Patching Compound: Submit sets of patching compound Samples in the form of plugs (patches in drilled holes) in sample units of stone representative of the range of stone colors on the building.
 - a. Have each set contain a close color range of at least three Samples of different mixes of patching compound that matches the variations in existing stone when cured and dry.
- 4. Include similar Samples of accessories involving color selection.
- D. Samples for Verification: For the following:
 - 1. Each type of replacement stone. Include sets of Samples to show full range of color, texture, grain, veining, and finish to be expected. Provide sets of at least three 12-by-12-inch Samples for each type, but no fewer than necessary to indicate full range and the proportion of variations within range.
 - 2. Each type of patching compound in form of briquettes, at least 3 inches long by 1-1/2 inches wide. Document each Sample with manufacturer and stock number or other information necessary to order additional material.
 - 3. Each type of adhesive.
 - 4. Accessories: Each type of anchor, accessory, and miscellaneous support.
- E. Qualification Data: For historic treatment specialists, including field supervisors and workers, and testing service.
- F. Preconstruction Test Reports: For existing stone and mortar and replacement stone.
- G. Stone historic treatment program.

1.6 QUALITY ASSURANCE

- A. Historic Treatment Specialist Qualifications: A qualified historic stone repair specialist. Experience installing standard unit masonry or new stone masonry is insufficient experience for stone historic treatment work.
 - 1. Historic Treatment Worker Qualifications: When stone units are being patched, assign at least one worker per crew who is trained and certified by manufacturer of patching compound to apply its products.
- B. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising worker performance and preventing damage.
- C. Stone Historic Treatment Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of the historic treatment work including protection of surrounding materials and Project site.
 - 1. Include methods for keeping exposed mortar damp during curing period.
 - 2. If materials and methods other than those indicated are proposed for any phase of historic treatment work, add to the quality-control program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project.
- D. Mockups: Prepare mockups of historic treatment on existing surfaces to demonstrate aesthetic effects and to set quality standards for materials and execution and for fabrication and installation.

1. Stone Repair: Prepare sample areas for each type of stone indicated to have repair work performed. If not otherwise indicated, size each mockup not smaller than two adjacent whole units or approximately 48 inches in least dimension. Construct sample areas in locations in existing walls where directed by Architect unless otherwise indicated. Demonstrate quality of materials, workmanship, and blending with existing work. Include the following as a minimum:
 - a. Replacement: Four stone units replaced.
 - b. Partial Stone Replacement: Two partial stone replacements (dutchman repairs).
 - c. Stone Plug Repair: Two stone plug repairs for each type of stone indicated to be plugged.
 - d. Crack Injection: Apply crack injection in two separate areas, each approximately 36 inches long.
 - e. Patching: Three small holes at least 1 inch in diameter.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver stone units to Project site strapped together in suitable packs or pallets or in heavy-duty crates and protected against impact and chipping.
- B. Deliver each piece of stone with code mark or setting number on unexposed face, corresponding to Shop Drawings, using non-staining paint.
- C. Deliver packaged materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- D. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- E. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- F. Store lime putty covered with water in sealed containers.
- G. Store sand where grading and other required characteristics can be maintained and contamination avoided.
- H. Handle stone to prevent overstressing, chipping, defacement, and other damage.

1.8 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit repair work to be performed according to product manufacturers' written instructions and specified requirements.
- B. Temperature Limits, General: Repair stone units only when air temperature is between 40 and 90 deg F and is predicted to remain so for at least seven days after completion of the Work unless otherwise indicated.
- C. Cold-Weather Requirements: Comply with the following procedures for stone repair unless otherwise indicated:

1. When air temperature is below 40 deg F, heat mortar ingredients, repair materials, and existing stone to produce temperatures between 40 and 120 deg F.
 2. When mean daily air temperature is below 40 deg F, provide enclosure and heat to maintain temperatures above 32 deg F within the enclosure for seven days after repair.
- D. Hot-Weather Requirements: Protect stone repair when temperature and humidity conditions produce excessive evaporation of water from mortar and patching materials. Provide artificial shade and wind breaks and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90 deg F and above unless otherwise indicated.
- E. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Source Limitations: Obtain each type of material for repairing historic masonry (stone, cement, sand, etc.) from single source with resources to provide materials of consistent quality in appearance and physical properties.

2.2 MASONRY MATERIALS

- A. Stone Matching Existing: Provide natural building stone of variety, color, texture, grain, veining, finish, size, and shape to match existing stone and with physical properties within 10 percent of those determined from preconstruction testing of selected existing stone.
1. For existing stone that exhibits a range of colors, textures, grains, veining, finishes, sizes, or shapes, provide stone that proportionally matches that range rather than stone that matches an individual color, texture, grain, veining, finish, size, or shape within that range.
- B. Quarrying New Stone: Have quarry clearly label the direction of rift or bedding planes when rough stone is quarried, to facilitate cutting stones so that natural bedding planes are as required in "Cutting New Stone" Paragraph.
- C. Cutting New Stone: Regardless of how existing stone was cut and set, cut each new stone so that, when it is set in final position, the rift or natural bedding planes match the rift of existing stones.
- D. Salvaged Stone: Obtain from location indicated on Drawings. Clean off residual mortar.

2.3 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150/C 150M, Type I or Type II; white or gray, or both, where required for color matching of mortar.
1. Provide cement containing not more than 0.60 percent total alkali when tested according to ASTM C 114.
- B. Factory-Prepared Lime Putty: ASTM C 1489.
- C. Mortar Sand: ASTM C 144 unless otherwise indicated.
1. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
 2. Colored Mortar: Provide natural sand of color necessary to produce required mortar color.

3. For exposed mortar, provide sand with rounded edges.
- D. Mortar Pigments: ASTM C 979/C 979M, compounded for use in mortar mixes, and having a record of satisfactory performance in masonry mortars.
 1. Provide materials from one of the following manufacturers:
 - a. Davis Colors.
 - b. Lanxess Corporation.
 - c. Solomon Colors, Inc.
- E. Water: Potable.

2.4 MANUFACTURED REPAIR MATERIALS

- A. Stone Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching stone.
 1. Products: Subject to compliance with requirements, provide the available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cathedral Stone Products.
 - b. Conproco Corporation.
 - c. Edison Coatings, Inc.
 - d. KEIM Mineral Coatings of America.
 - e. Jahn Restoration Mortars.
 2. Use formulation that is vapor and water permeable (equal to or more than the stone), exhibits low shrinkage, has lower modulus of elasticity than the stone units being repaired, and develops high bond strength to all stone types.
 3. Use formulation having working qualities and retardation control to permit forming and sculpturing where necessary.
 4. Formulate patching compound in colors, textures, and grain to match stone being patched. Provide sufficient number of colors to enable matching each piece of stone.
- B. Cementitious Crack Filler: An ultrafine superplasticized grout that can be injected into cracks, is suitable for application to wet or dry cracks, exhibits low shrinkage, and develops high bond strength to all stone types.
 1. Provide materials from one of the following manufacturers:
 - a. Cathedral Stone Products.
 - b. Edison Coatings, Inc.
- C. Stone-to-Stone Adhesive: Two-part polyester or epoxy-resin stone adhesive with a 15- to 45-minute cure at 70 deg F, recommended in writing by adhesive manufacturer for type of stone repair indicated, and matching stone color.
 1. Provide materials from one of the following manufacturers:
 - a. Akemi North America.
 - b. Bonstone Materials Corporation.
 - c. Edison Coatings, Inc.

2.5 ACCESSORY MATERIALS

- A. Stone Anchors and Pins: Type and size indicated or, if not indicated, to match existing anchors in size and type. Fabricate anchors and pins from Type 304 stainless steel.
- B. Setting Buttons and Shims: Resilient plastic, non-staining to stone, sized to suit joint thicknesses and bed depths of stone units, less the required depth of pointing materials unless removed before pointing.

- C. Masking Tape: Non-staining, nonabsorbent material; compatible with mortar, joint primers, sealants, and surfaces adjacent to joints; and that easily comes off entirely, including adhesive.
- D. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer according to MPI #23 (surface tolerant, anticorrosive metal primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating).
 - 1. Surface Preparation: Use coating requiring no better than SSPC-SP 2, "Hand Tool Cleaning," SSPC-SP 3, "Power Tool Cleaning," or SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning," surface preparation according to manufacturer's literature or certified statement.
- E. Other Products: Select materials and methods of use based on the following, subject to approval of a mockup:
 - 1. Previous effectiveness in performing work involved.
 - 2. Minimal possibility of damaging exposed surfaces.
 - 3. Consistency of each application.
 - 4. Uniformity of the resulting overall appearance.
 - 5. Do not use products or tools that could do the following:
 - a. Remove, alter, or harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
 - b. Leave residue on surfaces.

2.6 MORTAR MIXES

- A. Preparing Lime Putty: Slake quicklime and prepare lime putty according to appendix in ASTM C 5 and to manufacturer's written instructions.
- B. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
- C. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Architect's approval.
 - 1. Mortar Pigments: Where mortar pigments are indicated, do not add pigment exceeding 10 percent by weight of the cementitious or binder materials, except for carbon black which is limited to 2 percent, unless otherwise demonstrated by a satisfactory history of performance.
- D. Do not use admixtures in mortar unless otherwise indicated.
- E. Mixes: Mix mortar materials in the following proportions:
 - 1. Rebuilding (Setting) Mortar by Type: ASTM C 270, Proportion Specification, Type N or Type O unless otherwise indicated; with cementitious material limited to portland cement and lime.
 - 2. Colored Mortar: Add mortar pigments to produce exposed, setting (rebuilding) mortar of colors required.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Prevent mortar from staining face of surrounding stone and other surfaces.
 - 1. Cover sills, ledges, and other projecting items to protect them from mortar droppings.
 - 2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.

3. Immediately remove mortar splatters in contact with exposed masonry and other surfaces.
- B. Remove gutters and downspouts and associated hardware adjacent to immediate work area and store during stone repair work. Reinstall when repairs are complete.
 1. Provide temporary rain drainage during work to direct water away from building.

3.2 STONE REPAIR, GENERAL

- A. Repair Appearance Standard: Repaired surfaces are to have a uniform appearance as viewed from 25 feet away by Architect.

3.3 ABANDONED ANCHOR REMOVAL

- A. Remove abandoned anchors, brackets, wood nailers, and other extraneous items no longer in use unless indicated to remain.
 1. Remove items carefully to avoid spalling or cracking stone.
 2. Notify Architect before proceeding if an item cannot be removed without damaging surrounding stone; do the following where directed:
 - a. Cut or grind off item approximately 3/4 inch beneath surface and core drill a recess of same depth in surrounding stone as close around item as practical.
 - b. Immediately paint exposed end of item with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended dry film thickness per coat. Keep paint off sides of recess.
 3. Patch or plug the hole where each item was removed unless directed to remove and replace the stone unit.

3.4 PAINTING STEEL UNCOVERED DURING THE WORK

- A. Notify Architect if steel is exposed during stone removal. Where Architect determines that it is structural, or for other reasons cannot be totally removed, prepare and paint steel as follows:
 1. Surface Preparation: Remove paint, rust, and other contaminants according to SSPC-SP 2, "Hand Tool Cleaning," SSPC-SP 3, "Power Tool Cleaning," or SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning," as applicable to comply with paint manufacturer's recommended preparation.
 2. Antirust Coating: Immediately paint exposed steel with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended rate of application (dry film thickness per coat).
- B. If on inspection and rust removal, the thickness of a steel member is found to be reduced from rust by more than 1/16 inch, notify Architect before proceeding.

3.5 CRACK INJECTION

- A. General: Comply with cementitious crack-filler manufacturer's written instructions.
- B. Drill 1/4-inch-diameter injection holes as follows:
 1. Transverse Cracks Less Than 3/8-inch-wide: Drill holes through center of crack at 12 to 18 inches on center.
 2. Transverse Cracks More Than 3/8-inch-wide: Drill holes through center of crack at 18 to 36 inches on center.
 3. Delaminations: Drill holes at approximately 18 inches on center, both vertically and horizontally.
 4. Drill holes 2 inches deep.

- C. Clean out drill holes and cracks with compressed air and water. Remove dirt and organic matter, loose material, sealants, and failed crack repair materials.
- D. Place plastic injection ports in drilled holes and seal face of cracks between injection ports with clay or other non-staining, removable plugging material. Leave openings at upper ends of cracks for air release.
- E. Inject cementitious crack filler through ports sequentially, beginning at one end of area and working to opposite end; where possible, begin at lower end of injection area and work upward. Inject filler until it extrudes from adjacent ports. After port has been injected, plug with clay or other suitable material and begin injecting filler at adjacent port, repeating process until all ports have been injected.
- F. Clean cementitious crack filler from face of stone before it sets by scrubbing with water.
- G. After cementitious crack filler has set, remove injection ports, plugging material, and excess filler. Patch injection holes and surface of cracks as specified in "Stone Patching" Article.

3.6 STONE PATCHING

- A. Patch the following stone units unless another type of repair or replacement is indicated:
 - 1. Units indicated to be patched.
 - 2. Units with holes.
 - 3. Units with chipped edges or corners. Patch chipped edges or corners measuring over 3/4 inch in least dimension.
 - 4. Units with small areas of deep deterioration. Patch deep deteriorations measuring over 3/4 inch in least dimension and over 1/4 inch deep.
- B. Remove and replace existing patches where indicated.
- C. Remove deteriorated material and remove adjacent material that has begun to deteriorate. Carefully remove additional material so patch does not have feathered edges but has square or slightly undercut edges on area to be patched and is at least 1/4-inch-thick, but not less than as recommended in writing by patching compound manufacturer.
- D. Mask adjacent mortar joint or rake out for repointing if patch extends to edge of stone unit.
- E. Mix patching compound in individual batches to match each stone unit being patched. Combine one or more colors of patching compound, as needed, to produce exact match.
- F. Brush-coat stone surfaces with slurry coat of patching compound according to manufacturer's written instructions.
- G. Place patching compound in layers as recommended in writing by patching compound manufacturer, but not less than 1/4 inch or more than 2 inches thick. Roughen surface of each layer to provide a key for next layer.
 - 1. Simple Details: Trowel, scrape, or carve surface of patch to match texture and surrounding surface plane or contour of the stone. Shape and finish surface before or after curing, as determined by testing, to best match existing stone.
 - 2. Carved Details: Build patch up 1/4 inch above surrounding stone and carve surface to match adjoining stone after patching compound has hardened.
- H. Keep each layer damp for 72 hours or until patching compound has set.

- I. Remove and replace patches with hairline cracks or that show separation from stone at edges, and those that do not match adjoining stone in color or texture.

3.7 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed stone surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water applied by low-pressure spray.
 - 1. Do not use metal scrapers or brushes.
 - 2. Do not use acidic or alkaline cleaners.
- B. Clean adjacent non-stone surfaces. Use detergent and soft brushes or cloths.
- C. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- D. Remove masking materials, leaving no residues that could trap dirt.
- E. Sweep and rake adjacent pavement and grounds to remove mortar and debris. Where necessary, pressure wash pavement surfaces to remove mortar, dust, dirt, and stains.

3.8 FIELD QUALITY CONTROL

- A. Architect's Project Representatives: Architect will assign Project representatives to help carry out Architect's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Architect's Project representatives use of lift devices and scaffolding, as needed, to observe progress and quality of portion of the Work completed.
- B. Notify Architect's Project representatives in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until Architect's Project representatives have had reasonable opportunity to make inspections and observations of work areas at lift device or scaffold location.

3.9 STONE-WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess stone materials are Contractor's property.
- B. Stone Waste: Remove stone waste and legally dispose of off Owner's property.

END OF SECTION 04 03 42

SECTION 05 50 00-METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Steel framing and supports for applications where framing and supports are not specified in other Sections.
 - 2. Loose bearing and leveling plates.
 - 3. Miscellaneous steel trim including steel edgings and edge angles.
 - 4. Steel floor plates.
- B. Products furnished, but not installed, under this Section include the following:
 - 1. Loose steel lintels.
 - 2. Anchor bolts, steel pipe sleeves, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.
 - 3. Steel weld plates and angles for casting into concrete for applications where they are not specified in other Sections.
- C. Related Sections include the following:
 - 1. Division 04 Masonry Sections for installing loose lintels, anchor bolts, and other items indicated to be built into masonry.
 - 2. Division 05 Section "Structural Steel Framing."

1.2 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: Provide exterior metal fabrications that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120° F, ambient; 180° F, material surfaces.
- B. Structural Performance: Provide railings and connections capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, unless greater are required by code:
 - 1. Handrails:
 - a. Uniform load of 50 lbf/ ft. applied in any direction.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 2. Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. applied horizontally and concurrently with 100 lbf/ ft. applied vertically downward.
 - b. Concentrated load of 200 lbf applied at any point, in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 3. Infill of Guards:
 - a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft.
 - b. Infill load and other loads need not be assumed to act concurrently.
- C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.3 SUBMITTALS

- A. Product Data: For the following:
 - 1. Paint products.
 - 2. Grout.
- B. Shop Drawings: Show fabrication and installation details for metal fabrications.
 - 1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
 - 2. Provide templates for anchors and bolts specified for installation under other Sections.
- C. Welding certificates.

1.4 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1, "Structural Welding Code-Steel."

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
 - 2. Provide allowance for trimming and fitting at site.

1.6 COORDINATION

- A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Coordinate installation of steel weld plates and angles for casting into concrete that are specified in this Section but required for work of another Section. Deliver such items to Project site in time for installation.
- C. Coordinate support and anchorage; sizes, angles, and locations of drilled openings; and installation and tensioning requirements for cable railing systems with cable railing manufacturer.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

- B. Steel Tubing: ASTM A 500, cold-formed steel tubing.
- C. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40), unless another weight is indicated or required by structural loads.
- D. Abrasive-Surface Floor Plate: 1/4-inch aluminum plate with abrasive material metallurgically bonded to aluminum; with texture equivalent to SlipNOT Grade 1 (Fine) texture. Unless otherwise indicated, provide floor plate in single piece, full width and length of area.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. IKG Industries, a division of Harsco Corporation.
 - b. SlipNOT Metal Safety Flooring.
 - 2. Coat concealed surfaces of aluminum plate that contact cementitious surfaces or materials with manufacturers recommended protective coating.

2.3 FASTENERS

- A. General: Unless otherwise indicated, provide Type 316 stainless-steel fasteners for exterior use and fasteners with coating complying with ASTM A325 hot-dip galvanized to ASTM A153/A153M, at interior locations. Select fasteners for type, grade, and class required.
 - 1. Copper-Alloy (Bronze) Items: Silicon bronze (Alloy 651 or Alloy 655) fasteners.
 - 2. Stainless-Steel Items: Type 316 stainless-steel fasteners.
 - 3. Dissimilar Metals: Type 316 stainless-steel fasteners.
- B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.
- C. Stainless-Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, nuts and, where indicated, flat washers; ASTM F 593 for bolts and ASTM F 594 for nuts, Alloy Group 2.
- D. Anchor Bolts: ASTM F 1554, Grade 36.
 - 1. Provide hot-dip anchor bolts where item being fastened is indicated to be galvanized.
- E. Eyebolts: ASTM A 489.
- F. Machine Screws: ASME B18.6.3.
- G. Lag Bolts: ASME B18.2.1.
- H. Wood Screws: Flat head, ASME B18.6.1.
- I. Plain Washers: Round, ASME B18.22.1.
- J. Lock Washers: Helical, spring type, ASME B18.21.1.
- K. Cast-in-Place Anchors in Concrete: Anchors capable of sustaining, without failure, a load equal to four times the load imposed, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
 - 1. Threaded or wedge type; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, hot-dip galvanized per ASTM A 153/A 153M.
- L. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Material for Anchors in Interior Locations: Carbon-steel components hot-dip galvanized to ASTM A153/A153M.
2. Material for Anchors in Exterior Locations: Alloy Group 2 stainless-steel bolts complying with ASTM F 593 and nuts complying with ASTM F 594.

2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Shop Primers: Provide primers that comply with Division 09 Sections for "Paints and Coatings."
- C. Galvanizing Repair Paint: High-zinc-dust-content paint for reglazing welds in steel, complying with SSPC-Paint 20.
- D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- E. Non-shrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- F. Concrete Materials and Properties: Comply with requirements in Division 03 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi, unless otherwise indicated.

2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work true to line and level with accurate angles and surfaces and straight edges.
- E. Weld corners and seams continuously to comply with the following:
 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 2. Obtain fusion without undercut or overlap.
 3. Remove welding flux immediately.
 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts, unless otherwise indicated. Locate joints where least conspicuous.
- G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

- H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
 - 1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches, with a minimum 6-inch embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches on center, unless otherwise indicated.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.
 - 1. Furnish inserts if units are installed after concrete is placed.
- C. Galvanize miscellaneous framing and supports where indicated.

2.7 LOOSE STEEL LINTELS

- A. Fabricate loose steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls and partitions at locations indicated. Weld adjoining members together to form a single unit where indicated.
- B. Size loose lintels to provide 8 inches bearing length at each side of openings, unless otherwise indicated.
- C. Galvanize loose steel lintels located in exterior walls.

2.8 LOOSE BEARING AND LEVELING PLATES

- A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill plates to receive anchor bolts and for grouting.
- B. Galvanize loose steel bearing and leveling plates located in exterior walls.

2.9 STEEL WELD PLATES AND ANGLES

- A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with not less than two integrally welded steel strap anchors for embedding in concrete.

2.10 MISCELLANEOUS TRIM

- A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.
- B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

1. Provide with integrally welded steel strap anchors for embedding in concrete or masonry construction.
- C. Galvanize exterior miscellaneous steel trim. Galvanize interior miscellaneous steel trim, where indicated.

2.11 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.

2.12 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with applicable standard listed below:
 1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.
 2. ASTM A 123/A 123M, for galvanizing steel and iron products.
 3. ASTM A 153/A 153M, for galvanizing steel and iron hardware.
- B. For galvanized railings, provide hot-dip galvanized fittings, brackets, sleeves, and other ferrous components.
- C. Preparation for Shop Priming: Prepare ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed metal fabrications:
 1. Comply with requirements listed in Division 09 Section "Paints and Coatings".
- D. Shop Priming: Comply with requirements listed in Division 09 Section "Paints and Coatings".
 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.
- D. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

3.3 INSTALLING BEARING AND LEVELING PLATES

- A. Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of plates.
- B. Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.
 - 1. Use non-shrink grout, either metallic or non-metallic, in concealed locations where not exposed to moisture; use non-shrink, non-metallic grout in exposed locations, unless otherwise indicated.
 - 2. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.4 ADJUSTING AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 05 50 00

SECTION 06 03 12 - HISTORIC WOOD REPAIR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

1.2 SUMMARY

- A. Section includes historic treatment of wood in the form of repairing wood features as follows:
 - 1. Repairing wood trim.
 - 2. Replacing wood trim.
 - 3. Repairing, refinishing, and replacing hardware.
- B. Related Requirements:
 - 1. Section 01 35 91 "Historic Treatment Procedures" for general historic treatment requirements.
 - 2. Section 02 41 19 "Selective Demolition" for historic removal and dismantling work.
 - 3. Section 08 03 52 "Historic Treatment of Wood Windows" for historic wood window repairs, including related trim.
 - 4. Section 08 03 14 "Historic Treatment of Wood Doors" for historic wood door repairs, including related trim.

1.3 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
 - 1. Review minutes of Preliminary Historic Treatment Conference that pertain to historic wood repair.
 - 2. Review methods and procedures related to historic wood repair, including, but not limited to, the following:
 - a. Historic treatment specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Fire-protection plan.
 - d. Wood historic treatment program.
 - e. Coordination with building occupants.

1.4 SEQUENCING AND SCHEDULING

- A. Perform historic wood repair in the following sequence, which includes work specified in this and other Sections:
 - 1. Before removing wood components for on-site or off-site repair, tag each component with location-identification numbers. Indicate on tags and building plans the locations of each component, such as *"Baseboard on North Side of Room 101."*
 - 2. Dismantle hardware and tag with location-identification numbers.
 - 3. In the shop, label each repaired component and whole or partial replacement with permanent location-identification number in inconspicuous location and remove site-applied tags.
 - 4. Sort units by condition, separating those that need extensive repair.
 - 5. Clean surfaces.
 - 6. General Wood-Repair Sequence:
 - a. Remove paint to bare wood.
 - b. Repair wood by consolidation, replacement, partial replacement, and patching.
 - c. Sand, prime, fill, sand again, and prime surfaces again for refinishing.
 - 7. Repair, refinish, and replace hardware if required. Reinstall operating hardware.

8. Reinstall components.
9. Apply finish coats.
10. Install remaining hardware.

1.5 SUBMITTALS

- A. Product Data: For each type of product.
 1. Include recommendations for product application and use. Include test data substantiating that products comply with requirements.
- B. Shop Drawings:
 1. Include plans, elevations, and sections showing locations and extent of repair and replacement work, with enlarged details of replacement parts indicating materials, profiles, joinery, reinforcing, method of splicing or attaching wood members to other surfaces, accessory items, and finishes.
 2. Include field-verified dimensions and the following:
 - a. Full-size shapes and profiles with complete dimensions for replacement components and their jointing, showing relationship of existing components to new components.
 - b. Templates and directions for installing hardware and anchorages.
 - c. Identification of each new unit and its corresponding location in the building on annotated plans and elevations.
 - d. Provisions for sealant joints and flashing as required for location.
- C. Samples for Initial Selection: For each type of exposed wood and finish.
 1. Identify wood species, cut, and other features.
 2. Include Samples of hardware and accessories involving color selection.
- D. Samples for Verification: For the following products in manufacturer's standard sizes unless otherwise indicated, finished as required for use in the Work:
 1. Replacement Wood: 12-inch-long, full-size molding sections with applied finish.
 - a. Additional Samples of replacement members that show fabrication techniques, materials, and finishes as requested by Architect.
 2. Repaired Wood: Prepare Samples using existing wood removed from site, repaired, and prepared for refinishing.
 3. Refinished Wood: Prepare Samples using existing wood removed from site, repaired, and refinished.
 4. Hardware: Full-size units with each factory-applied or restored finish.
- E. Qualification Data: For historic treatment specialist including workers and wood-repair-material manufacturer.
- F. Wood Historic Treatment Program: Submit before work begins.
- G. Preconstruction Test Reports: For historic wood repair.

1.6 QUALITY ASSURANCE

- A. Wood-Repair-Material Manufacturer Qualifications: A firm regularly engaged in producing wood consolidant and wood-patching compound that have been used for similar historic wood-treatment applications with successful results, and with factory-authorized service representatives who are available for consultation, Project-site inspection, and on-site assistance.

- B. Wood Historic Treatment Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for historic treatment work, including protection of surrounding materials and Project site.
 - 1. If materials and methods other than those indicated are proposed for any phase of historic treatment work, add a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project.
- C. Mockups: Prepare mockups of historic treatment repair processes to demonstrate aesthetic effects and to set quality standards for materials and execution, and for fabrication and installation. Prepare mockups so they are as inconspicuous as practicable.
 - 1. Locate mockups in locations that enable viewing under same conditions as the completed Work.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified historic treatment specialist to perform preconstruction testing on historic wood materials as follows:
 - 1. Provide test specimens representative of proposed materials and existing construction.
 - 2. Test historic treatment products and methods for effectiveness and compliance with specified requirements.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Pack, deliver, and store products in suitable packs, heavy-duty cartons, or wooden crates; surround with sufficient packing material to ensure that products will not be deformed, broken, or otherwise damaged.
- B. Until installed, store products inside a well-ventilated area and protect from weather, moisture, soiling, abrasion, extreme temperatures, and humidity, and where environmental conditions comply with manufacturer's requirements.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with historic wood repair only when existing and forecasted weather conditions are within the environmental limits set by each manufacturer's written instructions and specified requirements.

PART 2 - PRODUCTS

2.1 HISTORIC WOOD REPAIR, GENERAL

- A. Quality Standard: Comply with applicable requirements in Section 12, "Historic Restoration Work," and related requirements in AWI/AWMAC/WI's "Architectural Woodwork Standards" for construction, finishes, grade rules, and other requirements unless otherwise indicated.
 - 1. Exception: Industry practices cited in Section 12, Article 1.5, "Industry Practices," of the Architectural Woodwork Standards do not apply to the work of this Section.

2.2 REPLICATED WOOD ITEMS

- A. Replicated Wood Trim: Custom-fabricated replacement wood units and components.
 - 1. Joint Construction: Joints matching existing joints.
 - 2. Wood Species: Match species of existing wood.
 - 3. Wood Cut: Match cut of existing wood.
 - 4. Wood Member and Trim Profiles: Match profiles and detail of existing.
 - 5. Hardware: Reuse existing unless otherwise indicated.

2.3 WOOD-REPLACEMENT MATERIALS

- A. Wood, General: Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32-inch-deep by 2 inches wide.
 - 1. Species: Match species of each existing type of wood component or assembly unless otherwise indicated.
- B. Exterior Trim: Match existing species.

2.4 WOOD-REPAIR MATERIALS

- A. Source Limitations: Obtain wood consolidant and wood-patching compound from single source from single manufacturer.
- B. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.
 - 1. Abatron, Inc., Kenosha, WI.
 - 2. ConServ Epoxy LLC, Northford CT.
 - 3. Gougeon Brothers, Inc., Bay City, MI.
 - 4. Protective Coating Company, Allentown, PA.
 - 5. System Three Resins, Inc., Auburn, WA.
- C. Wood-Patching Compound: Two-part, epoxy-resin, wood-patching compound; knife-grade formulation as recommended in writing by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to featheredge.
 - 1. Abatron, Inc., Kenosha, WI.
 - 2. Advanced Repair Technology, Inc., Cherry Valley, NY.
 - 3. ConServ Epoxy LLC, Northford CT.
 - 4. Gougeon Brothers, Inc., Bay City, MI.
 - 5. Polymeric Systems, Inc., Elverson, PA.
 - 6. Protective Coating Company, Allentown, PA.
 - 7. System Three Resins, Inc., Auburn, WA.

2.5 HARDWARE

- A. Hardware, General: Provide hardware required for each type of replicated or repaired wood, including but not limited to, hinges, pulls, latches, fasteners, and accessories indicated or required for proper operation. Hardware shall smoothly operate, tightly close, and secure units appropriately for frequency of use, unit weight, and dimensions.

2.6 MISCELLANEOUS MATERIALS

- A. Borate Preservative Treatment: Inorganic, borate-based solution, with disodium octaborate tetrahydrate as the primary ingredient; manufactured for preserving weathered and decayed wood from further damage caused by fungi and wood-boring insects; complying with AWWA P5; containing no boric acid.
- B. Cleaning Materials:
 - 1. Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium pyrophosphate (TSP), 1/2 cup of laundry detergent that contains no ammonia, 5 quarts of 5 percent sodium hypochlorite bleach, and 15 quarts of warm water for each 5 gal. of solution required.
 - 2. Mildewcide: Commercial, proprietary mildewcide or a solution prepared by mixing 1/3 cup of household detergent that contains no ammonia, 1 quart of 5 percent sodium hypochlorite bleach, and 3 quarts of warm water.
- C. Adhesives: Wood adhesives with minimum 15- to 45-minute cure at 70° F, in gunnable and liquid formulations as recommended in writing by adhesive manufacturer for each type of repair and exposure condition.
- D. Fasteners: Use fastener metals that are noncorrosive and compatible with each material joined.
 - 1. Match existing fasteners in material and type of fastener unless otherwise indicated.
 - 2. Use concealed fasteners for interconnecting wood components.
 - 3. Use concealed fasteners for attaching items to other work unless exposed fasteners are unavoidable or the existing fastening method.
 - 4. For fastening metals, use fasteners of same basic metal as fastened metal unless otherwise indicated.
 - 5. For exposed fasteners, use Phillips-type machine screws of head profile flush with metal surface unless otherwise indicated.
 - 6. Finish exposed fasteners to match finish of metal fastened unless otherwise indicated.

2.7 WOOD FINISHES

- A. Unfinished Replacement Units: Provide exposed exterior and interior wood surfaces of replacement units unfinished; smooth, filled, and suitably prepared for on-site priming and finishing.

PART 3 - EXECUTION

3.1 HISTORIC TREATMENT SPECIALIST

- A. Historic Treatment Specialist Firms: Subject to compliance with requirements.

3.2 PREPARATION

- A. Protect adjacent materials from damage by historic wood repair.
- B. Clean wood of mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. After cleaning, rinse thoroughly with fresh water. Allow to dry before repairing or painting.
- C. Condition replacement wood members and replacement units to prevailing conditions at installation areas before installing.

3.3 HISTORIC WOOD REPAIR, GENERAL

- A. Historic Treatment Appearance Standard: Completed work is to have a uniform appearance as viewed by Architect from 20 feet away for exterior work.
- B. General: In treating historic items, disturb them as minimally as possible and as follows:
 - 1. Stabilize and repair wood to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
 - 2. Remove coatings and apply borate preservative treatment before repair. Remove coatings according to Section 09 91 00 "Paints and Coatings" unless otherwise indicated.
 - 3. Repair items in place where possible.
 - 4. Install temporary protective measures to protect wood-treatment work that is indicated to be completed later.
 - 5. Refinish historic wood according to Section 09 91 00 "Paints and Coatings" unless otherwise indicated.
- C. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use only the gentlest mechanical methods, such as scraping and natural-fiber bristle brushing, that will not abrade wood substrate, reducing clarity of detail. Do not use abrasive methods, such as sanding, wire brushing, or power tools, except as indicated as part of the historic treatment program and as approved by Architect.
- D. Repair and Refinish Existing Hardware: Dismantle hardware; strip paint, repair, and refinish it to match finish samples; and lubricate moving parts just enough to function smoothly.
- E. Repair Wood: Match existing materials and features, retaining as much original material as possible to perform repairs.
 - 1. Unless otherwise indicated, repair wood by consolidating, patching, splicing, or otherwise reinforcing wood with new wood matching existing wood or with salvaged, sound, original wood.
 - 2. Where indicated, repair wood by limited replacement matching existing material.
- F. Replace Wood: Where indicated, duplicate and replace units with units made from salvaged, sound, original wood or with new wood matching existing wood. Use surviving prototypes to create patterns for duplicate replacements.
 - 1. Compatible substitute materials may be used.
- G. Identify removed items with numbering system corresponding to item locations, to ensure reinstallation in same location. Key items to Drawings showing location of each removed unit. Permanently label units in a location that will be concealed after reinstallation.

3.4 WOOD PATCH-TYPE REPAIR

- A. General: Patch wood that exhibits depressions, holes, or similar voids, and that has limited amounts of rotted or decayed wood.
 - 1. Verify that surfaces are sufficiently clean and free of paint residue prior to patching.
 - 2. Treat wood with wood consolidant prior to application of patching compound. Coat wood surfaces by brushing, applying multiple coats until wood is saturated and refuses to absorb more. Allow treatment to harden before filling void with patching compound.
 - 3. Remove rotted or decayed wood down to sound wood.
- B. Apply borate preservative treatment to accessible surfaces either before applying wood consolidant or after removing rotted or decayed wood. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom. Allow treatment to dry.

- C. Apply wood-patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood.
 - 1. Prime patch area with application of wood consolidant or manufacturer's recommended primer.
 - 2. Mix only as much patching compound as can be applied according to manufacturer's written instructions.
 - 3. Apply patching compound in layers as recommended in writing by manufacturer until the void is completely filled.
 - 4. Sand patch surface smooth and flush with adjacent wood, without voids in patch material, and matching contour of wood member.
 - 5. Clean spilled compound from adjacent materials immediately.

3.5 WOOD-REPLACEMENT REPAIR

- A. General: Replace parts of or entire wood items at locations indicated on Drawings and where damage is too extensive to patch.
 - 1. Remove surface-attached items from wood surface before performing wood-replacement repairs unless otherwise indicated.
 - 2. Verify that surfaces are sufficiently clean and free of paint residue prior to repair.
 - 3. Remove broken, rotted, and decayed wood down to sound wood.
 - 4. Custom fabricate new wood to replace missing wood; either replace entire wood member or splice new wood part into existing member.
 - 5. Secure new wood using finger joints, multiple dowels, or splines with adhesive and nailing to ensure maximum structural integrity at each splice. Use only concealed fasteners. Fill nail holes and patch surface to match surrounding sound wood.
- B. Apply borate preservative treatment to accessible surfaces after replacements are made. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.
- C. Repair remaining depressions, holes, or similar voids with patch-type repairs.
- D. Clean spilled materials from adjacent surfaces immediately.
- E. Reinstall items removed for repair into original locations.

3.6 FIELD QUALITY CONTROL

- A. Manufacturers Field Service: Engage wood-repair-material manufacturers' factory-authorized service representatives for consultation and Project-site inspection, and provide on-site assistance when requested by Architect.

3.7 ADJUSTMENT

- A. Adjust existing and replacement operating items, hardware, and accessories for a tight fit at contact points and for smooth operation and tight closure. Lubricate hardware and moving parts.

3.8 CLEANING AND PROTECTION

- A. Protect wood surfaces from contact with contaminating substances resulting from construction operations. Monitor wood surfaces adjacent to and below exterior concrete and masonry during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact wood surfaces, remove contaminants immediately.

- B. Clean exposed surfaces immediately after historic wood repair. Avoid damage to coatings and finishes. Remove excess sealants, patching materials, dirt, and other substances.

END OF SECTION 06 03 12

SECTION 06 05 65 – SLATWALL PANELING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: T-Grooved composite panels, pre-engineered and machined for use with retail display hardware.
- B. Products Not Furnished or Installed under This Section:
 - 1. Display fixtures, hooks or brackets arms.

1.2 REFERENCES

- A. American Society for Testing and Materials: Standard Specifications (ASTM)
 - 1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Architectural Woodwork Standards as published by the Architectural Woodwork Institute, the Architectural Woodwork Manufacturers Association of Canada, and the Woodwork Institute.
 - 1. Architectural Woodwork Standards.

1.3 SUBMITTALS

- A. Product Data: Submit sufficient manufacturer's data to indicate compliance with these specifications, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Shop Drawings: Submit elevations of each wall showing location of paneling and trim members with respect to all discontinuities in the wall elevation.
- C. Selection Samples: Submit manufacturer's standard color and pattern selection samples representing manufacturer's full range of available colors and patterns.
 - 1. Provide samples of edge trim as applicable.
 - 2. Provide samples for groove insert selection as applicable.
- D. Samples for Verification: Submit sample for each component and for each exposed finish required, prepared on samples of size indicated below complete with exposed molding and trim samples. Sample to indicate type, finish, and color specified.
 - 1. Laminate and printed finishes: Submit 6" by 10" section of panel for each panel selected indicating the color, texture, and pattern required.
 - a. Submit complete with specified applied finish.
 - b. For selected patterns show complete pattern repeat.
- E. Maintenance Instructions.

1.4 QUALITY ASSURANCE

- A. Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:
 - 1. ASTM E 84 (Method of test for surface burning characteristics of building Materials)
 - 2. Required Rating – Class A.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver panels and associated materials factory packaged on strong pallets and properly packaged or protected.
 - 1. Upon delivery carefully inspect all cartons, packages, pallets and protective wrap for damage or material shortage.
 - 2. Open and inspect suspect packages, cartons, or wrapped pallets for damage.
 - 3. Contact shipper immediately to report any damaged or missing materials.
 - 4. Contact manufacturer immediately to report any damaged or missing materials.
- B. Store products in manufacturer's unopened packaging until ready for installation.
 - 1. Maintain plastic or other protective wrap in place during on site handling until ready for installation.
 - 2. Keep panels clean and do not stack panels after removal of protection.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 PROJECT CONDITIONS

- A. Wood composite panels are subject to the effects of humidity and temperature. Do not use in kitchens, rest rooms, or other high humidity areas.
- B. Partition walls are to be finished and the building completely closed. Walls shall be thoroughly dry and concrete cured and dry before starting installation.
- C. HVAC system must be operable and installation area must be balanced to normal operating conditions.
- D. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. To ensure product performance, a temperature range of 60°-80°F and a humidity range of 35-55% must be maintained during storage, installation and product life cycle. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.7 COORDINATION AND SEQUENCING

- A. Except as specified by the architect, it's recommended to locate trim members so that panel lines coordinate with doors, headers, jambs and other discontinuities in a wall.
- B. Vapor barrier shall be used on exterior walls behind backing to discourage warping.

1.8 WARRANTY

- A. Standard Warranty: All products shall be warranted to be free from defects for a period of 30 days after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain panels from single source from single manufacturer.

2.2 PANEL

- A. Basis of Design:
 - 1. Marlite MDF Slatwall Panel: www.marlite.com
- B. Panel Configuration: Engineered groove machined into wood composite substrate.
 - 1. Panel thickness: 3/4" thick with nominal 1/2" deep slotted groove.
 - 2. Panel face dimensions: 48" by 96".
 - 3. Slatwall panels grooves machined on 3" centers.
- C. High internal bond wood composite substrate. Slatwall panels shall have formaldehyde emissions of 0.3 PPM or less and shall comply with HUD 24 CFR Part 3280 Standards set fourth for particleboard panels.
 - 1. Standard Slatwall
 - a. Medium density wood fiberboard conforming to ANSI A208.2, industrial-grade MDF or other wood fiber substrates having not less than 75% recycled wood waste.

2.3 PANEL FINISH

- A. Painted Finishes:
 - 1. Paint Grade: Smooth unfinished surface suitable for field or in-shop finishing.
 - 2. Primed Finish: Alkyd primer factory applied and baked creating a suitable surface for field finish in one coat.

2.4 PANEL GROOVE TREATMENT AND TRIM

- A. Groove Treatment:
 - 1. Marlite 2000 Series.
 - a. Painted groove.
- B. Panel Trim:
 - 1. Outside/Inside Corner: Marlite A760: 1" x 1 " x 8'- 0" aluminum mill finish.
 - 2. Edge: Marlite A770: 1/2" x 3/4" x 8'- 0" aluminum mill finish.

2.5 INSTALLATION ACCESSORIES

- A. Phillips, bugle head, coarse threaded screws.
- B. Marlite Rail Assembly: Combination of Mounting Track and Panel Bar
 - 1. Steel prefinished at the factory. Silver Powder Coat
 - 2. P770 Edge: D100White.
- C. Adhesives:
 - 1. Marlite Brand SS5262 Heavy Duty C-109 solvent based adhesive, unless otherwise approved by panel manufacturer.

2.6 FABRICATION

- A. All framing, panels, hardware, and accessories shall be factory finished and ready to install except for field fabrication required by perimeter and corner conditions.
- B. Refinish field cut panel edges in accordance with manufacturer's instruction before installation.
- C. Fabrication Tolerances for panels:

1. Dimensional: ± 0.0625 "
2. Square: ± 0.125 " across diagonals
3. Thickness: ± 0.008 "
4. Grooving: ± 0.031 " (groove width and spacing between grooves)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Installer's Examination: Examine conditions under which construction activities of this section are to be performed. Submit written notification to Architect and system manufacturer if such conditions are unacceptable. Beginning erection constitutes installer's acceptance of conditions.
 1. Verify that a vapor barrier has been provided on exterior walls behind backing to prevent warping.
 2. Verify backing panels are smooth, solid, and flat. All drywall joints are to be taped and finished.
 3. Verify that walls are primed before installation begins.
 4. Verify mechanical, electrical, and building service and/or items affecting work of this section are placed and ready to receive this work.
 5. Verify that stud spacing does not exceed 24" (600mm) on-center.
- B. Structural walls are to be finished, with building completely closed. Walls shall be thoroughly dry before starting installation.

3.2 PREPARATION

- A. Conditioning: Panels must be allowed to acclimate to a balanced environment in the installation location for 72 hours prior to installation.
- B. Protect existing surfaces.
- C. Except as directed by the architectural drawings, before installing, examine panels and arrange to achieve best combination of color, pattern, texture, and grain.

3.3 INSTALLATION

- A. Install all materials in strict accordance with the manufacturer's installation instructions with hardware straight, plumb, and level.
 1. Anchor units rigidly and securely in place.
 2. Cut sheets to meet existing supports.
- B. Fasten initial bottom panel to the wall with #6 or #7 bugle head drywall screws. Install a minimum of one screw every third slot (or 9") vertically and every stud horizontally, typically every 16" on centers horizontally (maximum 24" on centers horizontally). Each 4' x 8' panel shall have minimum of 42 screws secured to studs or furring.
 1. Where screws do not hit the studs, fasten with adhesive in accordance with the manufacturer's recommendations.
 2. Screws must be installed thru the panel grooves.
 3. Slatwall panels without inserts do not require pre-drilling.
 4. Slatwall panels with inserts require 5/32" pre-drilling of holes thru the insert and panel before fastening.
- C. Avoid contamination of the panel faces with adhesives, solvents or cleaners during installation.

3.4 CLEANING AND PROTECTION

- A.** Clean and remove dust and other foreign matter from panel and framing surfaces. Clean finishes in accordance with manufacturer's instructions.

END OF SECTION 06 05 65

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wood blocking and nailers.
 - 2. Wood furring.
 - 3. Miscellaneous wood framing.
- B. Related Requirements:
 - 1. Section 06 16 00 "Sheathing."

1.2 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NLGA: National Lumber Grades Authority.
 - 2. SPIB: The Southern Pine Inspection Bureau.
 - 3. WCLIB: West Coast Lumber Inspection Bureau.
 - 4. WWPA: Western Wood Products Association.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated wood.
 - 2. Power-driven fasteners.
 - 3. Expansion anchors.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Furring.
 - 4. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber and any of the following species:
 - 1. Hem-fir (north); NLGA.

2. Mixed southern pine; SPIB.
 3. Hem-fir; WCLIB or WWPA.
- C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- D. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Do not splice members between supports unless otherwise indicated.
- D. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- E. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with

function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

- F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 - 1. Use inorganic boron for items that are continuously protected from liquid water.
 - 2. Use copper naphthenate for items not continuously protected from liquid water.
- G. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- H. Use screw or bolt fasteners unless otherwise indicated. Make tight connections between members. Install fasteners without splitting wood. Slightly countersink fastener heads, unless otherwise indicated.

3.2 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- D. Install wood nailers at parapet copings, at perimeters of roof, at roof membrane terminations and offsets, and around all roof openings and projections. Coordinate locations with roofing contractor.
 - 1. Anchor to roof deck or wall construction at maximum 2'-0" on center, Install fasteners within 6 inches of each end. Spacing and fastener embedment shall conform to Factory Mutual Loss Prevention Data Sheet 1-49.
 - 2. Install nailers to resist force of 200 lbs/lf in any direction. Provide 1/2-inch space between adjacent lengths of nailers.
 - 3. Height of nailers shall match surface level of roof insulation, unless otherwise indicated.

3.3 PROTECTION

- A. Prevent direct contact between preservative-treated wood members and aluminum building components with either a minimum 1/4-inch polyethylene or nylon spacer or a minimum 10 mil polyethylene separation film.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06 10 00

SECTION 06 16 00 - SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wall sheathing.
 - 2. Roof sheathing.
- B. Related Requirements:
 - 1. Division 06 Section "Rough Carpentry" for plywood backing panels.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

- A. Plywood: DOC PS 1.
- B. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.
- C. Factory mark panels to indicate compliance with applicable standard.

2.2 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat items indicated on Drawings and plywood in contact with masonry or concrete or used with flashing, vapor barriers, and waterproofing.

2.3 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-

test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

- B. Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Use treatment that does not promote corrosion of metal fasteners.
 - 2. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D3201 at 92 percent relative humidity. Use where exterior type is not indicated.
- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- D. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.
- E. Application: Treat plywood indicated on Drawings, and the following:
 - 1. Roof and wall sheathing within 48 inches (1220 mm) of party walls.
 - 2. Subflooring and underlayment for raised platforms.

2.4 ROOF SHEATHING

- A. Plywood Sheathing: DOC PS 1, Exterior, Structural I sheathing; fire-retardant-treated.
 - 1. Nominal Thickness: Not less than 5/8 inch.

2.5 WALL SHEATHING

- A. Plywood Wall Sheathing: Exterior sheathing.
 - 1. Nominal Thickness: Not less than 5/8 inch.

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. For wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.

2.7 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
- D. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.
- E. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Wall and Roof Sheathing:
 - a. Screw or nail to wood framing.
 - b. Space panels 1/8 inch apart at edges and ends.

END OF SECTION 06 16 00

SECTION 06 20 13 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Standing and running trim.
 - 2. Storefront frames, jambs, and sills.
 - 3. Wood awning window, hardware, and screen in storefront transoms.
 - 4. Wood repair.
 - 5. Wood panels.
 - 6. Shop priming.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for furring, blocking, and other carpentry work not exposed to view.

1.2 DEFINITIONS

- A. Wood Window Component Terminology: As identified in AWI's "Architectural Woodwork Quality Standards." Wood window components for storefront window work include the following classifications:
 - 1. Frame Components: Head, jamb, and sill.
 - 2. Sash Components: Stile and rails, parting bead, stop, and muntins.
 - 3. Exterior Trim: Exterior casing, brick mould, and drip cap.
 - 4. Interior Trim: Casing, stool, and apron.
- B. Design Reference Sample: A Sample that represents Architect's pre-bid selection of work to be matched; it may be existing work or specially produced for Project.
- C. Glazing: Includes glass, glazing points, glazing tapes, glazing sealants, and glazing compounds.
- D. Window: Includes window frame and sash, unless otherwise indicated by the context.
- E. MDX: The Drawing designation "MDX" is synonymous with the term "Exterior Composite Wood Panels".
- F. MDO: Plywood with a medium density overlay on the face.

1.3 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained. Include chemical treatment manufacturer's written instructions for finishing treated material.
- B. Shop Drawings: For wood storefront windows and components. Show location and extent of work, with enlarged details of parts indicating materials, profiles, joinery, reinforcing, method of

splicing into or attaching to existing construction, accessory items, and finishes. Include field-verified dimensions and the following:

1. Full-size shapes and profiles with complete dimensions for new components and their jointing.
 2. Templates and directions for installing hardware and anchorages.
 3. Component numbers and corresponding locations in the buildings on annotated plans and elevations.
 4. Provisions for sealant joints, flashings, and weather-stripping as required for location.
- C. Samples for Verification: For the following items of size indicated below, finished as required for use in the Work:
1. Component Samples: 12-inch-long, full-size, with applied finish, including parts of frame, exterior trim, and interior trim.
 - a. Architect reserves the right to require additional Samples of replacement members that show fabrication techniques, materials, and finishes.
 2. Hardware: Full-size units with factory-applied finishes.
 3. Weather Stripping: 12-inch-long sections.
- D. AWI Quality Standard: Comply with applicable requirements in AWI's "Architectural Woodwork Standards" for construction, finishes, grades of wood windows, and other requirements.
- E. Pre-installation Conference: Conduct conference at Project site.
1. Review methods and procedures related to storefront windows including, but not limited to, the following:
 - a. Construction Schedule: Verify availability of materials, personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
- F. Certificate of Compliance: Submit manufacturer's certificate of compliance indicating exterior grade treated wood composite panel complies with specified requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials against weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation within and around stacks and under temporary coverings.

1.5 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.
1. For exterior ornamental wood columns, comply with manufacturer's written instructions and warranty requirements.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or blotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Exterior Wood: Central American or Honduran Mahogany (principally Swietenia Macrophylla).
 - 1. Grade: Finish or 1 Common grade.
 - 2. Non-water-repellent preservative treated.
- B. Interior Wood: White Oak.
 - 1. Grade: Finish or 1 Common grade.
 - 2. Non-water-repellent preservative treated.
- C. Exterior Composite Wood Panels (MDX): Exterior-grade, treated wood composite panel (for non-structural applications).
 - 1. Product: CMI; Extira Treated Exterior Composite Panels.
 - 2. Material: Wood fibers combined with phenolic resins, zinc borate, and water repellent; no added urea formaldehyde.
 - 3. Surface: Sanded 2 sides, smooth, unprimed.
 - 4. Substrate: 1-piece solid substrate, uniform density, not laminated. No knots or voids allowed.
 - 5. Thickness: As indicated on Drawings.
 - 6. Typical Properties (3/4-Inch Thickness):
 - a. Density, ASTM D 1037: 47 pounds per cubic foot.
 - b. Modulus of Rupture, ASTM D 1037: 3,550 psi.
 - c. Modulus of Elasticity, ASTM D 1037: 315,000 psi.
 - d. Internal Bond, ASTM D 1037: 92 psi.
 - e. Direct Screw Withdrawal, ASTM D 1037:
 - 1) Face: 352 pounds.
 - 2) Edge: 235 pounds.
 - f. 24-Hour Soak, ASTM D 1037:
 - 1) Thickness Swell: 3.3 percent.
 - g. Accelerated Aging Test, 6-Cycle, ASTM D 1037: Retained 90 percent of original strength.
 - h. Termite Resistance AWP A E7 Rating Scale, 3-Year Exposure: 7.9 out of 10.00.
 - i. Rot Resistance, AWP A E16: 1.0 out of 5 (0.0 is highest rating)
- D. Exterior Composite Wood Trim: Exterior-grade, treated wood composite trim (for non-structural applications).
 - 1. Product: CMI; MiraTEC Treated Exterior Composite Trim.
 - 2. Material: Wood fibers combined with phenolic resins, zinc borate, and water repellent; no added urea formaldehyde.
 - 3. Exposed Surface: Smooth, primed 4-sides.
 - 4. Substrate: 1-piece solid substrate, uniform density, not laminated. No knots or voids allowed.
 - 5. Sizes: As indicated on Drawings.
 - 6. Typical Properties (4/4-Inch Thickness):
 - a. Density, ASTM D 1037: 49 pounds per cubic foot.
 - b. Modulus of Rupture, ASTM D 1037: 3,900 psi.
 - c. 24-Hour Soak, ASTM D 1037:
 - 1) Water Absorption: 7.6 percent.
 - 2) Thickness Swell: 1.9 percent.
 - d. Accelerated Aging Test, 6-Cycle, ASTM D 1037: Retained 90 percent of original strength.
 - e. Termite Resistance and Decay, AWP A E7 Rating Scale, 3-Year Exposure:
 - 1) Termite Resistance Score: 8.8 out of 10.

- 2) Termite Decay Score: 10 out of 10.
 - f. Rot Resistance, AWPA E10:
 - 1) White Rot: 3.66 percent weight loss.
 - 2) Brown Rot: 1.02 percent weight loss.
- E. Bead Board: Moisture-resistant, exterior grade, 1/2-inch thickness, shiplap edge panels.
 - 1. Basis of Design Product: Nantucket BeadBoard Co., Inc. (The); Nantucket BeadBoard MRX.
 - a. Width and Bead Configuration: 10 inches wide for 2 inch center to center beads with standard bead profile.
 - b. Thickness: 1/2 inch.
 - c. Finish: Factory-applied, acrylic latex primer.
- F. MDO Trim and Plywood: Exterior Grade B-B MDO plywood.

2.2 WOOD REPAIR MATERIALS

- A. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Abatron, Inc.; LiquidWood.
- B. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Abatron, Inc.; LiquidWood with WoodEpoxy.

2.3 GLAZING MATERIALS

- A. Glass and Glazing Materials: See Division 08 Section "Glazing."
- B. Glass: Insulating-glass units according to Division 08 Section "Glazing."

2.4 MISCELLANEOUS MATERIALS

- A. Transom Screen Units: Wood-framed; mortise and tenon, exterior glued joints; edge mounted wool pile bug strip.
 - 1. Screen Mesh: 18 by 16, charcoal aluminum wire.
- B. Fasteners: Comply with AWI "Quality Standards", premium grade, requirements for fabrication and with manufacturer's recommendations and standard industry practices for type and size of installation fasteners. Provide nails or screws, in sufficient length to penetrate not less than 1-1/2 inches into wood substrate.
 - 1. For pressure-preservative-treated wood, provide hot-dip galvanized steel fasteners.
 - 2. For composite wood, provide hot-dip galvanized or Type 304 stainless steel fasteners.
 - 3. For applications not otherwise indicated, provide hot-dip galvanized steel fasteners.
 - 4. For fabrication of wood windows, use brass or bronze dowels and screws.
 - 5. For hardware and accessory installation use brass screws.
 - 6. For wood trim, all stops use brass screws; all other wood trim to be nailed.

- C. Adhesives: Wood adhesives for exterior exposure, with minimum 15- to 45-minute cure at 70° F, in gunnable and liquid formulations as recommended by adhesive manufacturer for each type of application.
 - 1. Exterior Composite Wood Adhesive: Provide adhesive tested and approved by adhesive manufacturer for use on exterior composite wood panel in exterior exposure.
- D. Anchors, Clips, and Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel complying with requirements in ASTM B 633 for SC 3 (Severe) service condition.
- E. Flashing: Comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim" for flashing materials installed in finish carpentry.
- F. Operable Transom Window Hardware: As indicated on Drawings.
- G. Ventilation and Drainage Mat: Keene Building Envelope Products; Driwall Rainscreen 10 mm.
- H. Sprayed Polyurethane Insulating Foam Sealant: One- or two-component, foamed-in-place, low-pressure formula designed not to bow or bend window and door frames, 1.5- to 2.0-lb/cu. ft. density; flame-spread index of 25 or less according to ASTM E 84.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Dow; GREAT STUFF PRO Window & Door Insulating Foam Sealant.
 - 2. Fill cavities at jambs and heads with a spray foam insulation and elsewhere as indicated.
- I. Sealants: Latex, complying with ASTM C 834, Type P, Grade NF and with applicable requirements in Division 07 Section "Joint Sealants," recommended by sealant manufacturer and manufacturer of substrates for intended application.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Bostik Findley; Chem-Calk 600.
 - b. Pecora Corporation; AC-20+.
 - c. Schnee-Morehead, Inc.; SM 8200.
 - d. BASF, Sonneborn; Sonolac.
 - e. Tremco; Tremflex 834.

2.5 FABRICATION

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of wood frames indicated for construction, finishes, installation, and other requirements.
 - 1. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.
 - 2. Grade: Custom.
- B. Back out or kerf backs of standing and running trim wider than 5 inches, except members with ends exposed in finished work.
- C. Ease edges of lumber less than 1 inch in nominal thickness to 1/16-inch radius and edges of lumber 1 inch or more in nominal thickness to 1/8-inch radius.
- D. Fabricate wood frames to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.

2.6 SHOP FINISHING

- A. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood frames, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of primer, compatible with finish coats, to concealed surfaces. Apply two coats to end-grain surfaces.
 - a. Prime all exposed field-cut edges of exterior panels and trim using an acrylic latex primer recommended by the manufacturer for application over composite wood substrates.
 - b. Coat all concealed and exposed surfaces including the bottom edges.
- B. Opaque Finish for Finish Carpentry: Comply with Section 09 91 00 "Paints and Coatings."
 - 1. Finish composite wood trim and panels with two finish coats of paint within 90 days after installation. If the material is not painted within 90 days, reprime using an exterior primer that is recommended for use on composite wood products and is compatible with the topcoat to be used. Use the same primer for repair of any damage to the original factory applied primer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Prime lumber to be painted, including both faces and edges. Cut to required lengths and prime ends. Comply with requirements in Division 09 Section "Paints and Coatings."

3.3 INSTALLATION, GENERAL

- A. Grade: Install finish carpentry to comply with same grade as item being installed.
- B. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Do not use manufactured units with defective surfaces, sizes, or patterns.
- C. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut finish carpentry to fit adjoining work. Refinish and seal cuts.
 - 2. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - 3. Coordinate finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate finish carpentry.

3.4 WOOD STOREFRONT WINDOW FRAMES

- A. General: Replace existing wood storefront units with new custom-fabricated units at locations indicated on Drawings.
- B. Grade: Install wood frames to comply with same grade as item to be installed.
- C. Mill glazed members to accommodate glass thickness. Glaze units prior to installation where possible.
- D. Assemble wood frames and complete fabrication at Project site to the extent that it was not completed in the shop.
- E. Install wood frames level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- F. Set sill members in bed of sealant for weathertight construction unless otherwise indicated.
- G. Anchor wood frames to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.
 - 1. For shop-finished items, use filler matching finish of items being installed.
- H. Scribe and cut wood frames to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- I. Disposal of Removed Units: Remove from Owner's property and legally dispose of them.

3.5 STANDING AND RUNNING TRIM INSTALLATION

- A. Install flat grain lumber with bark side exposed to weather.
- B. Install trim with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long except where necessary.
 - 1. Use scarf joints for end-to-end joints.
 - 2. Stagger end joints in adjacent and related members.
- C. Fit exterior joints to exclude water. Cope at returns and miter at corners to produce tight-fitting joints with full-surface contact throughout length of joint. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.
- D. Unless otherwise indicated, countersink fasteners, fill surface flush, and sand where face fastening is unavoidable.
- E. Exterior Wood Panels and Trim:
 - 1. Cut, miter, and rout composite materials in accordance with manufacturer's instructions.
 - 2. Ensure composite materials are dry before installing or finishing.
 - 3. Fasten composite materials with adhesives, nails, and screws in accordance with manufacturer's instructions.
 - 4. Use adhesives in accordance with adhesive manufacturer's instructions.
 - 5. Position nails no closer than 1/2 inch from edges. Do not install nails into edges.

3.6 GLAZING

- A. Install new glass with indicated glazing system and according to Division 08 Section "Glazing."

3.7 ADJUSTING

- A. Replace finish carpentry that is damaged or does not comply with requirements. Finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.8 CLEANING

- A. Clean finish carpentry on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.9 PROTECTION

- A. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.
- B. Protect surfaces from contact with contaminating substances resulting from construction operations. Monitor surfaces adjacent to and below exterior concrete and masonry during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact surfaces, remove contaminants immediately according to glass manufacturer's written recommendations.
- C. Clean exposed surfaces immediately after installation. Avoid damage to coatings and finishes. Remove excess sealants, glazing and patching materials, dirt, and other substances.
- D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 06 20 13

SECTION 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wood casework.
 - 2. Interior standing and running trim.
- B. Related Requirements:
 - 1. Section 06 20 23 "Interior Finish Carpentry" for interior wood trim.

1.2 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to support loads imposed by installed and fully loaded casework.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
- B. Keying Conference: Conduct conference at Project site. Incorporate keying conference decisions into final keying requirements.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product, including cabinet hardware and accessories and finishing materials and processes.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, finishes, attachment devices, and other components.
 - 1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 2. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, electrical switches and outlets, and other items installed in architectural woodwork.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of products.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 ARCHITECTURAL WOODWORK, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grade of interior architectural woodwork fabrication, finish, installation, and other requirements.
 - 1. Grade: Custom.

2.2 MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Wood Moisture Content: 5 to 10 percent.
- B. Composite Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Medium-Density Fiberboard: ANSI A208.2, Grade 130, made with binder containing no urea formaldehyde.
 - 2. Moisture-Resistant Medium-Density Fiberboard: ANSI A208.2, Grade 155 MR50, made with binder containing no urea formaldehyde.
 - 3. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.
 - 4. Moisture-Resistant Particleboard: ANSI A208.1, Grade M-2-Exterior Glue.
- C. Hardwood Lumber for Transparent Finish (Stain or Clear Finish):
 - 1. Wood Species and Cut: NHLA; vertical grain of quality suitable for transparent finish.
 - a. Species: White oak.
 - b. Cut: Plain sliced/plain sawn.
- D. Lumber for Painted Finish:
 - 1. Wood Species: NHLA; Yellow poplar.
 - 2. Maximum Moisture Content: 19 percent with at least 85 percent of shipment at 12 percent or less.
 - 3. Finger Jointing: Allowed.
 - 4. Face Surface: Surfaced (smooth).

5. Optional Material: Primed MDF of same actual dimensions as lumber indicated may be used in lieu of lumber.
- E. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.
 1. Wood Species and Cut for Transparent Finish:
 - a. Species: White oak.
 - b. Cut: Plain sliced/plain sawn.
- F. Thermoset Decorative Panels: Medium-density fiberboard made with binder containing no urea formaldehyde finished with thermally fused, melamine-impregnated decorative paper complying with requirements of NEMA LD 3, Grade VGL, for Test Methods 3.3, 3.4, 3.6, 3.8, and 3.10.

2.3 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Division 08 Section "Door Hardware."
 1. Cabinet hardware shall be of all metal construction, meeting or exceeding the ANSI/BHMA A156.9, Grade 1 "performance" and "permanent set" test requirements, unless otherwise indicated.
- B. Frameless Concealed Hinges: Fully adjustable, concealed, heavy gauge metal construction; 200,000 open-close cycle tested, with hinge manufacturer's lifetime material replacement guarantee.
 1. Swing: 170 degrees.
 2. Finish: Nickel plated.
 3. Door Operation: Self closing and fitted with silencer bumpers.
 4. Basis of Design Product: Blum Clip Top 170 Degree Concealed Hinge.
- C. Butt Hinges: 2-3/4-inch, five-knuckle, institutional, brushed stainless steel hinges made from 0.095-inch-thick metal, and as follows:
 1. Semiconcealed Hinges for Overlay Doors: BHMA A156.9, B01521.
 2. Provide magnetic door catch with maximum 5-pound pull, attached with screws and slotted for adjustment.
- D. Wire Pulls: Back-mounted 10mm diameter; stainless steel, matt finish; Hafele Cat. No. 115.61.601.
- E. Adjustable Shelf Standards and Brackets:
 1. Shelf Standards: Heavy-duty, 12 gage steel; anochrome finish. Model No. 87 ANO as manufactured by Knappe & Vogt or approved equivalent.
 2. Shelf Bracket: Heavy-duty steel with single molded nylon cam lever; anochrome finish. Model No. 187LL ANO as manufactured by Knappe & Vogt or approved equivalent.
 - a. Screw attach shelf to shelf bracket with manufacturer's standard anochrome steel clip.
- F. Shelf Rests: Injection molded transparent polycarbonate friction fit into cabinet end panels and vertical dividers, adjustable on 32mm centers. Each shelf support shall have 2 integral support pins, 5mm diameter, to interface pre-drilled holes and to prevent accidental rotation of support.
 1. Support shall automatically adapt to 3/4 inch or 1-inch thick shelving and provide non-tip feature for shelving.
 2. Support shall be capable of supporting an imposed vertical load of 300 pounds without failure.
- G. Drawer Slides: Side mounted; full-extension type; zinc-plated steel ball-bearing slides.

1. Medium Duty Drawers: Grade 1HD-100
 - a. Drawers 24 Inches Wide or Less: All ball-bearing, rail mount, hold-in detent, with a 100 lb per pair load rating and progressive movement; Accuride 7432 or approved equivalent.
 2. File Drawers and Heavy-Duty Drawers: Grade 1HD-200.
 - a. Drawers Over 24 Inches to 42 inches Wide: All ball-bearing, rail/bracket mount, hold-in detent, with a 200 lb per pair load rating, and sequential movement; Accuride 3640 or approved equivalent.
 3. Finish: Clear zinc
- H. Locks:
1. Drawer Locks: BHMA A156.11, E07041; 5-pin keyway; capable of being keyed alike, keyed different, and/or master keyed
- I. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.
 2. Satin Stainless Steel: BHMA 630.
- J. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.4 MISCELLANEOUS MATERIALS

- A. Aluminum Trim: Extruded accessories of profiles and dimensions indicated; concealed fasteners.
1. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B221, Alloy 6063-T5.
 2. Finish: Satin anodized.
- B. Stainless-Steel Sheet, Strip, Plate, and Flat Bar: ASTM A666, Type 304, No. 4 finish.
- C. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.
- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- E. Metal Support Brackets: Furniture grade, epoxy powder coated steel.
1. Provide metal wall bracket supports for all counters without supporting base cabinets; 48 inches maximum spacing.
- F. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

2.5 FABRICATION, GENERAL

- A. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- B. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch.
- C. Back out or kerf backs of the following members except those with ends exposed in finished work:

1. Interior standing and running trim except shoe and crown molds.
- D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 1. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
 1. Seal edges of openings in countertops with a coat of varnish.

2.6 FLUSH WOOD PANELING

- A. Panel Core Construction: Particleboard or medium-density fiberboard.
 1. Thickness: 3/4 inch.
- B. Exposed Panel Edges: Inset solid-wood or wood-veneer matching faces.
- C. Panel Reveals: Matte black plastic laminate.
- D. Assemble panels by gluing and concealed fastening.

2.7 WOOD CASEWORK FOR TRANSPARENT FINISH

- A. Type of Construction: Frameless.
- B. Cabinet and Door and Drawer Front Interface Style: Flush overlay.
- C. Panel Core Construction: Particleboard or medium-density fiberboard.
- D. Wood for Exposed Surfaces: As indicated.
 1. Grain Direction: Vertically for drawer fronts, doors, and fixed panels.

2.8 SHOP FINISHING

- A. General: To the greatest maximum possible, finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- B. Preparation for Shop-Applied Transparent Finishing: Comply with referenced quality standard for sanding, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
- C. Transparent Finish:
 1. Grade: Premium.
 2. Finish: System - 5, conversion varnish.
 3. Staining: As indicated in Finish and Materials Legend.
 4. Sheen: Satin, 31-45 gloss units measured on 60-degree gloss meter per ASTM D 523.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation.
- E. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members. Plane backs of trim to provide uniform thickness across joints where necessary for alignment.
 - 1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
 - 2. Install trim after gypsum-board joint finishing operations are completed.
 - 3. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.
 - 4. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base if finished.
 - 5. Install adjoining interior trim with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
- G. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - 1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 2. Maintain veneer sequence matching of cabinets with transparent finish.
 - 3. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches on center with No. 10 surface-bearing-head type screws sized for 1-1/2 inch (minimum) penetration into wood framing, blocking, or hanging strips.
- H. Seal junctures of tops, sills, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06 40 23

SECTION 07 01 50 - PREPARATION FOR REROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work of This Section Includes:
 - 1. Full roof tear-off.
 - 2. Roof re-cover preparation.
 - 3. Base flashing removal.
 - 4. Disposal.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for use of premises and for phasing requirements.
 - 2. Section 015000 "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for reroofing preparation.

1.2 DEFINITIONS

- A. EPS: Molded (expanded) polystyrene.
- B. Full Roof Tear-off: Removal of existing roofing system down to existing roof deck.
- C. OSB: Oriented strand board.
- D. Partial Roof Tear-off: Removal of selected components and accessories from existing roofing system.
- E. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.
- F. Roof Re-Cover Preparation: Existing roofing system is to remain and be prepared for new roof installed over it.

1.3 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting removal Work, conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, roofing Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing tear-off, including, but not limited to, the following:
 - a. Reroofing preparation, including roofing system manufacturer's written instructions.
 - b. Temporary protection requirements for existing roofing system components that are to remain.
 - c. Existing roof drains and roof drainage during each stage of reroofing, and roof-drain plugging and plug removal.
 - d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
 - e. Existing roof deck conditions requiring Architect notification.
 - f. Existing roof deck removal procedures and Owner notifications.
 - g. Condition and acceptance of existing roof deck and base flashing substrate for reuse.

- h. Structural loading limitations of roof deck during reroofing.
- i. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect reroofing.
- j. HVAC shutdown and sealing of air intakes.
- k. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
- l. Asbestos removal and discovery of asbestos-containing materials.
- m. Governing regulations and requirements for insurance and certificates if applicable.
- n. Existing conditions that may require Architect notification before proceeding.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Temporary Roofing Submittal: Product data and description of temporary roofing system.
 - 1. If temporary roof remains in place, include surface preparation requirements needed to receive permanent roof, and submit a letter from roofing manufacturer stating acceptance of the temporary roof and that its inclusion does not adversely affect the new roofing system's resistance to fire and wind or specified special warranty.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Photographs or Video: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.
 - 1. Submit before Work begins.

1.6 CLOSEOUT SUBMITTALS

- A. Certified statement from existing warranted roof system manufacturer stating that existing roof warranty has not been affected by Work performed under this Section.

1.7 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Comply with governing EPA notification regulations before beginning roofing removal.
 - 2. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.8 FIELD CONDITIONS

- A. Existing Roofing System: **EPDM** roofing.
- B. Owner **will not** occupy portions of building immediately below reroofing area.
 - 1. Conduct reroofing so Owner's operations are not disrupted.
 - 2. Provide Owner with not less than 72 hours' written notice of activities that may affect Owner's operations.
 - 3. Coordinate work activities daily with Owner so Owner has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.
 - 4. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area.
 - a. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.

- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
- F. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
 - 1. Remove only as much roofing in one day as can be made watertight in the same day.
- G. Hazardous Materials:
 - 1. It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.
 - a. Hazardous materials will be removed by Owner before start of the Work.
 - b. Existing roof will be left no less watertight than before removal.
 - 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
 - a. Hazardous materials will be removed by Owner under a separate contract.
 - 3. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
 - a. Hazardous material remediation is specified elsewhere in the Contract Documents.
 - b. Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.
 - c. Coordinate reroofing preparation with hazardous material remediation to prevent water from entering existing roofing system or building.

PART 2 - PRODUCTS

2.1 TEMPORARY PROTECTION MATERIALS

- A. EPS Insulation: ASTM C578.
- B. Plywood: DOC PS 1, Grade CD, Exposure 1.
- C. OSB: DOC PS 2, Exposure 1.

2.2 TEMPORARY ROOFING MATERIALS

- A. Design and selection of materials for temporary roofing are Contractor's responsibilities.

2.3 INFILL AND REPLACEMENT MATERIALS

- A. Use infill materials matching existing roofing system materials unless otherwise indicated.
 - 1. Infill materials are specified in Section 075323 "Ethylene-Propylene-Diene-Monomer (EPDM) Roofing" unless otherwise indicated.
- B. Wood blocking, curbs, and nailers are specified in Section 061000 "Rough Carpentry."
- C. Plywood roof sheathing is specified in Section 061600 "Sheathing."

- D. Fasteners: Factory-coated steel fasteners with metal or plastic plates listed in FM Approvals' RoofNav, and acceptable to new roofing system manufacturer.

2.4 AUXILIARY REROOFING MATERIALS

- A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new roofing system.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protection of In-Place Conditions:
 - 1. Protect existing roofing system that is not to be reroofed.
 - 2. Limit traffic and material storage to areas of existing roofing that have been protected.
 - 3. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.
 - 4. Comply with requirements of existing roof system manufacturer's warranty requirements.
- B. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- C. Shut off rooftop utilities and service piping before beginning the Work.
- D. Test existing roof drains to verify that they are not blocked or restricted.
 - 1. Immediately notify Architect of any blockages or restrictions.
- E. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
 - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- F. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- G. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
 - 1. Prevent debris from entering or blocking roof drains and conductors.
 - a. Use roof-drain plugs specifically designed for this purpose.
 - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
 - a. Do not permit water to enter into or under existing roofing system components that are to remain.

3.2 ROOF TEAR-OFF

- A. Notify Owner each day of extent of roof tear-off proposed for that day.
- B. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- C. Full Roof Tear-off: Remove existing roofing and other roofing system components down to the existing roof structure.
 - 1. Remove substrate board, roof insulation, and cover board.

2. Remove base flashings and counter flashings.
3. Remove perimeter edge flashing and gravel stops.
4. Remove copings.
5. Remove expansion-joint covers.
6. Remove flashings at pipes, curbs, mechanical equipment, and other penetrations.
7. Remove roof drains indicated on Drawings to be removed.
8. Remove wood blocking, curbs, and nailers.
9. Remove fasteners from deck or cut fasteners off slightly above deck surface.

3.3 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect.
 1. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
 1. Do not proceed with installation until directed by Architect.
- D. Provide additional deck securement as indicated on Drawings.
- E. Replace plywood roof sheathing as indicated on Drawings.

3.4 INFILL MATERIALS INSTALLATION

- A. Immediately after roof tear-off, and inspection and repair, if needed, of deck, fill in tear-off areas to match existing roofing system construction.
 1. Installation of infill materials is specified in Section 075323 "Ethylene-Propylene-Diene-Monomer (EPDM) Roofing."
 2. Installation of wood blocking, curbs, and nailers is specified in Section 061000 "Rough Carpentry."
- B. Install new roofing patch over roof infill area.
 1. If new roofing is installed the same day tear-off is made, roofing patch is not required.

3.5 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain.
 1. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish as existing.
- C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.
 1. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.
- D. Remove existing parapet sheathing and replace with new parapet sheathing to comply with Section 061600 "Sheathing."
 1. If parapet framing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.

- E. When directed by Architect, replace parapet framing, wood blocking, curbs, and nailers to comply with Section 061000 "Rough Carpentry."

3.6 DISPOSAL

- A. Collect demolished materials and place in containers.
 - 1. Promptly dispose of demolished materials.
 - 2. Do not allow demolished materials to accumulate on-site.
 - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 07 01 50

SECTION 07 19 00 - WATER REPELLENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes penetrating water-repellent treatments for the following vertical and horizontal surfaces:
 - 1. Clay brick masonry.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include manufacturer's printed statement of VOC content.
 - 2. Include manufacturer's recommended number of coats for each type of substrate and spreading rate for each separate coat.
- B. Sample Warranty: For special warranty.

1.4 QUALITY ASSURANCE

- A. Mockups: Prepare mockups of each required water repellent on each type of substrate required to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Locate mockups on existing surfaces where directed by Architect.
 - a. Size: 10 sq. ft. each.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 FIELD CONDITIONS

- A. Limitations: Proceed with application only when the following existing and forecasted weather and substrate conditions permit water repellents to be applied according to manufacturers' written instructions and warranty requirements:
 - 1. Concrete surfaces and mortar have cured for not less than 28 days.
 - 2. Ambient temperature is above 40° F and below 100° F and will remain so for 24 hours.
 - 3. Substrate is not frozen and substrate-surface temperature is above 40° F and below 100° F.
 - 4. Rain or snow is not predicted within 24 hours.
 - 5. Not less than 24 hours have passed since surfaces were last wet.
 - 6. Windy conditions do not exist that might cause water repellent to be blown onto vegetation or surfaces not intended to be treated.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer and Applicator agree to repair or replace materials that fail to maintain water repellency within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PENETRATING WATER REPELLENTS

- A. Water Repellent (non-silane, non-siloxane)
 - 1. R97 water repellent, manufactured by Cathedral Stone Products.
- B. Requirements
 - 1. Must not contain or produce any VOC's.
 - 2. Minimum rating of 80 perms when applied to manufactures specification.
 - 3. Must not lower the water vapor transmission (WVT) of the substrate by more than 1/3 of its pretreated value.
- C. Miscellaneous Equipment
 - 1. Natural bristle brushes
 - 2. Rollers
 - 3. Potable water
 - 4. Rubber gloves
 - 5. Eye and skin protection
 - 6. Low pressure (10-25 psi.) Sprayer

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements and conditions affecting performance of the Work.
 - 1. Verify that surfaces are clean and dry according to water-repellent manufacturer's requirements. Check moisture content in three representative locations by method recommended by manufacturer.
 - 2. Inspect for previously applied treatments that may inhibit penetration or performance of water repellents.
 - 3. Verify that there is no efflorescence or other removable residues that would be trapped beneath the application of water repellent.
 - 4. Verify that required repairs are complete, cured, and dry before applying water repellent.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. New Construction and Repairs: Allow concrete and other cementitious materials to age before application of water repellent, according to repellent manufacturer's written instructions.
- B. Cleaning: Before application of water repellent, clean substrate of substances that could impair penetration or performance of product according to water-repellent manufacturer's written instructions and as follows:
 - 1. Clay Brick Masonry: Section 04 01 20 "Maintenance of Unit Masonry."
- C. Protect adjoining work, including mortar and sealant bond surfaces, from spillage or blow-over of water repellent. Cover adjoining and nearby surfaces of aluminum and glass if there is the possibility of water repellent being deposited on surfaces. Cover live vegetation.
- D. Coordination with Mortar Joints: Do not apply water repellent until pointing mortar for joints adjacent to surfaces receiving water-repellent treatment has been installed and cured.

- E. Coordination with Sealant Joints: Do not apply water repellent until sealants for joints adjacent to surfaces receiving water-repellent treatment have been installed and cured.
 - 1. Water-repellent work may precede sealant application only if sealant adhesion and compatibility have been tested and verified using substrate, water repellent, and sealant materials identical to those required.

3.3 APPLICATION

- A. Apply coating of water repellent on surfaces to be treated using 15 psi- pressure spray with a fan-type spray nozzle, roller, or brush to the point of saturation. Apply coating in dual passes of uniform, overlapping strokes. Remove excess material; do not allow material to puddle beyond saturation. Comply with manufacturer's written instructions for application procedure unless otherwise indicated.
- B. Apply a second saturation coating, repeating first application. Comply with manufacturer's written instructions for limitations on drying time between coats and after rainstorm wetting of surfaces between coats. Consult manufacturer's technical representative if written instructions are not applicable to Project conditions.
 - 1. Reapply water repellent until coverage test indicates complete coverage.

3.4 FIELD QUALITY CONTROL

- A. Coverage Test: In the presence of Architect, hose down a dry, repellent-treated surface to verify complete and uniform product application. A change in surface color will indicate incomplete application.
 - 1. Notify Architect seven days in advance of the dates and times when surfaces will be tested.
 - 2. Reapply water repellent until coverage test indicates complete coverage.

3.5 CLEANING

- A. Immediately clean water repellent from adjoining surfaces and surfaces soiled or damaged by water-repellent application as work progresses. Correct damage to work of other trades caused by water-repellent application, as approved by Architect.
- B. Comply with manufacturer's written cleaning instructions.

END OF SECTION 07 19 00

SECTION 07 21 00 - THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Foam-plastic board insulation.
 - 2. Glass-fiber blanket insulation.
 - 3. Spray polyurethane foam insulation.
 - 4. Vapor retarders.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

1.3 QUALITY ASSURANCE

- A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.
- B. Protect foam-plastic board insulation as follows:
 - 1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
 - 2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site before installation time.
 - 3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 - PRODUCTS

2.1 FOAM-PLASTIC BOARD INSULATION

- A. Foam-Plastic Board (Rigid) Insulation: Provide one of the following board insulation systems:
 - 1. Extruded-Polystyrene Board Insulation: ASTM C 578, of type and minimum compressive strength indicated below, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) DiversiFoam Products.
 - 2) Dow Chemical Company (The).
 - 3) Owens Corning.
 - 4) Pactiv Building Products.
 - b. Interior Furred Walls: Type X, 15 psi.
 - 2. Expanded-Polystyrene Board Insulation: ASTM C 578, of type and minimum compressive strength indicated below, with maximum flame-spread and smoke-developed indexes of

75 and 450, respectively, per ASTM E 84. Label each individual insulation board indicating UL certification and ASTM material type.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) ACH Foam Technologies.
 - 2) DiversiFoam Products.
 - 3) Plymouth Foam, Inc.
 - b. Interior Furred Walls: Type II, 15 psi.
- B. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

2.2 GLASS-FIBER BLANKET INSULATION

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. CertainTeed Corporation.
 2. Guardian Building Products, Inc.
 3. Johns Manville.
 4. Knauf Insulation.
 5. Owens Corning.
- B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

2.3 SPRAY POLYURETHANE FOAM INSULATION

- A. Open-Cell Polyurethane Foam Insulation: Spray-applied polyurethane foam using water as a blowing agent, with maximum flame-spread and smoke-developed indexes of 25 and 450, respectively, per ASTM E 84.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Demilec (USA) LLC.
 - b. Icynene Inc.
 - c. NCFI; Division of Barnhardt Mfg. Co.
 2. Minimum density of 0.4 lb/cu. ft., thermal resistivity of 3.7° F x h x sq. ft./Btu x in. at 75° F.

2.4 VAPOR RETARDERS

- A. Polyethylene Vapor Retarders: ASTM D 4397, 6 mils thick, with maximum permeance rating of 0.13 perm.
- B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
- C. Vapor-Retarder Fasteners: Pancake-head, self-tapping steel drill screws; with fender washers.
- D. Single-Component Nonsag Urethane Sealant: ASTM C 920, Type I, Grade NS, Class 25, Use NT related to exposure, and Use O related to vapor-barrier-related substrates.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean substrates of substances that are harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.
- B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.3 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

- A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- B. Glass-Fiber or Mineral-Wool Blanket Insulation: Install in cavities formed by framing members according to the following requirements:
 - 1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
 - 2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
 - 3. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
- C. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and windows, electrical boxes, and other items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs by using method recommended by insulation manufacturer.
- D. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
 - 1. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

3.4 INSTALLATION OF VAPOR RETARDERS

- A. Place vapor retarders on side of construction indicated on Drawings. Extend vapor retarders to extremities of areas to protect from vapor transmission. Secure vapor retarders in place with adhesives or other anchorage system as indicated. Extend vapor retarders to cover miscellaneous voids in insulated substrates, including those filled with loose-fiber insulation.

- B. Seal vertical joints in vapor retarders over framing by lapping no fewer than two studs.
 - 1. Fasten vapor retarders to wood framing at top, end, and bottom edges; at perimeter of wall openings; and at lap joints. Space fasteners 16 inches on center.
- C. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarders.
- D. Repair tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarder.

3.5 PROTECTION

- A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 21 00

SECTION 07 24 19 - WATER-DRAINAGE EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. EIFS-clad drainage-wall assemblies that are field applied over substrate.
 - 2. Water-resistive barrier coatings.
- B. Related Requirements:
 - 1. Section 07 92 00 "Joint Sealants" for sealing joints in EIFS with elastomeric joint sealants and for perimeter joints between system and other materials.

1.2 DEFINITIONS

- A. Definitions in ASTM E 2110 apply to Work of this Section.
- B. EIFS: Exterior insulation and finish system(s).
- C. IBC: International Building Code.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each EIFS component, trim, and accessory, including water-resistive barrier coatings.
- B. Shop Drawings: For EIFS. Include plans, elevations, sections, details of components, details of penetration and termination, flashing details, joint locations and configurations, fastening and anchorage details including mechanical fasteners, and connections and attachments to other work.
- C. Samples for Verification: 24-inch- square panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work including.
 - 1. Include exposed trim and accessory Samples to verify color selected.
 - 2. Include a typical control joint filled with sealant of color selected, as specified in Section 07 92 00 "Joint Sealants."

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Manufacturer Certificates: Signed by EIFS manufacturer, certifying the following:
 - 1. EIFS complies with requirements.
 - 2. Substrates to which EIFS is indicated to be attached are acceptable to EIFS manufacturer.
 - 3. Accessory products installed with EIFS, including joint sealants, flashing, water-resistive barrier coatings, trim, whether or not furnished by EIFS manufacturer and whether or not specified in this Section, are acceptable to EIFS manufacturer.

- C. Product Test Reports: For each EIFS assembly and component, and for water-resistive barrier coatings, for tests performed by a qualified testing agency.
- D. Sample Warranty: For manufacturer's special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For EIFS to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An installer who is certified in writing by EIFS manufacturer as qualified to install manufacturer's system using trained workers.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, to set quality standards for materials and execution, and to set quality standards for fabrication and installation.
 - 1. Build mockup of typical wall area.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original, unopened packages with manufacturers' labels intact and clearly identifying products.
- B. Store materials inside and under cover; keep them dry and protected from weather, direct sunlight, surface contamination, aging, corrosion, damaging temperatures, construction traffic, and other causes.
 - 1. Stack insulation board flat and off the ground.
 - 2. Protect plastic insulation against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
 - 3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions and ambient outdoor air, humidity, and substrate temperatures permit EIFS to be applied, dried, and cured according to manufacturers' written instructions and warranty requirements.
 - 1. Proceed with installation of adhesives or coatings only when ambient temperatures have remained, or are forecast to remain, above 40 deg F (4.4 deg C) for a minimum of 24 hours before, during, and after application. Do not apply EIFS adhesives or coatings during rainfall.

1.10 WARRANTY

- A. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace components of EIFS-clad drainage-wall assemblies that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:

- a. Bond integrity and weathertightness.
 - b. Deterioration of EIFS finishes and other EIFS materials beyond normal weathering.
2. Warranty coverage includes the following components of EIFS-clad drainage-wall assemblies:
 - a. EIFS finish, including base coats, finish coats, and reinforcing mesh.
 - b. Insulation installed as part of EIFS.
 - c. Insulation adhesive.
 - d. EIFS accessories, including trim components and flashing.
 - e. Water-resistive coatings.
 - f. EIFS drainage components.
3. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. BASF; Senergy.
 2. Dryvit Systems, Inc.
 3. Parex USA, Inc.
 4. Sto Corp.
- B. Source Limitations: Obtain EIFS from single source from single EIFS manufacturer and from sources approved by EIFS manufacturer as compatible with EIFS components.

2.2 PERFORMANCE REQUIREMENTS

- A. EIFS Performance: Comply with ASTM E 2568 and with the following:
 1. Weathertightness: Resistant to uncontrolled water penetration from exterior, with a means to drain water entering EIFS to the exterior.
 2. Structural Performance of Assembly and Components:
 - a. Wind Loads: Uniform pressure as indicated on Drawings.
 3. Impact Performance: ASTM E 2568, High impact resistance.
 4. Bond Integrity: Free from bond failure within EIFS components or between EIFS and substrates, resulting from exposure to fire, wind loads, weather, or other in-service conditions.
 5. Abrasion Resistance of Finish Coat: Sample consisting of 1-inch- thick EIFS mounted on 1/2-inch- thick gypsum board; cured for a minimum of 28 days and shows no cracking, checking, or loss of film integrity after exposure to 528 quarts of sand when tested according to ASTM D 968, Method A.
 6. Mildew Resistance of Finish Coat: Sample applied to 2-by-2-inch clean glass substrate; cured for 28 days and shows no growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274.
 7. Drainage Efficiency: 90 percent average minimum when tested according to ASTM E 2273.

2.3 EIFS MATERIALS

- A. Primer/Sealer: EIFS manufacturer's standard substrate conditioner designed to protect substrates from moisture penetration and to improve the bond between substrate and insulation adhesive.
- B. Water-Resistive Barrier Coating: EIFS manufacturer's standard formulation and accessories for use as water-resistive barrier coating; compatible with substrate.

1. Water-Resistance: Comply with physical and performance criteria of ASTM E 2570/E 2570M.
- C. Flexible-Membrane Flashing: Cold-applied, self-adhering, self-healing, rubberized-asphalt and polyethylene-film composite sheet or tape and primer; EIFS manufacturer's standard or product recommended in writing by EIFS manufacturer.
- D. Insulation Adhesive: EIFS manufacturer's standard formulation designed for indicated use; specifically formulated to be applied to back side of insulation in a manner that creates open vertical channels designed to serve as an integral part of the water-drainage system of the EIFS-clad drainage-wall assembly; compatible with substrate.
- E. Molded, (Expanded) Rigid Cellular Polystyrene Board Insulation: Comply with ASTM E 2430/E 2430M, unless otherwise noted, and the following:
 1. Flame-Spread and Smoke-Developed Indexes: 25 and 450 or less, respectively, according to ASTM E 84.
 2. Dimensions: Provide insulation boards of not more than 24 by 48 inches, with thickness indicated on Drawings.
 3. Foam Buildouts: Provide with profiles and dimensions indicated on Drawings.
- F. Reinforcing Mesh: Balanced, alkali-resistant, open-weave, glass-fiber mesh treated for compatibility with other EIFS materials, made from continuous multiend strands with retained mesh tensile strength of not less than 120 lbf/in. according to ASTM E 2098 and the following:
 1. Reinforcing Mesh for EIFS, General: Not less than weight required to comply with impact-performance level specified in "Performance Requirements" Article.
- G. Base-Coat Materials: EIFS manufacturer's standard mixture complying with the following:
 1. Factory-blended dry formulation of portland cement, dry polymer admixture, and inert fillers to which only water is added at Project site.
- H. Primer: EIFS manufacturer's standard factory-mixed, elastomeric-polymer primer for preparing base-coat surface for application of finish coat.
- I. Finish-Coat Materials: EIFS manufacturer's standard acrylic-based coating complying with the following:
 1. Factory-mixed formulation of polymer-emulsion binder, colorfast mineral pigments, sound stone particles, and fillers.
 2. Color: basis of design: Dryvit #381 "Monastery Brown"
 3. Texture: basis of design: Dryvit "Sandblast"
- J. Water: Potable.
- K. Trim Accessories: Type as designated or required to suit conditions indicated and to comply with EIFS manufacturer's written instructions; manufactured from UV-stabilized PVC; and complying with ASTM D 1784, manufacturer's standard cell class for use intended, and ASTM C 1063.
 1. Weep Screed/Track: Prefabricated, one-piece type for attachment behind insulation with weep holes, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg; designed to drain incidental moisture that gets into wall construction to the exterior at terminations of EIFS with drainage.

2.4 MIXING

- A. Comply with EIFS manufacturer's requirements for combining and mixing materials. Do not introduce admixtures, water, or other materials except as recommended by EIFS manufacturer.

Mix materials in clean containers. Use materials within time period specified by EIFS manufacturer or discard.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roof edges, wall framing, flashings, openings, substrates, and junctures at other construction for suitable conditions where EIFS will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 1. Begin coating application only after surfaces are dry.
 - 2. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Protect contiguous work from moisture deterioration and soiling caused by application of EIFS. Provide temporary covering and other protection needed to prevent spattering of exterior finish coats on other work.
- B. Protect EIFS, substrates, and wall construction behind them from inclement weather during installation. Prevent penetration of moisture behind drainage plane of EIFS and deterioration of substrates.
- C. Prepare and clean substrates to comply with EIFS manufacturer's written instructions to obtain optimum bond between substrate and water-resistive coating.
 - 1. Masonry and Concrete Substrates: Verify suitability of substrate by performing bond and moisture tests recommended by EIFS manufacturer.

3.3 EIFS INSTALLATION, GENERAL

- A. Comply with ASTM C 1397, ASTM E 2511, and EIFS manufacturer's written instructions for installation of EIFS as applicable to each type of substrate indicated.

3.4 SUBSTRATE PROTECTION APPLICATION

- A. Prime Coat: Apply primer over substrates where required by EIFS manufacturer at required rate and allow it to dry. Limit priming to areas that will be covered by weather-resistive barrier on same day. Reprime areas exposed for more than 24 hours
- B. Water-Resistive Coating: Apply over entire substrate to provide a water-resistive barrier.
 - 1. Tape and seal joints, exposed edges, terminations, and inside and outside corners of sheathing unless otherwise indicated by EIFS manufacturer's written instructions.
- C. Flexible-Membrane Flashing: Install over weather-resistive barrier, applied and lapped to shed water; seal at openings, penetrations, terminations, and where required by EIFS manufacturer. Prime substrates if required and install flashing to comply with EIFS manufacturer's written instructions and details.

3.5 TRIM INSTALLATION

- A. Trim: Coordinate with installation of insulation.

1. Weep Screed/Track: Use at bottom termination edges and at floor line expansion joints of water-drainage EIFS unless otherwise indicated.

3.6 INSULATION INSTALLATION

- A. Board Insulation: Adhesively attach insulation to substrate in compliance with ASTM C 1397 and the following:
1. Apply adhesive to insulation by notched-trowel method, with notches oriented vertically to produce drainage channels that remain functional after the insulation is adhered to substrate.
 2. Press and slide insulation into place. Apply pressure over the entire surface of insulation to accomplish uniform contact, high initial grab, and overall level surface.
 3. Allow adhered insulation to remain undisturbed for not less than 24 hours, before beginning rasping and sanding insulation or applying base coat and reinforcing mesh.
 4. Apply insulation over substrates in courses with long edges of boards oriented horizontally.
 5. Begin first course of insulation from screed/track and work upward. Work from perimeter toward interior of panels if possible.
 6. Stagger vertical joints of insulation boards in successive courses to produce running bond pattern. Locate joints so no piece of insulation is less than 12 inches wide or 6 inches high. Offset joints not less than 6 inches from corners of window and door openings and not less than 4 inches from aesthetic reveals.
 - a. Adhesive Attachment: Offset joints of insulation not less than 6 inches from horizontal and 4 inches from vertical joints in sheathing.
 7. Interlock ends at internal and external corners.
 8. Abut insulation tightly at joints within and between each course to produce flush, continuously even surfaces without gaps or raised edges between boards. If gaps greater than 1/16 inch occur, fill with insulation cut to fit gaps exactly; insert insulation without using adhesive or other material.
 9. Cut insulation to fit openings, corners, and projections precisely and to produce edges and shapes complying with details indicated.
 10. Rasp or sand flush entire surface of insulation to remove irregularities projecting more than 1/32 inch from surface of insulation and to remove yellowed areas due to sun exposure; do not create depressions deeper than 1/16 inch. Prevent airborne dispersal and immediately collect insulation raspings or sandings.
 11. Cut aesthetic reveals in outside face of insulation with high-speed router and bit configured to produce grooves, rabbets, and other features that comply with profiles and locations indicated. Do not reduce insulation thickness at aesthetic reveals to less than 3/4 inch.
 12. Interrupt insulation for expansion joints where indicated.
 13. Form joints for sealant application by leaving gaps between adjoining insulation edges and between insulation edges and dissimilar adjoining surfaces. Make gaps wide enough to produce joint widths indicated after encapsulating joint substrates with base coat and reinforcing mesh.
 14. After installing insulation and before applying field-applied reinforcing mesh, fully wrap board edges. Cover edges of board and extend encapsulating mesh not less than 2-1/2 inches over front and back face unless otherwise indicated on Drawings.
 15. Treat exposed edges of insulation as follows:
 - a. Except for edges forming substrates of sealant joints, encapsulate with base coat, reinforcing mesh, and finish coat.
 - b. Encapsulate edges forming substrates of sealant joints within EIFS or between EIFS and other work with base coat and reinforcing mesh.
 16. Coordinate installation of flashing and insulation to produce wall assembly that does not allow water to penetrate behind flashing and water-resistive barrier.
- B. Expansion Joints: Install at locations indicated, where required by EIFS manufacturer, and as follows:

1. At expansion joints in substrates behind EIFS.
2. Where EIFS adjoin dissimilar substrates, materials, and construction, including other EIFS.
3. **[At floor lines in multilevel wood-framed construction.]**
4. Where wall height or building shape changes.
5. Where EIFS manufacturer requires joints in long continuous elevations.

3.7 BASE-COAT INSTALLATION

- A. Base Coat: Apply to exposed surfaces of insulation in minimum thickness recommended in writing by EIFS manufacturer, but not less than 1/16-inch dry-coat thickness.
- B. Reinforcing Mesh: Embed reinforcing mesh in wet base coat to produce wrinkle-free installation with mesh continuous at corners, overlapped not less than 2-1/2 inches or otherwise treated at joints to comply with ASTM C 1397 and EIFS manufacturer's written instructions. Do not lap reinforcing mesh within 8 inches of corners. Completely embed mesh, applying additional base-coat material if necessary, so reinforcing-mesh color and pattern are invisible.
- C. Additional Reinforcing Mesh: Apply strip reinforcing mesh around openings, extending 4 inches beyond perimeter. Apply additional 9-by-12-inch strip reinforcing mesh diagonally at corners of openings (re-entrant corners). Apply 8-inch- wide, strip reinforcing mesh at both inside and outside corners unless base layer of mesh is lapped not less than 4 inches on each side of corners.
 1. At aesthetic reveals, apply strip reinforcing mesh not less than 8 inches wide.
 2. Embed strip reinforcing mesh in base coat before applying first layer of reinforcing mesh.
- D. Double Base-Coat Application: Where indicated, apply second base coat in same manner and thickness as first application, except without reinforcing mesh. Do not apply until first base coat has cured.

3.8 FINISH-COAT INSTALLATION

- A. Primer: Apply over dry base coat according to EIFS manufacturer's written instructions.
- B. Finish Coat: Apply over dry primed base coat, maintaining a wet edge at all times for uniform appearance, in thickness required by EIFS manufacturer to produce a uniform finish of color and texture matching approved sample and free of cold joints, shadow lines, and texture variations.
 1. Embed aggregate in finish coat according to EIFS manufacturer's written instructions to produce a uniform applied-aggregate finish of color and texture matching approved sample.

3.9 CLEANING AND PROTECTION

- A. Remove temporary covering and protection of other work. Promptly remove coating materials from window and door frames and other surfaces outside areas indicated to receive EIFS coatings.

END OF SECTION 07 24 19

SECTION 07 25 00 - WEATHER BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes building wrap and flashings.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 WEATHER BARRIERS

- A. Building Wrap: ASTM E 1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. DuPont (E. I. du Pont de Nemours and Company); Tyvek CommercialWrap D.
 - 2. Water Vapor Transmission: 30 perms, when tested in accordance with ASTM E 96, Method B.
 - 3. Water Penetration Resistance: 235 cm when tested in accordance with AATCC Test Method 127.
 - 4. Basis Weight: 2.4 oz/yd², when tested in accordance with TAPPI Test Method T-410.
 - 5. Air Infiltration Resistance: Air infiltration at >750 seconds, when tested in accordance with TAPPI Test Method T-460.
 - 6. Tensile Strength: 33/41 lbs/in., when tested in accordance with ASTM D 822, Method A.
 - 7. Surface Burning Characteristics: Class A, when tested in accordance with ASTM E 84. Flame Spread: 15, Smoke Developed: 25.
- B. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints in building wrap.
- C. Flexible Flashing: Self-adhering, recommended by building-wrap manufacturer for sealing transitions, penetrations, and openings; including preformed inside or outside corners and end dams.
- D. Adhesives: Provide adhesive recommended by building-wrap manufacturer.
- E. Fasteners: Rust-resistant plastic cap fasteners, recommended by building-wrap manufacturer for substrate indicated.
- F. Termination Sealant: ASTM C 920, Type S, Grade NS, Class 25; moisture cure, medium modulus polymer modified sealing compound.
- G. Weather Resistive Barrier: Self-adhering, vapor permeable air barrier.
 - 1. Carlisle Coatings & Waterproofing; CCW-705VP.
 - 2. Cosella-Dorken Products Inc.; Delta Vent SA.
 - 3. Henry Company; BlueskinVP 160.
 - 4. Grace Construction Products; Perm-A-Barrier VPS.

- H. Sill, Transition, and Wall Flashing: Weather barrier manufacturer's SBS modified bitumen, self-adhering sheet membrane which is integrally laminated to cross laminated polyethylene film.
 - 1. Membrane Thickness: Not less than 36 mils.
 - 2. Film Thickness: 4.0 mils
- I. Primer: Liquid primer recommended for substrate by weather barrier material manufacturer.
- J. Joint Sealant: Moisture cure, medium modulus polymer modified sealing compound having the following physical properties:
 - 1. Compatible with weather barrier, and roofing, waterproofing, or air/vapor barrier membranes and substrate to which contact is made.
 - 2. Complies with Fed. Spec. TT-S-00230C, Type II, Class A
 - 3. Complies with ASTM C 920, Type S, Grade NS, Class 25
 - 4. Elongation: 450 – 550%
 - 5. Remains flexible with aging
 - 6. Seals construction joints up to 1 inch wide
 - 7. Auxiliary tested component of ASTM E2357 for Air Leakage of Air Barrier Assemblies

PART 3 - EXECUTION

3.1 WEATHER RESISTIVE BARRIER INSTALLATION: BUILDING WRAP

- A. Building Wrap: Comply with manufacturer's written instructions.
 - 1. Seal seams, cuts, tears, and edges with tape.
 - 2. Extend flexible flashing into openings and at penetrations and transitions.
 - 3. Apply sealant along exposed flexible flashing edges.

3.2 WEATHER RESISTIVE BARRIER INSTALLATION: SELF ADHERING VAPOR PERMEABLE

- A. Apply primer to substrates at required rate and allow it to dry. Limit priming to areas that will be covered by weather resistive barrier on same day. Reprime areas exposed for more than 24 hours.
- B. Inside and Outside Corners:
 - 1. Seal inside and outside corners of sheathing with a strip of self-adhering vapor permeable membrane extending a minimum of 3 inches on either side of the corner detail.
 - 2. For inside corners, pre-treat the corner with a continuous 1/2-inch bead of termination sealant.
 - 3. Prime surfaces in an intermittent pattern, at a rate of 200-250 sq ft/gal where appropriate to achieve surface adhesion as per manufacturers' instructions and allow to dry.
 - 4. Align and position self-adhering transition membrane, remove protective film and press firmly into place. Ensure minimum 2 inches overlap at all side laps and minimum 3 inches overlap at all end laps of membrane.
 - 5. Roll all laps and membrane with a countertop roller to ensure seal.
- C. Transition Areas:
 - 1. Tie-in to structural beams, columns, floor slabs and intermittent floors, parapet curbs, foundation walls, roofing systems and at the interface of dissimilar materials as indicated on Drawings.
 - 2. Prime surfaces in an intermittent pattern, at a rate of 200-250 sq. ft/gal where appropriate to achieve surface adhesion as per manufacturers' instructions and allow to dry.
 - 3. Align and position self-adhering transition membrane, remove protective film and press firmly into place. Provide minimum 3-inch lap to all substrates.
 - 4. Lap weather barrier over flashing at heads of openings, unless otherwise indicated.

5. Ensure minimum 2 inches overlap at all side laps and minimum 3 inches overlap at all end laps of membrane.
 6. Roll all laps and membrane with a countertop roller to ensure seal.
- D. Rough Openings:
1. Prime surfaces in an intermittent pattern, at a rate of 200-250 sq. ft/gal where appropriate to achieve surface adhesion as per manufacturers' instructions and allow to dry.
 2. Place specified SBS modified self-adhering flashing membrane across sills. Pre-treat inside corners with a bead of termination sealant. Install sill pan membrane and end dam terminations, seal cuts and terminations with termination sealant.
 3. Wrap jamb of rough openings with self-adhering transition membrane overlapping sill flashings.
 4. Align and position self-adhering transition membrane, remove protective film and press firmly into place. Ensure minimum 2 inches overlap at all side laps and minimum 3 inches overlap at all end laps of membrane.
 5. Roll all laps and membrane with a countertop roller to ensure seal.
- E. Primary Water Resistive Air Barrier:
1. Apply self-adhering water resistive air barrier membrane complete and continuous to substrate in a sequential overlapping weatherboard method starting at bottom or base of wall and working up in accordance with manufacturer's recommendations and written instructions. Stagger all vertical joints.
 - a. Cut to manageable sections, align and position self-adhering membrane to substrate, remove top panel of protective release film and press firmly into place.
 - b. Ensure alignment, hold membrane in place to avoid wrinkles and sequentially remove remaining panels of protective film and press firmly into place.
 - c. Ensure minimum 3-inch overlap at all ends and 2-inch side laps of subsequent membrane applications.
 - d. Pressure roll all membrane surfaces, laps and flashings with a countertop roller or 'J-roller' to ensure appropriate surface adhesion.
 - e. Seal around all penetrations through weather barrier with termination mastic/sealant, membrane counter-flashing or other procedures according to manufacturer's instructions, ensuring chemical compatibility among adjoining materials.
 - f. At the end of each day's work seal the top edge of the membrane where it meets the substrate with termination sealant. Trowel apply a feathered edge to seal termination and shed water.
- F. Application of Termination Sealant:
1. Seal membrane terminations, heads of mechanical fasteners, masonry tie fasteners, around penetrations, duct work, electrical and other apparatus extending through the primary water resistive air barrier membrane and around the perimeter edge of membrane terminations at window and door frames with specified termination sealant.
 2. Seal the leading edge of membrane terminations and reverse laps.

3.3 CLEANING AND PROTECTION

- A. Protect weather barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.
1. Protect weather barrier from exposure to UV light and harmful weather exposure as required by manufacturer. If exposed to these conditions for more than time period allowed by manufacturer, remove and replace weather barrier or if approved by manufacturer in writing, install additional full-thickness weather barrier application after repairing and preparing the overexposed membrane according to weather barrier manufacturer's written instructions.

2. Protect weather barrier from contact with incompatible materials and sealants not approved by weather barrier manufacturer.
- B. Clean spills, stains, and soiling from construction that would be exposed in the completed Work, using cleaning agents and procedures recommended by manufacturer of affected construction.
 - C. Remove masking materials after installation.

END OF SECTION 07 25 00

SECTION 07 42 13 - FORMED METAL WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Concealed-fastener, lap-seam metal wall panels.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, metal panel Installer, metal panel manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects metal panels, including installers of doors, windows, and louvers.
 - 2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 3. Review methods and procedures related to metal panel installation, including manufacturer's written instructions.
 - 4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
 - 5. Review flashings, special siding details, wall penetrations, openings, and condition of other construction that affect metal panels.
 - 6. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
 - 7. Review temporary protection requirements for metal panel assembly during and after installation.
 - 8. Review of procedures for repair of metal panels damaged after installation.
 - 9. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
- B. Shop Drawings:
 - 1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
 - 2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.
- C. Samples for Initial Selection: For each type of metal panel indicated with factory-applied finishes.
 - 1. Include Samples of trim and accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below:
 - 1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.

1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranties: For special warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For metal panels to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

1.8 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.9 COORDINATION

- A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including rupturing, cracking, or puncturing.
 - b. Deterioration of metals and other materials beyond normal weathering.
 - 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Delta E units when tested according to ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.

- c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
- 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:
 - 1. Wind Loads: As indicated on Drawings.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

2.2 CONCEALED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. Provide factory-formed metal panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. ATAS International, Inc.
 - 2. CENTRIA Architectural Systems.
 - 3. MBCI.
 - 4. Morin - A Kingspan Group Company.
- C. Concealed-Fastener Metal Wall Panel – FMWP: vertical orientation.
 - 1. Basis of Design Product: MBCI, FW-120-2 Panel.
 - 2. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A653/A653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A792/A792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A755/A755M.
 - a. Nominal Thickness: 0.040 inch (20 gage).
 - b. Exterior Finish: Two-coat fluoropolymer.
 - c. Color: As selected by Architect from manufacturer's full range.
 - 3. Panel Coverage: 12 inches.
 - 4. Panel Height: 1.5 inches, nominal.
- D. Mitered Corners: Structurally-bonded horizontal interior and exterior trimless corners matching metal wall panel material, profile, and factory-applied finish, fabricated and finished by metal wall panel manufacturer.
 - 1. Welded, riveted, fastened, or field- fabricated corners do not meet the requirements of this specification.

2.3 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Subframing and Furring: ASTM C645, cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 coating designation or ASTM A792/A792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
 - 1. Concealed Clips: Galvanized steel, not less than 0.06 inch (16 gage) nominal thickness, designed to allow unimpeded thermal movement of panel and configured to hold panel minimum 1/2 inch from substrate
 - 2. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
 - 3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 - 4. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
- D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.
- E. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
 - 1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2-inch-wide and 1/8 inch thick.
 - 2. Joint Sealant: ASTM C920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
 - 3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.4 FABRICATION

- A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 - 3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.

4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
 - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

2.5 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Steel Panels and Accessories:
 1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
 1. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
 - a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal panel manufacturer's written recommendations.

3.3 INSTALLATION

- A. Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 1. Shim or otherwise plumb substrates receiving metal panels.
 - 2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
 - 3. Install screw fasteners in predrilled holes.
 - 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 - 5. Install flashing and trim as metal panel work proceeds.
 - 6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
 - 7. Fasten flashings and trim around openings and similar elements with self-tapping screws.
 - 8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
- B. Fasteners:
 - 1. Steel Panels: Use stainless steel fasteners.
- C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
 - 1. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
 - 2. Flash and seal panels with weather closures at perimeter of all openings.
- E. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal wall panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.
- F. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
 - 1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.
 - 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.4 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
- C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07 42 13

SECTION 07 46 46 - FIBER-CEMENT SIDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes fiber-cement siding.
- B. Related Requirements:
 - 1. Section 06 10 00 "Rough Carpentry" for wood furring, grounds, nailers, and blocking.
 - 2. Section 07 25 00 "Weather Barriers" for weather-resistive barriers.

1.2 COORDINATION

- A. Coordinate siding installation with flashings and other adjoining construction to ensure proper sequencing.

1.3 SUBMITTALS

- A. Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Samples for Verification: For each type, color, texture, and pattern required.
 - 1. 12-inch-long-by-actual-width Sample of siding.
 - 2. 12-inch-long-by-actual-width Samples of trim and accessories.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for fiber-cement siding.
- D. Sample Warranty: For special warranty.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of product, including related accessories, to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.
 - 1. Build mockups for fiber-cement siding and soffit including accessories.
 - a. Size: 48 inches long by 60 inches high.
 - b. Include outside corner on one end of mockup and inside corner on the other end.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with labels intact until time of use.
- B. Store materials on elevated platforms, under cover, and in a dry location.

- C. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace products that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including cracking and deforming.
 - b. Deterioration of materials beyond normal weathering.
 - 2. Warranty Period: 30 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain products, including related accessories, from single source from single manufacturer.

2.2 FIBER-CEMENT SIDING

- A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.
 - 1. CertainTeed Corporation.
 - 2. James Hardie.
 - 3. GAF Materials Corporation.
- B. Labeling: Provide fiber-cement siding that is tested and labeled according to ASTM C 1186 by a qualified testing agency acceptable to authorities having jurisdiction.
- C. Nominal Thickness: Not less than 5/16 inch.
- D. Horizontal Pattern: Boards width as indicated on Drawings wide in plain style.
 - 1. Texture: Smooth.
- E. Panel Texture: 48-inch- wide sheets with smooth texture.
- F. Factory Priming: Manufacturer's standard acrylic primer.

2.3 ACCESSORIES

- A. Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.
 - 1. Provide accessories matching color and texture of adjacent siding unless otherwise indicated.
- B. Decorative Accessories: Provide the following fiber-cement decorative accessories as indicated:
 - 1. Moldings and trim.
- C. Flashing: Provide aluminum flashing complying with Section 07 62 00 "Sheet Metal Flashing and Trim" at window and door heads and where indicated.
 - 1. Finish for Aluminum Flashing: High-performance organic finish.
- D. Fasteners:

1. For fastening to wood, use siding nails or ribbed bugle-head screws of sufficient length to penetrate a minimum of 1 inch into substrate.
2. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch, or three screw-threads, into substrate.
3. For fastening fiber cement, use hot-dip galvanized or stainless-steel fasteners.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of fiber-cement siding and related accessories.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
 1. Do not install damaged components.
 2. Install fasteners no more than 24 inches on center.
- B. Install joint sealants as specified in Section 07 92 00 "Joint Sealants" and to produce a weathertight installation.

3.4 ADJUSTING AND CLEANING

- A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.
- B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 07 46 46

SECTION 07 53 23 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Adhered ethylene-propylene-diene-monomer (EPDM) roofing system.
 - 2. Substrate board.
 - 3. Vapor retarder.
 - 4. Roof insulation.
 - 5. Cover board.
 - 6. Walkways.
- B. Section includes the installation of insulation strips in ribs of roof deck. Insulation strips are furnished under Section 05 31 00 "Steel Decking."
- C. Related Requirements:
 - 1. Section 06 10 00 "Rough Carpentry" for wood nailers, curbs, and blocking; and for wood-based, structural-use roof deck panels.
 - 2. Section 07 62 00 "Sheet Metal Flashing and Trim" for metal roof flashings and counter-flashings.

1.2 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, roofing Installer, roofing system manufacturer's representative, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
 - 7. Review governing regulations and requirements for insurance and certificates if applicable.
 - 8. Review temporary protection requirements for roofing system during and after installation.
 - 9. Review roof observation and repair procedures after roofing installation.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work, including:
 - 1. Layout and thickness of insulation.
 - 2. Base flashings and membrane termination details.
 - 3. Flashing details at penetrations.
 - 4. Tapered insulation layout, thickness, and slopes.
 - 5. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
 - 6. Tie-in with adjoining air barrier.
- C. Samples for Verification: For the following products:
 - 1. Walkway pads, of color required.
- D. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer.
- B. Field quality-control reports.
- C. Sample Warranties: For manufacturer's special warranties.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.10 WARRANTY

- A. Roofing Manufacturer's Warranty: Manufacturer's non-prorated, no-dollar-limit warranty in which the manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
 - 1. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, substrate board, and other components of roofing system.
 - 2. Warranty Period: 20 years from date of Substantial Completion.
- B. Roofing Installer's Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, and walkway products, for the following warranty period:
 - 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.
 - 1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
 - 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746, ASTM D4272, or the Resistance to Foot Traffic Test in FM Approvals 4470.
 - 3. Hail Resistance: UL 2218 Class 4 rating.
- B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested according to FM Approvals 4474, UL 580, or UL 1897 by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
 - 1. Wind Uplift Pressure: Determine loads based on criteria indicated on Structural Drawings.
 - 2. Safety Factor: Not less than 2.0
- D. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class B; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

2.2 ETHYLENE-PROPYLENE-DIENE-TERPOLYMER (EPDM) ROOFING

- A. EPDM Sheet: ASTM D 4637, Type I, nonreinforced, uniform, flexible EPDM sheet.

1. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Carlisle SynTec Incorporated.
 - b. Firestone Building Products.
 - c. GenFlex Roofing Systems.
 - d. Johns Manville; a Berkshire Hathaway company.
 - e. Versico Incorporated.
3. Thickness: 60 mils, nominal.
4. Exposed Face Color: Black.

2.3 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing.
 1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: 60-mil- thick EPDM, partially cured or cured, according to application.
- C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- D. Bonding Adhesive: Manufacturer's standard.
- E. Seaming Material: Manufacturer's standard, synthetic-rubber polymer primer and 3-inch- wide minimum, butyl splice tape with release film.
- F. Lap Sealant: Manufacturer's standard, single-component sealant, colored to match membrane roofing.
- G. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.
- H. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8-inch-thick; with anchors.
- I. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening membrane to substrate, and acceptable to roofing system manufacturer.
- J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, molded pipe boot flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

2.4 SUBSTRATE BOARDS

- A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate.
 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Georgia-Pacific Corporation; Dens Deck.
 - b. National Gypsum Company; DEXcell FA Glass Mat Roof Board.
 - c. USG Corporation; USG Securock Brand Glass-Mat Roof Board.
 2. Thickness: Type X, 5/8 inch thick.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening substrate panel to roof deck.

2.5 VAPOR RETARDER

- A. Self-Adhering Vapor Barrier: SBS modified bitumen adhesive, factory laminated to a tri-laminate woven, high-density polyethylene or reinforced composite aluminum foil top surface with polymeric release liner.
 - 1. Products:
 - a. Carlisle SynTec Incorporated; VapAir Seal MD Air and Vapor Barrier.
 - b. Firestone; V-Force Vapor Barrier Membrane.

2.6 ROOF INSULATION

- A. General:
 - 1. Provide preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from manufacturer's standard sizes suitable for application, and of thicknesses required to achieve specified R-value.
- B. Roof Insulation: UL classified; FM Class 1 Approved; in compliance with FM 4450 or UL 1256 for direct-to-steel deck installation where applicable. Provide one of the following:
 - 1. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
 - a. R-value of 5.0 per inch shall be used to calculate the required thickness of polyisocyanurate board insulation.
 - 2. Expanded-Polystyrene Board Insulation (EPS): ASTM C 578, Type IX, 1.8-lb/cu. ft. minimum density.
 - a. R-value of 4.6 per inch shall be used to calculate the required thickness of the EPS board insulation
- C. Tapered Insulation: Provide factory-tapered insulation boards.
 - 1. Minimum Thickness: 1/4 inch.
 - 2. Slope:
 - a. Roof Field: 1/4 inch per foot unless otherwise indicated on Drawings.
 - b. Saddles and Crickets: 1/2 inch per foot unless otherwise indicated on Drawings.

2.7 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
 - 1. Bead-applied, low-rise, one-component or multicomponent urethane adhesive.
- D. Cover Board: Subject to compliance with requirements, provide one of the following:
 - 1. Glass-Mat, Water-Resistant Gypsum Cover Board: ASTM C 1177/C 1177M; 1/4-inch-thickness.
 - a. Georgia-Pacific Corporation; Dens Deck or Dens Deck Prime with EONIC Technology.
 - b. National Gypsum Company; DEXcell FA Glass Mat Roof Board.
 - c. USB Securock Glass-Mat Roof Board.
 - 2. High-Density Polyisocyanurate Cover Board: ASTM C1289 Type II, Class 4, Grade 1; closed-cell, polyisocyanurate foam and coated glass facers; 1/2-inch thickness.

- a. Carlisle SynTec Incorporated; SecurShield HD Cover Board
- b. Firestone Building Products; Isogard HD Cover Board.

2.8 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads, approximately 3/16-inch-thick and acceptable to roofing system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
 - 1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
 - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 3. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.
 - a. Test Frequency: One test probe per each 1000 sq. ft., or portion thereof, of roof deck, with not less than three tests probes.
 - b. Submit test reports within 24 hours after performing tests.
 - 4. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.
 - 5. Verify that joints in precast concrete roof decks have been grouted flush with top of concrete.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Install sound-absorbing insulation strips according to acoustical roof deck manufacturer's written instructions.

3.3 INSTALLATION OF ROOFING, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- C. Install roofing and auxiliary materials to tie into existing roofing to maintain weathertightness of transition and to not void warranty for existing roofing system.

3.4 INSTALLATION OF SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, with end joints staggered not less than 24 inches in adjacent rows.
 - 1. Tightly butt substrate boards together.
 - 2. Cut substrate board to fit tight around penetrations and projections, and to fit tight to intersecting sloping roof decks.

3.5 INSTALLATION OF VAPOR RETARDER

- A. Self-Adhering-Sheet Vapor Retarder: Prime substrate if required by manufacturer. Install self-adhering-sheet vapor retarder over area to receive vapor retarder, side and end lapping each sheet a minimum of 3-1/2 and 6 inches, respectively.
 - 1. Extend vertically up parapet walls and projections to a minimum height equal to height of insulation and cover board.
 - 2. Seal laps by rolling.
- B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into roofing system.

3.6 INSTALLATION OF INSULATION AND COVER BOARDS

- A. Coordinate installing roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install insulation under areas of roofing in thicknesses required to achieve R-value indicated on Drawings.
 - 1. Install insulation with end joints staggered not less than 12 inches in adjacent rows and with long joints continuous at right angle to flutes of decking.
 - 2. Install two or more layers of insulation with joints of each succeeding layer staggered from joints of previous layer a minimum of 12 inches in each direction.
 - 3. Make joints between adjacent insulation boards not more than 1/4 inch in width.
 - 4. Trim insulation neatly to fit within 1/4 inch of nailers, penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - 5. Fill gaps exceeding 1/4 inch with insulation.
 - 6. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
 - a. Trim insulation so that water flow is unrestricted.
- D. Install cover board over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction.
 - 1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - 2. At internal roof drains, conform to slope of drain sump.
 - a. Trim cover board so that water flow is unrestricted.
 - 3. Cut and fit cover board tight to nailers, projections, and penetrations.
- E. Mechanically Fastened Insulation and Cover Board: Secure top layer to deck using mechanical fasteners specifically designed and sized for fastening specified board-type to deck type. Locate fasteners at high point of deck flutes at acoustical metal deck locations or where metal deck remains permanently exposed to view.

1. Fasten insulation and cover board to resist uplift pressure at corners, perimeter, and field of roof.

F. Install tapered insulation under areas of roofing to conform to slopes indicated.

3.7 INSTALLATION OF ADHERED ROOF MEMBRANE

- A. Adhere roofing over area to receive roofing according to membrane roofing system manufacturer's written instructions.
- B. Unroll membrane roofing and allow to relax before installing.
- C. Start installation of roofing in presence of roofing system manufacturer's technical personnel.
- D. Accurately align roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to substrate and underside of roofing at rate required by manufacturer and allow to partially dry before installing roofing. Do not apply to splice area of roofing.
- F. In addition to adhering, mechanically fasten roofing membrane securely at terminations, penetrations, and perimeters of roofing.
- G. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- H. Tape Seam Installation: Clean and prime both faces of splice areas, apply splice tape, and firmly roll side and end laps of overlapping roofing according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of roofing terminations.
- I. Repair tears, voids, and lapped seams in roofing that do not comply with requirements.
- J. Spread sealant or mastic bed over deck-drain flange at roof drains, and securely seal membrane roofing in place with clamping ring.

3.8 INSTALLATION OF BASE FLASHING

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.9 INSTALLATION OF WALKWAYS

- A. Flexible Walkways: Install walkway products in locations indicated.
 - 1. Provide 6-inch clearance between adjoining pads.
 - 2. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.10 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion. Coordinate date and time of final roof inspection with Owner's Representative to allow attendance.
- B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.11 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.12 ROOFING INSTALLER'S WARRANTY

PROJECT:

OWNER:

The undersigned agrees, for a period of two (2) years from the date of Substantial Completion of the Project, to repair leaks or other faults due to improper materials and workmanship and replace defective materials that may develop in the roofing system. This warranty includes all components of the roofing system installed under this contract.

Cost of labor and materials required to fulfill this agreement will be borne by the undersigned on a non-prorated basis. Leaks shall be responded to within 24 hours and required repairs and replacement shall be completed within seven (7) days from the date of notification that defects exist; otherwise the Owner may have such repairs and/or replacement made and the undersigned agrees to pay all costs of same within thirty (30) days from date that such repair work is done.

Start Date of Guarantee (Date of Substantial Completion) _____

Signature

Roofing Subcontractor

END OF SECTION 07 53 23

SECTION 07 62 00-SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Parapet copings.
 - 2. Flashings and counter-flashings.
 - 3. Reglets and flashings at masonry.
 - 4. Roof-edge drainage systems (including hanging gutters, screens, and downspouts).
- B. Related Sections:
 - 1. Division 06 Section "Rough Carpentry" for wood nailers, curbs, and blocking.
 - 2. Division 07 Section "EPDM roofing"

1.2 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Fabricate and install copings capable of resisting forces according to ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.
- C. Thermal Movements: Provide sheet metal flashing and trim that allows for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change (Range): 120° F, ambient; 180° F, material surfaces.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- B. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work. Include the following:
 - 1. Identification of material, thickness, weight, and finish for each item and location in Project.
 - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
 - 3. Details for joining, supporting, and securing sheet metal flashing and trim, including layout of fasteners, cleats, clips, and other attachments. Include pattern of seams.
 - 4. Details of termination points and assemblies, including fixed points.
 - 5. Details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction.
 - 6. Details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counter-flashings as applicable.
 - 7. Details of special conditions.
 - 8. Details of connections to adjoining work.
 - 9. Detail formed flashing and trim at a scale of not less than 3 inches per 12 inches.

- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
 - 1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.
- D. Manufacturer Certificates: Signed by sheet metal manufacturer certifying that coping system complies with requirements specified in "Performance Requirements" Article.
 - 1. Submit evidence of meeting performance requirements.
- E. Qualification Data: For qualified fabricator.
- F. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Sheet Metal Coping: Copings shall be certified by the coping manufacturer or fabricator to meet performance design criteria according to the following test standards:
 - 1. ANSI/SPRI ES-1 Test RE-3 for Coping: Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems (current edition). The coping system shall be tested simultaneously on horizontal and vertical surfaces and shall exceed horizontal and vertical design wind pressure as calculated in accord with the ANSI/SPRI ES-1 Test RE-3.
- C. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.
 - 1. Sheet metal copings shall be certified by the coping manufacturer or fabricator to meet performance design criteria according to ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems (Current Edition).

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

1.6 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
- B. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface.
 - 1. Thickness: 0.040 inch, unless otherwise indicated.
 - 2. Factory Prime Coating: Pretreat metal with white or light-colored, factory-applied, baked-on epoxy primer coat; minimum dry film thickness of 0.2 mil.
 - 3. Finish: Field painted finish as specified in Section 09 91 00.
- C. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, pre-painted by the coil-coating process to comply with ASTM A 755/A 755M.
 - 1. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - b. Color(s): As selected by Architect from manufacturers full color range.
 - 2. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

2.2 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
 - 1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F.
 - 2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F.
 - 3. Products: Subject to compliance with requirements, provide one of the following:
 - a. Carlisle Coatings & Waterproofing Inc.; CCW WIP 300HT.
 - b. GCP Applied Technologies; Ice and Water Shield HT.
 - c. Henry Company; Blueskin PE200 HT.
 - d. Metal-Fab Manufacturing, LLC; MetShield.
 - e. Owens Corning; WeatherLock Metal High Temperature Underlayment.

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.

- b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
- 2. Fastener Material: ASTM F 2329 or Series 300 stainless steel.
- C. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape 1/2-inch-wide and 1/8 inch thick.
- D. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- E. Reglets: Recessed type, stainless-steel.
- F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- G. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.
- H. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.4 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
 - 1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 - 2. Obtain field measurements for accurate fit before shop fabrication.
 - 3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Fabricate copings and flashings in minimum 96-inch-long, but not exceeding 10-foot-long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners and seal watertight.
 - 1. Coping Profile: As indicated on Drawings.
 - 2. Joint Style: Butt, with 12-inch- wide, concealed backup plate.
- C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- D. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- E. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- F. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant.

- G. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- H. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.
- I. Do not use graphite pencils to mark metal surfaces.
- J. Hanging Gutters:
 - 1. Fabricate to cross section indicated, complete with end pieces, outlet tubes, and other accessories as required.
 - 2. Fabricate in minimum 96-inch- long sections.
 - 3. Furnish flat-stock gutter straps or gutter brackets fabricated from same metal as gutters, of size recommended by SMACNA but not less than twice the gutter thickness.
 - 4. Fabricate expansion joints, expansion-joint covers, gutter bead reinforcing bars, and gutter accessories from same metal as gutters.
 - 5. Gutter Profile: K-Style in accordance with cited sheet metal standard.
 - 6. Gutters with Girth up to 15 Inches (380 mm): Fabricate from the following materials:
 - a. Coated Steel, 0.022 inch (0.56 mm) thick.
- K. Downspouts: Fabricate downspouts complete with matching elbows. Furnish with metal hangers, from same material as downspouts, and anchors.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
 - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 - 3. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
 - 4. Install sealant tape where indicated.
 - 5. Torch cutting of sheet metal flashing and trim is not permitted.
 - 6. Do not use graphite pencils to mark metal surfaces.

- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.
 - 1. Coat back side of uncoated aluminum sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate wood substrates not less than 3/4 inch for screws.
- E. Seal joints as shown and as required for watertight construction.
 - 1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40° and 70° F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40° F.
 - 2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

3.3 FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
- B. Copings: Anchor to resist uplift and outward forces according to "Performance Requirements" indicated.
- C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Lap counterflashing joints a minimum of 4 inches and bed with sealant. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.
- D. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.
- E. Joints: Where exposed coping or flashing length is less than the minimum specified, install as a single piece without joints. Where the length is greater than the minimum specified, install as to minimize the number of joints.

3.4 ROOF DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.
- B. Hanging Gutters:
 - 1. Join sections with lapped joints sealed with sealant. Provide for thermal expansion.
 - 2. Attach gutters at eave or fascia to firmly anchored gutter brackets or straps spaced not more than 36 inches apart.
 - 3. Provide end closures and seal watertight with sealant.
 - 4. Slope to downspouts.
 - 5. Fasten gutter spacers to front and back of gutter.
 - 6. Loosely lock straps to front gutter bead and anchor to roof deck.
 - 7. Anchor and loosely lock back edge of gutter to continuous cleat, eave or apron flashing.
 - 8. Anchor back of gutter that extends onto roof deck with cleats spaced not more than 24 inches apart.
 - 9. Install gutter with expansion joints at locations indicated, but not exceeding, 50 feet apart. Install expansion-joint caps.
 - 10. Install continuous gutter screens on gutters with noncorrosive fasteners, removable for cleaning gutters.
- C. Downspouts: Join sections with 1-1/2-inch telescoping joints.
 - 1. Provide hangers with fasteners designed to hold downspouts securely to walls. Locate hangers at top and bottom and at approximately 60 inches on center in between.
 - 2. Provide elbows at base of downspout to direct water away from building.
- D. Conductor Heads: Anchor securely to wall with elevation of conductor head rim 1 inch below scupper discharge.

3.5 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING AND PROTECTION

- A. Clean off excess sealants.
- B. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturers written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.
- C. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07 62 00

SECTION 07 92 00-JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
 - 1. Exterior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Construction joints in cast-in-place concrete.
 - b. Control and expansion joints in unit masonry.
 - c. Joints between different materials listed above.
 - d. Perimeter joints between exterior wall surfaces and frames of doors, windows, and louvers.
 - e. Other joints as indicated.
 - 2. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints of exterior openings where indicated.
 - c. Vertical joints on exposed surfaces of interior unit masonry, concrete walls, and partitions.
 - d. Perimeter joints between interior wall surfaces and frames of interior doors and windows.
 - e. Other joints as indicated.
- B. Related Sections include the following:
 - 1. Division 08 Section "Glazing" for glazing sealants.

1.2 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Qualification Data: For Installer.
- D. Field Test Report Log: For each elastomeric sealant application.
- E. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.5 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40° F.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.6 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products listed in Sealant Schedule at end of Part 3.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

- B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.4 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type B (bicellular material with a surface skin) as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles

remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

- a. Concrete.
 - b. Masonry.
 - c. Wood.
 - d. Unglazed surfaces of ceramic tile.
3. Remove laitance and form-release agents from concrete.
 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile.

- B. Joint Priming: Prime joint substrates, where recommended by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 1. Do not leave gaps between ends of sealant backings.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Perform field-adhesion testing in compliance with sealant manufacturer's requirements for warranty period indicated.
 1. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
 2. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

- A. Multicomponent, Non-sag Urethane Sealant: ASTM C 920, Type M, Grade NS, Class 25 or Class 50, for Use T, NT, and I.
 1. Applications: Exterior non-traffic joints, unless otherwise indicated.
 2. Products:
 - a. Pecora Corporation; Dynatrol II.
 - b. Sika Corporation; Sikaflex-2c NS.
 - c. Sonneborn, Division of BASF; NP 2.
 - d. Tremco; Dymeric 240.
- B. Single-Component, Nonsag, Urethane Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
 1. Application: All interior non-rated, non-traffic joints, unless otherwise specified.
 2. Products:
 - a. BASF Building Systems; Sonolastic NP 1.
 - b. Pecora Corporation; Dynatrol I-XL.

- c. Sika Corporation, Inc.; Sikaflex-1a.
- d. Tremco Incorporated; Dymonic.

END OF SECTION 07 92 00

SECTION 08 03 14 - HISTORIC TREATMENT OF WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes historic treatment of wood doors in the form of the following:
 - 1. Repairing wood doors and trim.
 - 2. Replacing wood door leaves and frames.
 - 3. Reglazing.
 - 4. Repairing, refinishing, and replacing hardware.
 - 5. Repairing storm doors and screen doors.
 - 6. Replacing storm-door and screen-door units.
 - 7. Providing new storm-door and screen-door units.
- B. Related Requirements:
 - 1. Section 01 35 91 "Historic Treatment Procedures."

1.2 DEFINITIONS

- A. Door: Generally, this term includes door frame, leaves, hardware, side panels or lights, fan light, transom, storm and screen doors, and storm vestibule unless otherwise indicated by context.
- B. Glazing: Includes glass, glazing points, glazing tapes, glazing sealants, and glazing compounds.
- C. Storm Vestibule: Removable winter enclosure erected on a covered porch, which includes side panels or lights and door leaf and may include top panels.
- D. Wood Door Component Terminology: Wood door components for historic treatment work include the following classifications:
 - 1. Frame Components: Head, jambs, stop, and threshold or sill.
 - 2. Leaf Components: Stiles, rails, and muntins.
 - 3. Exterior Trim: Exterior casing, brick mold, and cornice or drip cap.
 - 4. Interior Trim: Casing.

1.3 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
 - 1. Review minutes of Preliminary Historic Treatment Conference that pertain to historic treatment of wood doors.
 - 2. Review methods and procedures related to historic treatment of wood doors including, but not limited to, the following:
 - a. Historic treatment specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Fire-protection plan.
 - d. Wood door historic treatment program.
 - e. Coordination with building occupants.

1.4 SEQUENCING AND SCHEDULING

- A. Perform historic treatment of wood doors in the following sequence, which includes work specified in this and other Sections:

1. Label each door frame with permanent opening-identification number in inconspicuous location.
2. Tag existing door leaves, storm doors, and storm-vestibule panels with opening-identification numbers and remove for on-site or off-site repair. Indicate on tags the locations on door of each component, such as "left-hand door leaf," "right-hand reverse door leaf," "top Dutch-door leaf," "bottom Dutch-door leaf," "first left-side storm-vestibule panel," and "second left-side storm-vestibule panel."
3. Remove door, dismantle hardware, and tag hardware with door opening-identification numbers.
4. In the shop, label each leaf, storm door, storm-vestibule panel, and screen-door unit with permanent opening-identification number in inconspicuous location and remove site-applied tags.
5. Install temporary protection and security at door openings.
6. Sort units by condition, separating those that need extensive repair.
7. Clean surfaces.
8. General Wood-Repair Sequence:
 - a. Remove paint to bare wood.
 - b. Rack frames slightly to inject adhesive into mortise and tenon joints; square frames to proper fit before adhesive sets.
 - c. If glass thicker than original is required, rout existing muntins to required rebate size.
 - d. Repair wood by consolidation, member replacement, partial member replacement, and patching.
 - e. Sand, prime, fill, sand again, and prime surfaces again for refinishing.
9. Repair, refinish, and replace hardware if required. Reinstall operating hardware.
10. Install glazing.
11. Remove temporary protection and security at door openings.
12. Reinstall units.
13. Apply finish coats.
14. Install remaining hardware and weather stripping.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 1. Include recommendations for product application and use. Include test data substantiating that products comply with requirements.
- B. Shop Drawings: For locations and extent of wood-door repair and replacement work.
 1. Include plans, elevations, sections, and details of replacement parts indicating materials, profiles, joinery, reinforcing, method of splicing into or attaching to existing wood door, accessory items, and finishes.
 2. Include field-verified dimensions and the following:
 - a. Full-size shapes and profiles with complete dimensions for replacement components and their jointing, showing relation of existing to new components.
 - b. Templates and directions for installing hardware and anchorages.
 - c. Identification of each new unit and its corresponding door locations in the building on annotated plans and elevations.
 - d. Provisions for sealant joints and flashing as required for location.
- C. Samples for Initial Selection: For each type of exposed wood and finish.
 1. Identify wood species, cut, and other features.
 2. Include Samples of hardware and accessories involving color selection.
- D. Samples for Verification: For the following products in manufacturer's standard sizes unless otherwise indicated, finished as required for use in the Work:

1. Replacement Units: 12-inch-long, full-size frame and leaf sections with applied finish.
2. Replacement Members: 12 inches long for each replacement member, including parts of frame, leaf, exterior trim, and interior trim.
 - a. Additional Samples of replacement members that show fabrication techniques, materials, and finishes as requested by Architect.
3. Repaired Wood Door Members: Prepare Samples using existing wood door members removed from site, repaired, and prepared for refinishing.
4. Refinished Wood Door Members: Prepare Samples using existing wood door members removed from site, repaired, and refinished.
5. Hardware: Full-size units with each factory-applied or restored finish.
6. Weather Stripping: 12-inch-long sections.
7. Glass: Full-size units of each type and appearance.

1.6 INFORMATIONAL SUBMITTALS

- A. Wood Door Historic Treatment Program: Submit before work begins.

1.7 QUALITY ASSURANCE

- A. Wood-Repair-Material Manufacturer Qualifications: A firm regularly engaged in producing **wood** consolidant and wood-patching compound that have been used for similar historic wood-treatment applications with successful results, and with factory-authorized service representatives who are available for consultation and Project-site inspection and on-site assistance.
- B. Wood Door Historic Treatment Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for historic treatment work, including protection of surrounding materials and Project site.
 1. If materials and methods other than those indicated are proposed for any phase of historic treatment work, add a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project.
- C. Mockups: Prepare mockups of historic treatment repair processes to demonstrate aesthetic effects and to set quality standards for materials and execution and for fabrication and installation. Prepare mockups so they are as inconspicuous as practicable.
 1. Locate mockups in locations that enable viewing under same conditions as the completed Work.
 2. Wood Door Repair: Prepare one entire door unit to serve as mockup to demonstrate Samples of each type of repair of wood door members including frame, leaves, glazing, and hardware.
 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Pack, deliver, and store products in suitable packs, heavy-duty cartons, or wooden crates; surround with sufficient packing material to ensure that products will not be deformed, broken, or otherwise damaged.

- B. Store products inside a well-ventilated area, protected from weather, moisture, soiling, abrasion, extreme temperatures, and humidity, and where environmental conditions comply with manufacturer's requirements.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with historic treatment of wood doors only when existing and forecasted weather conditions are within the environmental limits set by each manufacturer's written instructions and specified requirements.

PART 2 - PRODUCTS

2.1 HISTORIC TREATMENT OF WOOD DOORS, GENERAL

- A. Quality Standard: Comply with applicable requirements in Section 12, "Historic Restoration Work," and related requirements in AWI/AWMAC/WI's "Architectural Woodwork Standards" for construction, finishes, grades of wood doors, and other requirements unless otherwise indicated.
 - 1. Exception: Industry practices cited in the "Architectural Woodwork Standards," Section 12, Article 1.5, "Industry Practices," do not apply to the work of this Section.

2.2 REPLICATED WOOD DOOR UNITS

- A. Replicated Wood Door Frames and Leaves: Custom-fabricated replacement wood units and trim, with operating and latching hardware.
 - 1. Joint Construction: Joints matching existing.
 - 2. Wood Species: Match wood species of existing exterior door and frame parts.
 - 3. Wood Cut: Match cut of existing exterior wood door and frame parts.
 - 4. Wood Member and Trim Profiles: Match profiles and detail of existing door members and trim.
 - 5. Hardware: Reuse existing unless otherwise indicated.
 - 6. Glazing Stops: Provide replacement glazing stops coordinated with glazing system indicated.
 - 7. Weather Stripping: Full-perimeter weather stripping for each exterior door leaf.
 - 8. Date Identification: Emboss on a concealed surface of each replaced door frame and leaf, in easily read characters, "DOOR FRAME MADE <Insert year>" or "DOOR LEAF MADE <Insert year>." Manufacturer's name may also be embossed.

2.3 STORM DOORS

- A. General: Custom fabricated, tight fitting, replicating appearance of existing storm door, and with operating and latching hardware.
 - 1. Make storm doors removable for cleaning and storage.
 - 2. Interchangeable Storm and Screen Inserts: Equip storm-door leaf with **full height or** partial height panels fitting into stile-and-rail construction of storm door and secured with six or eight thumb-operable clips on storm-door to secure panels in door leaf. Storm insert shall be fully glazed with subdivided lights and screen insert fully screened.
 - 3. Joint Construction: Joints matching existing.
 - 4. Wood Species: Match wood species of primary door and frame parts.
 - 5. Wood Cut: Match cut of existing exterior wood door and frame parts.
 - 6. Wood Member Profiles: Match wood profiles of existing storm door] [As indicated on Drawings.
 - 7. Hardware: Reuse existing unless otherwise indicated.
 - 8. Glazing Material: Uncoated clear safety glass.

9. Date Identification: Emboss on a concealed surface of each storm door, in easily read characters, "STORM DOOR MADE <Insert year>." Manufacturer's name may also be embossed.

2.4 WOOD-REPLACEMENT MATERIALS

- A. Wood, General: Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch deep by 2 inches wide.
 1. Species: Ponderosa pine, or match species of each existing type of wood component or assembly, unless otherwise indicated.
- B. Frame Heads and Jambs and Exterior Trim: Match existing species.
- C. Exterior Trim: Match existing species.
- D. Thresholds or Sills: African mahogany or Western red cedar.
- E. Leaf Components: Match existing species.
- F. Interior Trim: Match existing species.

2.5 WOOD-REPAIR MATERIALS

- A. Source Limitations: Obtain wood consolidant and wood-patching compound from single source from single manufacturer.
- B. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated because of weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood. Subject to compliance with requirements, incorporate products from one of the following manufacturers:
 1. Abatron, Inc., Kenosha, WI.
 2. ConServ Epoxy LLC, Northford CT.
 3. Gougeon Brothers, Inc., Bay City, MI.
 4. Protective Coating Company, Allentown, PA.
 5. System Three Resins, Inc., Auburn, WA.
- C. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended in writing by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated because of weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge. Subject to compliance with requirements, incorporate products from one of the following manufacturers:
 1. Abatron, Inc., Kenosha, WI.
 2. Advanced Repair Technology, Inc., Cherry Valley, NY.
 3. ConServ Epoxy LLC, Northford CT.
 4. Gougeon Brothers, Inc., Bay City, MI.
 5. Polymeric Systems, Inc., Elverson, PA.
 6. Protective Coating Company, Allentown, PA.
 7. System Three Resins, Inc., Auburn, WA.

2.6 GLAZING MATERIALS

- A. Glass: Uncoated clear safety glass.

- B. Glazing Systems:
 - 1. Modern Glazing Products: Glazing points and single-component polyurethane glazing compound; ASTM C 920, Type S, Grade NS, Class 25, Use G; struck uniformly to match taper of existing glazing putty (removed); colored as required to match painted sash.
 - 2. Primers and Cleaners for Glazing: As recommended in writing by glazing material manufacturer.

2.7 HARDWARE

- A. Primary Door Hardware, General: Provide complete sets of door hardware consisting of hinges, pulls, locks, latches, and accessories indicated for each door or required for proper operation. Sets shall include replacement hardware to complement repaired and refinished, existing hardware. Door hardware shall smoothly operate, tightly close, and securely lock wood doors and be sized to accommodate frequency of use, glazing weight, and dimensions.
- B. Other Hardware, General: Provide complete sets of hardware for each type of storm door consisting of hinges, pulls, latches, fasteners, clips, and accessories indicated or required for proper operation. Hardware shall smoothly operate, tightly close, and secure units appropriately for frequency of use, unit weight, and dimensions.
- C. Replacement Hardware: Replace existing damaged or missing hardware with new hardware.
- D. Material and Design:
 - 1. Material: Solid bronze of alloy indicated, or nonmagnetic stainless steel, unless otherwise indicated.
 - 2. Design: Match type and appearance of existing hardware.
 - 3. Replacement Door Hardware: Regardless of mechanisms within, match existing, exposed door hardware of the following types:
 - a. Door knobs, levers, and escutcheons.
 - b. Door latches.
 - c. Surface-mounted flush bolts.
 - d. Handles.
 - e. Projecting transom hinges and latch with pole ring.
- E. Hardware Finishes: Comply with BHMA A156.18 for base material and finish requirements indicated by the following:
 - 1. BHMA 613: Dark-oxidized satin bronze, oil rubbed, bronze base metal.

2.8 WEATHER STRIPPING

- A. Compression-Type Weather Stripping: Compressible weather stripping designed for permanently resilient sealing under bumper or wiper action; completely concealed when door is closed.
 - 1. Weather-Stripping Material: Match existing materials and profiles as much as possible unless otherwise indicated.
 - a. Cellular Elastomeric Gaskets: Preformed; complying with ASTM C 509.
 - b. Dense Elastomeric Gaskets: Preformed; complying with ASTM C 864.

2.9 MISCELLANEOUS MATERIALS

- A. Insect Screening:
 - 1. Aluminum Wire Fabric: 18-by-16 count per sq. in. mesh of 0.011-inch-diameter, coated aluminum wire; charcoal gray finish.

- B. Borate Preservative Treatment: Inorganic, borate-based solution, with disodium octaborate tetrahydrate ($\text{Na}_2\text{B}_8\text{O}_{13} \cdot 4\text{H}_2\text{O}$) as the primary ingredient; manufactured for preserving weathered and decayed wood from further damage by decay fungi and wood-boring insects; complying with AWWA P5; containing no boric acid.
- C. Cleaning Materials:
 - 1. Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium pyrophosphate ($\text{Na}_4\text{O}_7\text{P}_2$) (TSPP), 1/2 cup of laundry detergent that contains no ammonia, 5 quarts of 5 percent sodium hypochlorite bleach, and 15 quarts of warm water for each 5 gal. of solution required.
 - 2. Mildewcide: Commercial, proprietary mildewcide or a solution prepared by mixing 1/3 cup of household detergent that contains no ammonia, 1 quart of 5 percent sodium hypochlorite bleach, and 3 quarts of warm water.
- D. Adhesives: Wood adhesives with minimum 15- to 45-minute cure at 70° F, in gunnable and liquid formulations as recommended in writing by adhesive manufacturer for each type of repair and exposure conditions.
- E. Fasteners: Use fastener metals that are noncorrosive and compatible with each material joined.
 - 1. Match existing fasteners in material and type of fastener unless otherwise indicated.
 - 2. Use concealed fasteners for interconnecting wood components.
 - 3. Use concealed fasteners for attaching items to other work unless exposed fasteners are unavoidable or the existing fastening method.
 - 4. For fastening metals, use fasteners of same basic metal as fastened metal unless otherwise indicated.
 - 5. For exposed fasteners, use Phillips-type machine screws of head profile flush with metal surface unless otherwise indicated.
 - 6. Finish exposed fasteners to match finish of metal fastened unless otherwise indicated.
- F. Anchors, Clips, and Accessories: Fabricate anchors, clips, and door accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel complying with requirements in ASTM B 633 for SC 3 (Severe) service condition.

2.10 WOOD DOOR FINISHES

- A. Unfinished Replacement Units: Provide exposed exterior and interior wood surfaces of replacement units unfinished; smooth, filled, and suitably prepared for on-site priming and finishing.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect adjacent materials from damage by historic treatment of wood doors.
- B. Clean wood doors of mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. After cleaning, rinse thoroughly with fresh water. Allow to dry before repairing or painting.
- C. Condition replacement wood members and replacement units to prevailing conditions at installation areas before installing.

3.2 HISTORIC TREATMENT OF WOOD DOORS, GENERAL

- A. Historic Treatment Appearance Standard: Completed work is to have a uniform appearance as viewed by Architect from the door interior at 5 feet away and from the door exterior at 20 feet away.
- B. General: In treating historic items, disturb them as minimally as possible and as follows:
 - 1. Stabilize and repair wood doors to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
 - 2. Remove coatings and apply borate preservative treatment before repair. Remove coatings according to Section 09 03 91 "Historic Treatment of Plain Painting" unless otherwise indicated.
 - 3. Repair items in place where possible.
 - 4. Install temporary protective measures to protect wood door work that is indicated to be completed later.
 - 5. Refinish historic wood windows according to Section 09 03 91 "Historic Treatment of Plain Painting" unless otherwise indicated.
- C. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use only the gentlest mechanical methods, such as scraping and natural-fiber bristle brushing, that will not abrade wood substrate, reducing clarity of detail. Do not use abrasive methods such as sanding, wire brushing, or power tools except as indicated as part of the historic treatment program and as approved by Architect.
- D. Repair and Refinish Existing Hardware: Dismantle door hardware; strip paint, repair, and refinish it to match finish Samples; and lubricate moving parts just enough to function smoothly.
- E. Repair Wood Doors: Match existing materials and features, retaining as much original material as possible to perform repairs.
 - 1. Unless otherwise indicated, repair wood doors by consolidating, patching, splicing, or otherwise reinforcing wood with new wood matching existing wood or with salvaged, sound, original wood.
 - 2. Where indicated, repair wood doors by limited replacement matching existing material.
- F. Replace Wood Units: Where indicated, duplicate and replace units with units made from salvaged, sound, original wood or with new wood matching existing wood. Use surviving prototypes to create patterns for duplicate replacements.
 - 1. Compatible substitute materials may be used.
- G. Protection of Openings: Where doors are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.
- H. Identify removed doors, frames, leaves, and members with numbering system corresponding to door locations to ensure reinstallation in same location. Key doors, leaves, and members to Drawings showing location of each removed unit. Permanently label units in a location that will be concealed after reinstallation.

3.3 WOOD DOOR PATCH-TYPE REPAIR

- A. General: Patch wood members that exhibit depressions, holes, or similar voids and that have limited amounts of rotted or decayed wood.
 - 1. Remove leaves, storm doors, and screen doors from door frames before performing patch-type repairs at meeting or sliding surfaces unless otherwise indicated. Reglaze units prior to reinstallation.
 - 2. Verify that surfaces are sufficiently clean and free of paint residue before patching.

3. Treat wood members with wood consolidant before applying patching compound. Coat wood surfaces by brushing, applying multiple coats until wood is saturated and unable to absorb more. Allow treatment to harden before filling void with patching compound.
- B. Apply borate preservative treatment to accessible surfaces either before applying wood consolidant or after removing rotted or decayed wood. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom. Allow treatment to dry.
- C. Apply wood-patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood.
 1. Prime patch area with application of wood consolidant or manufacturer's recommended primer.
 2. Mix only as much patching compound as can be applied in accordance with manufacturer's written instructions.
 3. Apply patching compound in layers as recommended in writing by manufacturer until the void is completely filled.
 4. Sand patch surface smooth and flush with adjacent wood, without voids in patch material, and matching contour of wood member.
 5. Clean spilled compound from adjacent materials immediately.

3.4 WOOD DOOR MEMBER-REPLACEMENT REPAIR

- A. General: Replace parts of or entire wood door members at locations [indicated on Drawings] [indicated in the Historic Wood Door Schedule] [and] [where damage is too extensive to patch] <Insert requirement>.
 1. Remove leaves, storm doors, and screen doors from door frames before performing member-replacement repairs unless otherwise indicated.
 2. Verify that surfaces are sufficiently clean and free of paint residue before repair.
 3. Remove broken, rotted, and decayed wood down to sound wood.
 4. Custom fabricate new wood to replace missing wood; either replace entire wood member or splice new wood part into existing member.
 5. Secure new wood using finger joints, multiple dowels, or splines with adhesive and nailing to ensure maximum structural integrity at each splice. Use only concealed fasteners. Fill nail holes and patch surface to match surrounding sound wood.
- B. Apply borate preservative treatment to accessible surfaces after replacements are made. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.
- C. Repair remaining depressions, holes, or similar voids with patch-type repairs.
- D. Clean spilled materials from adjacent surfaces immediately.
- E. Glazing: Reglaze units before reinstallation.
 1. Provide replacement glazing stops coordinated with glazing system indicated.
 2. Provide glazing stops to match contour of door frames.
- F. Reinstall units removed for repair into original openings.
- G. Weather Stripping: Replace nonfunctioning and install missing weather stripping to ensure full-perimeter weather stripping for each exterior leaf.

3.5 GLAZING

- A. Comply with combined written instructions of manufacturers of glass, glazing system, and glazing materials, unless more stringent requirements are indicated.

- B. Remove cracked and damaged glass and glazing materials from openings and prepare surfaces for re-glazing.
- C. Size glass as required by Project conditions to provide necessary bite on glass, minimum edge and face clearances, with reasonable tolerances.
- D. Apply primers to joint surfaces where required for adhesion of glazing system, as determined by preconstruction testing.
- E. Install setting bead, side beads, and back bead against stop in glazing rabbets before setting glass.
- F. Install glass with proper orientation so that coatings, if any, face exterior or interior as required.
- G. Install glazing points.
- H. Disposal of Removed Glass: Remove from Owner's property and legally dispose of it unless otherwise indicated.

3.6 WOOD DOOR UNIT REPLACEMENT

- A. General: Replace existing wood door frame, leaf, storm door, and screen door units with new custom-fabricated units to match existing at locations [indicated on Drawings and where damage is too extensive to repair.
- B. Apply borate preservative treatment to accessible surfaces before finishing. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.
- C. Mill glazed members to accommodate glass thickness. Glaze units before installation.
- D. Install units, hardware, weather stripping, accessories, and other components as indicated on Drawings.
- E. Install units level, plumb, square, true to line, without distortion or impeding movement, anchored securely in place to structural support, and in proper relation to wall flashing, trim, and other adjacent construction.
- F. Set threshold or sill members in bed of sealant for weathertight construction unless otherwise indicated.
- G. Install door units with new anchors into existing openings.
- H. Weather Stripping: Install full-perimeter weather stripping for each operable exterior leaf.
- I. Metal Protection: Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
- J. Disposal of Removed Units: Remove from Owner's property and legally dispose of them.

3.7 STORM DOOR INSTALLATION

- A. Fit wood storm doors at each door jamb indicated. Verify that storm door and door frames are correctly tagged with opening-identification numbers.

- B. Adjust hardware, clips, and removable fasteners for a tight fit with uniform joints. Uninstall and reinstall door at least once to ensure proper fit.
- C. Install and leave storm doors in place when directed by Architect to suit the season.
- D. Install units by mounting to door frames according to manufacturer's written instructions.

3.8 WEATHER STRIPPING INSTALLATION

- A. Install weather stripping for tight seal of joints as demonstrated in mockup.

3.9 ADJUSTING

- A. Adjust existing and replacement operating leaves, screens, hardware, weather stripping, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.

3.10 CLEANING AND PROTECTION

- A. Protect door surfaces from contact with contaminating substances resulting from construction operations. Monitor door surfaces adjacent to and below exterior concrete and masonry during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact door surfaces, remove contaminants immediately.
- B. Clean exposed surfaces immediately after historic treatment of wood doors. Avoid damage to coatings and finishes. Remove excess sealants, glazing and patching materials, dirt, and other substances.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

3.11 REPAIR SCOPE SCHEDULE

- A. Level 1 Repairs: minor repairs.
 1. Scope includes the repair of existing wood doors, windows, transoms, sidelights, frames and panels at exterior side.
 2. Remove peeling paint down to sound wood or paint. Sound paint may remain.
 3. Replace failed or missing glazing putty.
 4. Prime and paint.
 5. Doors and window do not need to be made fully operational, but should be made weather tight.
- B. Level 2 Repairs: medium repairs.
 1. Scope includes repairs to existing historic wood door and frame (including transom, if any).
 2. Remove existing paints, coatings, and finishes.
 3. Remove hardware from door and frame scheduled or shown to be replaced.
 4. Service existing hardware scheduled to remain for smooth and proper operation, included repairs and replace of parts as necessary within the hardware.
 5. Provide new hardware as specified.
 6. Fill in gouges and holes with wood patching compound.
 7. Replace up to 10% of surface veneer.
 8. Replace up to 10% of damaged or missing trim with profiles to match existing.
 9. Replace bottom 2" of door with new wood to match existing.
 10. Reattach loose trim.

11. Adjust door and frame for smooth operation.
12. Prep and paint door and frame (interior and exterior) or provide varnish over stain.
13. Existing glass to remain unless otherwise noted.
14. Provide insulated tempered glass where noted.

C. Level 3 Repairs: major repairs.

1. Scope includes repairs to existing historic wood door and frame (including transom, if any). Remove existing paints and coatings (interior and exterior).
2. Remove door from frame for repairs in the shop, and provide temporary door for security and weather protection.
3. Remove all hardware from door and frame. Salvage historic hardware for reinstallation or deliver to owner.
4. Provide new door hardware as specified.
5. Fill in former hardware locations with new wood in preparation for new or salvaged door hardware installation.
6. Fill in all gouges with wood patching compound.
7. Replace up to 20% of surface veneer.
8. Replace up to 20% of damaged or missing trim with profiles to match existing.
9. Replace bottom 2" of door with new wood to match existing.
10. Reattach loose trim.
11. Treat dry weathered wood in preparation for painting with preservative treatment.
12. Fill significant cracks and checks with wood consolidant and wood patching compound.
13. Reinstall door in opening.
14. Adjust door and frame for smooth operation.
15. Prep and paint door and frame (interior and exterior).
16. Replace glass in door (if any) with new clear tempered glass; provide insulated tempered glass where noted.

END OF SECTION 08 03 14

SECTION 08 03 52 - HISTORIC TREATMENT OF WOOD WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes historic treatment of wood windows in the form of the following:
 - 1. Repairing wood windows and trim.
 - 2. Replacing wood window frames and sash units.
 - 3. Reglazing (includes glass, see definitions).
 - 4. Repairing, refinishing, and replacing hardware.
 - 5. Repairing storm windows and insect screens.
 - 6. Replacing storm-windows and insect-screen units.
 - 7. Providing new storm-window and insect-screen units.
- B. Related Requirements:
 - 1. Section 01 35 91 "Historic Treatment Procedures" for general historic treatment requirements.
 - 2. Section 02 42 96 "Historic Removal and Dismantling" for historic removal and dismantling work.
 - 3. Section 06 40 13 "Exterior Architectural Woodwork" for new wood shutters not included in this Section.
 - 4. Section 08 52 00 "Wood Windows" for replacement wood windows or new replacement sash not included in this Section.

1.2 DEFINITIONS

- A. Glazing: Includes glass, glazing points, glazing tapes, glazing sealants, and glazing compounds.
- B. Window: Includes window frame, sash, hardware, storm window, and exterior and interior shutters unless otherwise indicated by context.
- C. Wood Window Component Terminology: Wood window components for historic treatment work include the following classifications:
 - 1. Frame Components: Head, jambs, and sill.
 - 2. Sash Components: Stiles and rails, parting bead, stop, and muntins.
 - 3. Exterior Trim: Exterior casing, brick mold, and cornice or drip cap.
 - 4. Interior Trim: Casing, stool, and apron.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to historic treatment of wood windows including, but not limited to, the following:
 - a. Historic treatment specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Fire-protection plan.
 - d. Wood window historic treatment program.
 - e. Coordination with building occupants.

1.4 SEQUENCING AND SCHEDULING

- A. Perform historic treatment of wood windows in the following sequence, which includes work specified in this and other Sections:
1. Label each window frame with permanent opening-identification number in inconspicuous location.
 2. Tag existing window sash, storm windows, and shutters with opening-identification numbers and remove for on-site or off-site repair. Indicate on tags the locations on window of each component, such as "top sash," "bottom sash," "left shutter," and "right shutter."
 3. Remove window, dismantle hardware, and tag hardware with opening-identification numbers.
 4. Install temporary protection and security at window openings.
 5. In the shop, label each sash and storm window with permanent opening-identification number in inconspicuous location and remove site-applied tags.
 6. Sort units by condition, separating those that need extensive repair.
 7. Clean surfaces.
 8. General Wood-Repair Sequence:
 - a. Remove paint to bare wood.
 - b. Rack frames slightly to inject adhesive into mortise and tenon joints; square frames to proper fit before adhesive sets.
 - c. If thicker than original glass is required, rout existing muntins to required rebate size.
 - d. Repair wood by consolidation, member replacement, partial member replacement, and patching.
 - e. Sand, prime, fill, sand again, and prime surfaces again for refinishing.
 9. Repair, refinish, and replace hardware if required. Reinstall operating hardware.
 10. Install glazing.
 11. Remove temporary protection and security at window openings.
 12. Reinstall units.
 13. Apply finish coats.
 14. Install remaining hardware and weather stripping.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
1. Include recommendations for product application and use. Include test data substantiating that products comply with requirements.
- B. Shop Drawings:
1. Include plans, elevations, and sections showing locations and extent of repair and replacement work, with enlarged details of replacement parts indicating materials, profiles, joinery, reinforcing, method of splicing into or attaching to existing wood window, accessory items, and finishes.
 2. Include field-verified dimensions and the following:
 - a. Full-size shapes and profiles with complete dimensions for replacement components and their jointing, showing relation of existing to new components.
 - b. Templates and directions for installing hardware and anchorages.
 - c. Identification of each new unit and its corresponding window locations in the building on annotated plans and elevations.
 - d. Provisions for sealant joints and flashing as required for location.
- C. Samples for Initial Selection: For each type of exposed wood and finish.
1. Identify wood species, cut, and other features.
 2. Include Samples of hardware and accessories involving color selection.
 3. Replacement Units: 12-inch- (300-mm-) long, full-size frame and sash sections with applied finish.

4. Replacement Members: 12 inches (300 mm) long for each replacement member, including parts of frame, sash, exterior trim, and interior trim.
 - a. Additional Samples of replacement members that show fabrication techniques, materials, and finishes as requested by Architect.
5. Repaired Wood Window Members: Prepare Samples using existing wood window members removed from site, repaired, and prepared for refinishing.
6. Refinished Wood Window Members: Prepare Samples using existing wood window members removed from site, repaired, and refinished.
7. Hardware: Full-size units with each factory-applied or restored finish.
8. Weather Stripping: 12-inch- (300-mm-) long sections.
9. Glass: 12-inch- square units of each type and appearance.

1.6 QUALITY ASSURANCE

- A. Wood-Repair-Material Manufacturer Qualifications: A firm regularly engaged in producing wood consolidant and wood-patching compound that have been used for similar historic wood-treatment applications with successful results, and with factory-authorized service representatives who are available for consultation and Project-site inspection and on-site assistance.
- B. Wood Window Historic Treatment Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for historic treatment work, including protection of surrounding materials and Project site.
 1. If materials and methods other than those indicated are proposed for any phase of historic treatment work, add a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Pack, deliver, and store products in suitable packs, heavy-duty cartons, or wooden crates; surround with sufficient packing material to ensure that products are not deformed, broken, or otherwise damaged.
- B. Store products inside a well-ventilated area and protect from weather, moisture, soiling, abrasion, extreme temperatures, and humidity, and where environmental conditions comply with manufacturer's requirements.

1.8 FIELD CONDITIONS

- A. Weather Limitations: Proceed with historic treatment of wood windows only when existing and forecasted weather conditions are within the environmental limits set by each manufacturer's written instructions and specified requirements.
- B. Lead-Based Paint: Lead-based paint may be present on interior and exterior painted surfaces of the buildings. Renovation activities may result in exposure to lead. Perform lead-based paint removal and abatement and all renovation work affected by the presence of lead-based paint in compliance with state and Federal Occupational Safety and Health Administration (OSHA) requirements.
 1. No lead-based paint abatement program will be performed by the Owner.
 2. Sanding, stripping and refinishing operations on surfaces containing lead paint shall be performed in accordance with all regulatory rules and standards, including OSHA's Lead Standard for the Construction Industry (29 CFR 1926.62).
 3. Legal disposal of lead-based paint waste is the responsibility of the contractor.

4. Reference the U.S. Department of the Interior, National Park Service Preservation Briefs #37 Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing at <http://www.nps.gov/hps/tps/briefs/brief37.htm>.
- C. Contractor shall assume existing paints and coatings contain lead-based paint. If contractor testing reveals existing paints and coatings are not lead-based, the Owner may issue a Change Order to reduce costs of removal, disposal, and other associated costs.

PART 2 - PRODUCTS

2.1 HISTORIC TREATMENT OF WOOD WINDOWS, GENERAL

- A. Quality Standard: Comply with applicable requirements in Section 12, "Historic Restoration Work," and related requirements in AWI/AWMAC/WI's "Architectural Woodwork Standards" for construction, finishes, grades of wood windows, and other requirements unless otherwise indicated.
1. Exception: Industry practices cited in Section 12, Article 1.5, Industry Practices, of the Architectural Woodwork Standards do not apply to the work of this Section.

2.2 STORM WINDOWS

- A. General: Custom fabricated, tight fitting, replicating appearance of existing storm windows where indicated, and with operating and latching hardware.
1. Fabricate storm windows for installation on outside of primary window.
 2. Fabricate storm window frame and sash so as not to be visible from the interior. (Example: align the meeting rails of the sash with the meeting rails of the primary window).
 3. Make storm windows removable for cleaning and storage.
- B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Adams Architectural Millwork, Dubuque, IA.
 2. Allied Window, Inc., Cincinnati, OH.
 3. Cleary and Son, Inc., Waltham, MA.
 4. Indow Windows, Portland, OR.
 5. Innerglass Window Systems, Simsbury CT.
 6. Kingsland Architectural Millwork, Norfolk, CT.
 7. Smith Restoration Sash, Providence, RI.
 8. Weston Millwork Co., Weston, MO.
 9. Wewoka Window Works, Wewoka, OK.
 10. Wood Window Workshop, Utica, NY.
 11. Woodstone Co., North Walpole, NH.
- C. Wood Storm Windows (Operable Self Storing):
1. Basis of Design: Self-Storing Storm/Screen Window sash by Adams Architectural Millwork.
 2. Joint Construction: Mortise and tenon joints or Doweled joints.
 3. Wood Species: Sapele mahogany.
 4. Paint: factory prime painted, latex primer.
 5. Aluminum track, bronze anodized finish, set into the wood sash. Aluminum shall not be visible from the exterior face of the sash.
 6. Wood Storm-Window Members: standard profiles.
 7. Hardware: As required to secure storm window to window frames. Provide stainless steel hanger sets at top of sash, stainless steel turn-buttons at sides of sash.
 8. Glazing Material: uncoated clear float glass, double strength or annealed.

9. Screen Material: aluminum, charcoal color.
10. Date Identification: Emboss on a concealed surface of each storm window, in easily read characters, "STORM WINDOW MADE <Insert year>." Manufacturer's name may also be embossed.
11. At arch top window openings:
 - a. Construct the top edge of the top rail to conform with the arch; construct the bottom edge of the top rail straight across to conform with the aluminum glass track.
12. At half round top, or rounded window top, window openings:
 - a. Provide alternate type of sash, Basis of Design: Fixed-Top Combination Plus Storm/Screen Window by Adams Architectural Millwork. Top pane shall be glass. Bottom pane shall be removable glass set in aluminum channel. Also provide matching screen, set in aluminum channel, for the bottom pane.

2.3 WOOD-REPLACEMENT MATERIALS

- A. Wood, General: Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch (0.8 mm) deep by 2 inches (51 mm) wide.
 1. Species: Ponderosa pine, eastern white pine, or Idaho white pine, unless otherwise indicated.
- B. Frame Heads and Jambs and Exterior Trim: Ponderosa pine, eastern white pine, or Idaho white pine.
- C. Sills: White oak, or Western red cedar.
- D. Sash Components: Ponderosa pine, eastern white pine, or Idaho white pine.
- E. Interior Trim: Ponderosa pine, eastern white pine, or Idaho white pine.

2.4 WOOD-REPAIR MATERIALS

- A. Source Limitations: Obtain wood consolidant and wood-patching compound from single source from single manufacturer.
- B. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood. Subject to compliance with requirements, incorporate products from one of the following manufacturers:
 1. Abatron, Inc., Kenosha, WI.
 2. ConServ Epoxy LLC, Northford CT.
 3. Gougeon Brothers, Inc., Bay City, MI.
 4. Protective Coating Company, Allentown, PA.
 5. System Three Resins, Inc., Auburn, WA.
- C. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended in writing by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge. Subject to compliance with requirements, incorporate products from one of the following manufacturers:
 1. Abatron, Inc., Kenosha, WI.
 2. Advanced Repair Technology, Inc., Cherry Valley, NY.
 3. ConServ Epoxy LLC, Northford CT.

4. Gougeon Brothers, Inc., Bay City, MI.
5. Polymeric Systems, Inc., Elverson, PA.
6. Protective Coating Company, Allentown, PA.
7. System Three Resins, Inc., Auburn, WA.

2.5 GLAZING MATERIALS

- A. Glass: Uncoated clear float-glass units according to Section 08 80 00 "Glazing."
- B. Glazing Systems:
 1. Traditional Glazing Products: Glazing points and oil-based glazing putty or latex glazing compound. Tint to required color according to manufacturer's written instructions. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. DAP Products, Inc., Baltimore, MD.
 - b. Sarco Putty Co., Inc., Chicago, IL.
 - c. UGL (United Gilsonite Laboratories), Scranton, PA.
 2. Primers and Cleaners for Glazing: As recommended in writing by glazing material manufacturer.

2.6 HARDWARE

- A. Window Hardware: Provide complete sets of window hardware consisting of sash balances, hinges, pulls, latches, and accessories indicated for each window or required for proper operation. Sets shall include replacement hardware to complement repaired and refinished, existing hardware. Window hardware shall smoothly operate, tightly close, and securely lock wood windows and be sized to accommodate sash or ventilator weight and dimensions.
- B. Other Hardware: Provide complete sets of hardware for each type of storm window consisting of hinges, pulls, latches, and accessories indicated or required for proper operation. Hardware shall smoothly operate, tightly close, and secure units appropriately for unit weight and dimensions.
- C. Replacement Hardware: Replace existing damaged or missing hardware with new hardware manufactured by one of the following:
 1. Architectural Resource Center, Northwood, NH.
 2. Ball and Ball, Exton, PA.
 3. Blaine Windows Hardware, Inc., Hagerstown, MD.
 4. Bronze Craft Corp., Nashua, NH.
 5. Phelps Co., Brattleboro, VT.
 6. Smith Restoration Sash, Providence, RI.
- D. Material and Design:
 1. Material: Solid bronze or brass alloy unless otherwise indicated.
 2. Design: Match type and appearance of existing hardware.
 3. Weight and Pulley Sash-Balance: Concealed weight and pulley balance system including steel or cast-iron weights, cast-bronze pulleys, synthetic sash cord; size and capacity to hold sash stationary at any open position.
 4. Replacement Window Hardware: Match existing window hardware of the following types:
 - a. Projected window hinge.
 - b. Window lock.
 - c. Window latch.
 - d. Handle.

- E. Hardware Finishes: Comply with BHMA A156.18 for base material and finish requirements indicated by the following:
 - 1. BHMA 613: Dark-oxidized satin bronze, oil-rubbed; bronze base metal.

2.7 WEATHER STRIPPING

- A. Compression-Type Weather Stripping: Compressible weather stripping designed for permanently resilient sealing under bumper or wiper action; completely concealed when window is closed. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. National Guard Products, Inc., Memphis, TN.
 - 2. Pemko Manufacturing Co., Ventura, CA.
 - 3. Reese Enterprises, Inc., Rosemount, MN.
 - 4. Zero International, Inc., Bronx, NY.
- B. Weather-Stripping Material: Match existing materials and profiles as much as possible unless otherwise indicated.
 - 1. Cellular Elastomeric Gaskets: Preformed; complying with ASTM C509.
 - 2. Dense Elastomeric Gaskets: Preformed; complying with ASTM C864.

2.8 MISCELLANEOUS MATERIALS

- A. Borate Preservative Treatment: Inorganic, borate-based solution, with disodium octaborate tetrahydrate as the primary ingredient; manufactured for preserving weathered and decayed wood from further damage by decay fungi and wood-boring insects; complying with AWWA P5; containing no boric acid.
- B. Cleaning Materials:
 - 1. Detergent Solution: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 1/2 cup (125 mL) of laundry detergent that contains no ammonia, 5 quarts (5 L) of 5 percent sodium hypochlorite bleach, and 15 quarts (15 L) of warm water for each 5 gal. (20 L) of solution required.
 - 2. Mildewcide: Commercial, proprietary mildewcide or a solution prepared by mixing 1/3 cup (80 mL) of household detergent that contains no ammonia, 1 quart (1 L) of 5 percent sodium hypochlorite bleach, and 3 quarts (3 L) of warm water.
- C. Adhesives: Wood adhesives for exterior exposure, with minimum 15- to 45-minute cure at 70 deg F (21 deg C), in gunnable and liquid formulations as recommended in writing by adhesive manufacturer for each type of repair.
- D. Fasteners: Use fastener metals that are noncorrosive and compatible with each material joined.
 - 1. Match existing fasteners in material and type of fastener unless otherwise indicated.
 - 2. Use concealed fasteners for interconnecting wood components.
 - 3. Use concealed fasteners for attaching items to other work unless exposed fasteners are unavoidable or the existing fastening method.
 - 4. For fastening metals, use fasteners of same basic metal as fastened metal unless otherwise indicated.
 - 5. For exposed fasteners, use Phillips-type machine screws of head profile flush with metal surface unless otherwise indicated.
 - 6. Finish exposed fasteners to match finish of metal fastened unless otherwise indicated.
- E. Anchors, Clips, and Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel complying with requirements in ASTM B633 for SC 3 (Severe) service condition.

2.9 WOOD WINDOW FINISHES

- A. Factory-Primed Replacement Units: Manufacturer's standard factory-prime coat on exposed exterior and interior wood surfaces; compatible with indicated finish coating.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect adjacent materials from damage by historic treatment of wood windows.
- B. Clean wood windows of mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. After cleaning, rinse thoroughly with fresh water. Allow to dry before repairing or painting.
- C. Condition replacement wood members and replacement units to prevailing conditions at installation areas before installing.
- D. Remove and discard all storm windows, security screens, insect screens, etc., unless noted otherwise. Salvage and retain window air conditioners and associated support brackets; reinstall window air conditioners and support brackets upon request.

3.2 HISTORIC TREATMENT OF WOOD WINDOWS, GENERAL

- A. Historic Treatment Appearance Standard: Completed work is to have a uniform appearance as viewed by Architect from the window interior at 5 feet (1.5 m) away and from the window exterior at 20 feet (6 m) away.
- B. General: In treating historic items, disturb them as minimally as possible and as follows:
 - 1. Stabilize and repair wood windows to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
 - 2. Remove coatings and apply borate preservative treatment before repair. Remove coatings according to Section 09 03 91 "Historic Treatment of Plain Painting" unless otherwise indicated.
 - 3. Repair items in place where possible.
 - 4. Install temporary protective measures to protect wood window work that is indicated to be completed later.
 - 5. Refinish historic wood windows according to Section 09 03 91 "Historic Treatment of Plain Painting" unless otherwise indicated.
- C. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use only the gentlest mechanical methods, such as scraping and natural-fiber bristle brushing, that will not abrade wood substrate, reducing clarity of detail. Do not use abrasive methods such as sanding, wire brushing, or power tools except as indicated as part of the historic treatment program and as approved by Architect.
- D. Repair and Refinish Existing Hardware: Dismantle window hardware; strip paint, repair, and refinish it to match finish samples; and lubricate moving parts just enough to function smoothly.
- E. Repair Wood Windows: Match existing materials and features, retaining as much original material as possible to perform repairs.
 - 1. Unless otherwise indicated, repair wood windows by consolidating, patching, splicing, or otherwise reinforcing wood with new wood matching existing wood or with salvaged, sound, original wood.

2. Where indicated, repair wood windows by limited replacement matching existing material.
 3. Sash Balance: Repair sash balances to function according to type as specified in "Hardware" Article" above. Provide missing sash balances.
- F. Replace Wood Units: Where indicated, duplicate and replace units with units made from salvaged, sound, original wood or with new wood matching existing wood. Use surviving prototypes to create patterns for duplicate replacements.
1. Compatible substitute materials may be used.
- G. Protection of Openings: Where sash or windows are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.
- H. Identify removed windows, frames, sash, and members with numbering system corresponding to window locations to ensure reinstallation in same location. Key windows, sash, and members to Drawings showing location of each removed unit. Permanently label units in a location that will be concealed after reinstallation.

3.3 WOOD WINDOW PATCH-TYPE REPAIR

- A. General: Patch wood members that exhibit depressions, holes, or similar voids, and that have limited amounts of rotted or decayed wood.
1. Remove sash, storm windows, and screens from windows before performing patch-type repairs at meeting or sliding surfaces unless otherwise indicated. Reglaze units before reinstallation.
 2. Verify that surfaces are sufficiently clean and free of paint residue before patching.
 3. Remove rotted or decayed wood down to sound wood.
- B. Apply borate preservative treatment to accessible surfaces either before applying wood consolidant or after removing rotted or decayed wood. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom. Allow treatment to dry.
- C. Apply wood-patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood.
1. Prime patch area with application of wood consolidant or manufacturer's recommended primer.
 2. Mix only as much patching compound as can be applied according to manufacturer's written instructions.
 3. Apply patching compound in layers as recommended in writing by manufacturer until the void is completely filled.
 4. Sand patch surface smooth and flush with adjacent wood, without voids in patch material, and matching contour of wood member.
 5. Clean spilled compound from adjacent materials immediately.

3.4 WOOD WINDOW MEMBER-REPLACEMENT REPAIR

- A. General: Replace parts of or entire wood window members at locations indicated on Drawings or as indicated in the Historic Wood Window Schedule.
1. Remove sash and storm windows from windows before performing member-replacement repairs unless otherwise indicated.
 2. Verify that surfaces are sufficiently clean and free of paint residue before repair.
 3. Remove broken, rotted, and decayed wood down to sound wood.
 4. Custom fabricate new wood to replace missing wood; either replace entire wood member or splice new wood part into existing member.

- 5. Secure new wood using finger joints, multiple dowels, or splines with adhesive and nailing to ensure maximum structural integrity at each splice. Use only concealed fasteners. Fill nail holes and patch surface to match surrounding sound wood.
- B. Apply borate preservative treatment to accessible surfaces after replacements are made. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.
- C. Repair remaining depressions, holes, or similar voids with patch-type repairs.
- D. Clean spilled materials from adjacent surfaces immediately.
- E. Glazing: Reglaze units before reinstallation.
 - 1. Provide replacement glazing stops coordinated with glazing system indicated.
 - 2. Provide glazing stops to match contour of sash frames.
- F. Reinstall units removed for repair into original openings.
- G. Weather Stripping: Replace nonfunctioning and install missing weather stripping to ensure full-perimeter and meeting rail weather stripping for each operable sash.

GLAZING

- H. Comply with combined written instructions of manufacturers of glass, glazing systems, and glazing materials, unless more stringent requirements are indicated.
- I. Remove existing glass and glazing where indicated on Drawings or in the Historic Wood Window Schedule and prepare surfaces for reglazing.
- J. Size glass as required by Project conditions to provide necessary bite on glass, minimum edge and face clearances, with reasonable tolerances.
- K. Apply primers to joint surfaces where required for adhesion of glazing system, as determined by preconstruction testing.
- L. Install setting bead, side beads, and back bead against stop in glazing rabbets before setting glass.
- M. Install glass with proper orientation so that coatings, if any, face exterior or interior as required.
- N. Install glazing points.
- O. Disposal of Removed Glass: Remove from Owner's property and legally dispose of it unless otherwise indicated.

3.5 WOOD WINDOW UNIT REPLACEMENT

- A. General: Replace existing wood window frame and sash units with new custom-fabricated units to match existing at locations indicated on Drawings or as indicated in the Historic Wood Window Schedule.
- B. Apply borate preservative treatment to accessible surfaces before finishing. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.
- C. Mill glazed members to accommodate glass thickness. Glaze units before installation.

- D. Install units, hardware, weather stripping, accessories, and other components as indicated on Drawings.
- E. Install units level, plumb, square, true to line, without distortion or impeding movement; anchored securely in place to structural support; and in proper relation to wall flashing, trim, and other adjacent construction.
- F. Set sill members in bed of sealant for weathertight construction unless otherwise indicated.
- G. Install window units with new anchors into existing openings.
- H. Weather Stripping: Install full-perimeter and meeting rail weather stripping for each operable sash.
- I. Metal Protection: Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
- J. Disposal of Removed Units: Remove from Owner's property and legally dispose of them.

3.6 STORM WINDOW INSTALLATION

- A. Install wood storm windows at each window indicated.
- B. Install units by mounting to window frames or as indicated on Drawings and according to manufacturer's written instructions.

3.7 WEATHER STRIPPING INSTALLATION

- A. Install weather stripping for tight seal of joints as demonstrated in mockup.

ADJUSTING

- B. Adjust existing and replacement operating sash, screens, hardware, weather stripping, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.

3.8 CLEANING AND PROTECTION

- A. Protect window surfaces from contact with contaminating substances resulting from construction operations. Monitor window surfaces adjacent to and below exterior concrete and masonry during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact window surfaces, remove contaminants immediately.
- B. Clean exposed surfaces immediately after historic treatment of wood windows. Avoid damage to coatings and finishes. Remove excess sealants, glazing and patching materials, dirt, and other substances.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction.

3.9 REPAIR SCOPE SCHEDULE

- A. Level 1 Repairs: minor repairs.

1. Scope includes the repair of existing windows, transoms, sidelights, frames, and panels at exterior side.
 2. Remove peeling paint down to sound wood or paint. Sound paint may remain.
 3. Replace broken and cracked panes of glass.
 4. Replace failed or missing glazing putty (glazing compound).
 5. Prime and paint.
 6. Window does not need to be made fully operational, but should be made weather tight.
- B. Level 3 Repairs: major repairs.
1. Scope includes the repair of existing windows, transoms, sidelights, frames, and panels at exterior and interior side.
 2. Remove sashes from window frame for repairs in the shop, and provide temporary panels for security and weather protection.
 3. Remove all glazing putty (glazing compound).
 4. Remove and salvage glass in serviceable condition for reinstallation.
 5. Prepare all wood surfaces, remove paint, and fill gouges and scratches with wood patching compound.
 6. Provide wood consolidant as necessary.
 7. Replace wood component(s) where indicated. Replace part of wood window sash and/or wood window frame as indicated with new wood material. Profiles and dimensions shall match existing.
 8. Prep and paint all wood surfaces on sashes (interior and exterior). Include surfaces not exposed to view.
 9. Reinstall glass. Provide new glazing putty (glazing compound) and new glazing points.
 10. Provide new panes to glass to match existing, where indicated and where broken or cracked prior to or following removal and salvage.
 11. Replace weatherstripping. Salvaged metal spring weatherstripping in good condition may be retained and reinstalled.
 12. Remove and reinstall hardware pulls and locks. Remove paint from hardware. Adjust hardware to working condition. Inform architect if hardware cannot be salvaged and reused.
 13. Repair sash weights, sash pulleys, and sash cords to working condition for all operable sashes.
 14. Reinstall frame sash stops and other components as appropriate. Provide new removable fasteners (screws) for future maintenance and removal of sashes.
 15. Prep and paint all wood surfaces of the window frame (interior and exterior). Include surfaces not exposed to view.
 16. Replace joint sealants at perimeter of the window frame and trim (interior and exterior).

END OF SECTION 08 03 52

SECTION 08 14 33 - STILE AND RAIL WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Exterior stile and rail wood doors and fixed, glazed transoms.
 - 2. Exterior wood frames and trim.
 - 3. Fitting stile and rail wood doors to frames and machining for hardware.
 - 4. Pre-hanging doors in frames.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
 - 1. Include details of construction and glazing.
 - 2. Include factory finishing specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and other pertinent data.

1.3 QUALITY ASSURANCE

- A. Provide true stile and rail doors from a single manufacturer.
- B. Safety Glass: Provide products complying with testing requirements in 16 CFR 1201, for Category II materials, unless those of Category I are expressly indicated and permitted.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect doors with resilient packaging. Store doors flat on a level surface, in a clean, dry, and well-ventilated area protected from the sunlight. Avoid subjecting doors to extreme heat, dryness, or moisture. Break seal (plastic protective packaging only) on-site to permit ventilation.
- B. Do not drag doors across one another.

1.5 COORDINATION

- A. Coordinate the work with door opening construction, door frame and door hardware installation.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace wood door assemblies that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.

- b. Structural failures including excessive deflection, water leakage, air infiltration, or condensation.
 - c. Faulty operation of operable units and hardware.
 - d. Deterioration of wood, metals, vinyl, and other materials, beyond normal weathering.
 - e. Failure of insulating glass.
- 2. Warranty Period:
 - a. Door Assembly: 10 years from date of Substantial Completion.
 - b. Glazing: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 STILE AND RAIL WOOD DOORS AND TRANSOMS

- A. Basis of Design: Custom stile and rail wood doors as manufactured by The Maiman Company.
- B. Subject to compliance with requirements, provide the named product or comparable product by of the following:
 - 1. Maiman Company (The).
 - 2. Marvin Windows and Doors.
 - 3. Pozzi Custom Collection; JELD-WEN, Inc.
 - 4. Adams Architectural Millwork Company.
- C. Panel Designs: Indicated by Drawings. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Wood Species and Finish: Clear Mahogany or White Oak; factory prime finish.
 - 1. Kiln dried to a moisture content of 8-10% prior to fabrication.
- E. Finish: Opaque.
- F. Door Construction: 2-1/4-inch thickness, unless noted otherwise.
 - 1. Stile and Rail Construction: Laminated veneer core (LVL) wood stiles and rails with not less than 1/16-inch face veneer.
 - a. Assemble using hot press method for laminating door materials.
 - b. Provide edge banding and sticking profile of solid lumber (veneered profile is not acceptable).
 - c. Corners glued and fastened with 5/8 inch by 4 inch (16 mm by 102 mm) fluted hardwood dowels.
 - d. Non-removable interior wood glazing stops.
 - e. Stave Core Pine is acceptable in lieu of LVL.
 - 2. Panel Construction: Extra panel.
 - 3. Stile and Rail Widths: As indicated.
 - 4. Molding Profile (Sticking): As indicated.
- G. Frame Construction: Finger jointed, edge-glued pine core with clear pine veneer.
 - 1. Frame Thickness: not less than 13/16 inches.
 - 2. Frame Depth: As indicated on Drawings.
 - 3. Jamb Extensions: Furnish jamb extensions, factory installed (loose), for wall thickness indicated or required.
 - 4. Exterior Wood Mouldings: As indicated on Drawings; match exterior frame finish.
- H. Sill: Fiberglass reinforced pultruded sill with water shed and weep system; 0.100 inch thickness; color as selected; mahogany interior sill liner.

2.2 GLAZING

- A. Insulating Glass Units: As specified in Section 08 80 00.

2.3 STILE AND RAIL WOOD DOOR FABRICATION

- A. General: Use only materials that comply with referenced standards and other requirements specified.
 - 1. Assemble exterior doors and sidelights, including components, with wet-use adhesives complying with ASTM D 5572 for finger joints and with ASTM D 5751 for joints other than finger joints.
- B. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels unless otherwise indicated:
 - 1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/2 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide not more than 3/8 inch from bottom of door to top of threshold.
 - a. Comply with NFPA 80 for fire-rated doors.
 - 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
- C. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W Series standards, and hardware templates.
 - 1. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before factory machining.
- D. Glazed Openings: Trim openings indicated for glazing with solid wood moldings, with one side removable. Miter wood moldings at corner joints.
- E. Pre-hung Doors: Provide stile and rail doors as pre-hung units including doors, frames, and hardware.
 - 1. Knock-down frame delivery method is acceptable.

2.4 WOOD FINISH

- A. Exterior and Interior: Prime paint at factory.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and substrates, with Installer present, for suitable conditions where wood stile and rail doors and fire-rated wood door frames will be installed.
 - 1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 - 2. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
 - 3. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches of opening.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install wood doors to comply with manufacturer's written instructions, approved Shop Drawings, and other requirements specified.
- B. Install doors level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weathertight construction.
- D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Clean factory-glazed glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Protect surfaces from contact with contaminating substances resulting from construction operations. In addition, monitor surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances do contact door or frame surfaces, remove contaminants immediately according to manufacturer's written recommendations.

END OF SECTION 08 14 33

SECTION 08 41 13 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Exterior storefront framing.
 - 2. Exterior manual-swing entrance doors and door-frame units.
 - 3. Aluminum sill flashing, aluminum trim, and aluminum in-fill components.

1.2 DEFINITIONS

- A. ADA/ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disability Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities."

1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Aluminum-framed systems shall withstand the effects of the following performance requirements without exceeding performance criteria or failure due to defective manufacture, fabrication, installation, or other defects in construction:
 - 1. Movements of supporting structure indicated on Drawings including, but not limited to, story drift and deflection from uniformly distributed and concentrated live loads.
 - 2. Dimensional tolerances of building frame and other adjacent construction.
 - 3. Failure includes the following:
 - a. Deflection exceeding specified limits.
 - b. Thermal stresses transferring to building structure.
 - c. Framing members transferring stresses, including those caused by thermal and structural movements to glazing.
 - d. Glazing-to-glazing contact.
 - e. Noise or vibration created by wind and by thermal and structural movements.
 - f. Loosening or weakening of fasteners, attachments, and other components.
 - g. Sealant failure.
 - h. Failure of operating units.
- B. Delegated Design: Design aluminum-framed systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- C. Structural Loads:
 - 1. Wind Loads: As indicated on Structural Drawings.
- D. Deflection of Framing Members:
 - 1. Deflection Normal to Wall Plane: Limited to edge of glass in a direction perpendicular to glass plane shall not exceed $L/175$ of the glass edge length for each individual glazing lite or an amount that restricts edge deflection of individual glazing lites to $3/4$ inch, whichever is less.
 - 2. Deflection Parallel to Glazing Plane: Limited to $L/360$ of clear span or $1/8$ inch, whichever is smaller.
- E. Structural-Test Performance: Provide aluminum-framed systems tested according to ASTM E 330 as follows:

1. When tested at positive and negative wind-load design pressures, systems do not evidence deflection exceeding specified limits.
 2. When tested at 150 percent of positive and negative wind-load design pressures, systems, including anchorage, do not evidence material failures, structural distress, and permanent deformation of main framing members exceeding 0.2 percent of span.
 3. Test Durations: As required by design wind velocity, but not fewer than 10 seconds.
- F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:
1. Fixed Framing and Glass Area:
 - a. Maximum air leakage of 0.06 cfm/sq. ft. at a static-air-pressure differential of 6.24 lbf/sq. ft.
 2. Entrance Doors:
 - a. Single Doors: Maximum air leakage of 0.5 cfm/sq. ft. at a static-air-pressure differential of 6.24 lbf/sq. ft.
 - b. Pair of Doors: Maximum air leakage of 1.0 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft.
- G. Water Penetration under Static Pressure: Provide aluminum-framed systems that do not evidence water penetration through fixed glazing and framing areas when tested according to ASTM E 331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 12.0 lbf/sq. ft.
- H. Thermal Movements: Provide aluminum-framed systems that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): 120° F, ambient; 180° F, material surfaces.
 2. Interior Ambient-Air Temperature: 72° F.
- I. Energy Performance: Certify and label energy performance according to NFRC as follows:
1. Thermal Transmittance (U-factor):
 - a. Fixed glazing and framing areas shall have U-factor of not more than 0.43 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
 - b. Aluminum entrance doors shall have U-factor of not more than 0.80 Btu/sq. ft. x h x deg F as determined according to NFRC 100
 2. Condensation Resistance: Fixed glazing and framing areas shall have an NFRC-certified condensation resistance rating of no less than 61 as determined according to NFRC 500.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for aluminum-framed systems.
- B. Shop Drawings: For aluminum-framed systems. Include plans, elevations, sections, details, and attachments to other work.
 1. Include details of provisions for system expansion and contraction and for drainage of moisture in the system to the exterior.
- C. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.
- D. Qualification Data: For qualified Installer.
- E. Welding certificates.

- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for aluminum-framed systems, indicating compliance with performance requirements.
- G. Maintenance Data: For aluminum-framed systems to include in maintenance manuals.
- H. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Certification: Submit written certification prepared and sealed by a registered structural engineer licensed in the State of Iowa, verifying the ability of all members, assemblies, and connections to support the loads specified and required by applicable codes and regulations.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Engineering Responsibility: Prepare data for aluminum-framed systems, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in systems similar to those indicated for this Project.
- C. Product Options: Information on Drawings and in Specifications establishes requirements for systems' aesthetic effects and performance characteristics. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction. Performance characteristics are indicated by criteria subject to verification by one or more methods including preconstruction testing, field testing, and in-service performance.
 - 1. Do not revise intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If revisions are proposed, submit comprehensive explanatory data to Architect for review.
- D. Accessible Entrances: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.
- E. Source Limitations: Obtain glazed aluminum curtain walls, aluminum storefront, aluminum-framed entrances, and aluminum windows through one source from a single manufacturer.
- F. Welding Qualifications: Qualify procedures and personnel according to AWS D1.2, "Structural Welding Code - Aluminum."

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of structural supports for aluminum-framed systems by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including, but not limited to, excessive deflection.
 - b. Noise or vibration created by wind and thermal and structural movements.

- c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - d. Water penetration through fixed glazing and framing areas.
 - e. Failure of operating components.
- 2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Systems:
 - 1. EFCO Corporation; Series 433 2" x 4 1/2" Thermal Storefront Framing (Insulated Glazing Units).
 - 2. Kawneer North America; Series TR-2800 2" x 2 1/4" Thermal Fixed Architectural Window (Insulated Glazing Units).
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. EFCO Corporation.
 - 2. Kawneer North America; an Alcoa company.
 - 3. Manko Window Systems, Inc.
 - 4. Pittco Architectural Metals, Inc.
 - 5. Oldcastle Building Envelopes.
 - 6. Tubelite, Inc.
 - 7. Wausau Window and Wall Systems.

2.2 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - 1. Sheet and Plate: ASTM B 209.
 - 2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
 - 3. Extruded Structural Pipe and Tubes: ASTM B 429.
 - 4. Structural Profiles: ASTM B 308/B 308M.
 - 5. Welding Rods and Bare Electrodes: AWS A5.10/A5.10M.
- B. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer, complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.
 - 1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
 - 2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
 - 3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.3 FRAMING SYSTEMS

- A. Framing Members: Manufacturer's standard extruded-aluminum framing members of thickness required and reinforced as required to support imposed loads.
 - 1. Construction: Thermally broken.
 - 2. Size: 2 x 4-1/2 inches (nominal).
 - 3. Glazing System: Retained mechanically with gaskets on four sides.
 - 4. Glazing Plane: Outside glazed.
- B. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with non-staining, nonferrous shims for aligning system components.

- C. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding fasteners and accessories compatible with adjacent materials.
 - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 - 2. Reinforce members as required to receive fastener threads.
- D. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts, complying with ASTM A 123/A 123M or ASTM A 153/A 153M.
- E. Trim and Infill Panels: Minimum 0.125 inch thick aluminum; finish to match mullion sections where exposed.
- F. Exposed-to-View Flashings: Minimum 0.62 inch thick aluminum; finish to match mullion sections where exposed.
- G. Concealed Flashing: Dead-soft, 0.018-inch- thick stainless steel, ASTM A 240/A 240M of type recommended by manufacturer.
- H. Framing System Gaskets and Sealants: Manufacturer's standard, recommended by manufacturer for joint type.
- I. Brick Molding: Aluminum, color to match storefront system, at the perimeter of the storefront.
 - 1. Basis of Design: Special-Lite® Brick Moulding. Size: 1¾" x 1 ¼" nominal.

2.4 GLAZING SYSTEMS

- A. Glazing: As specified in Division 08 Section "Glazing."
- B. Glazing Gaskets: Manufacturer's standard compression types; replaceable, molded or extruded, of profile and hardness required to maintain watertight seal.
- C. Spacers and Setting Blocks: Manufacturer's standard elastomeric type.
- D. Bond-Breaker Tape: Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.
- E. Solar Control Films: As specified in Division 08 Section "Solar Control Films." Locations as shown on the drawings.
- F. Decorative Glass Films: As specified in Division 08 Section "Decorative Glass Glazing." Locations as shown on the drawings.
- G. Signage: As specified in Division 10 Section "Exterior Signage." Locations as shown on the drawings.

2.5 ENTRANCE DOOR SYSTEMS

- A. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing operation.
 - 1. Door Construction: 1-3/4-inch overall thickness, with minimum 0.125-inch-thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated, and fillet welded.
 - 2. Door Design: As indicated.
 - a. Accessible Doors: Smooth surfaced for width of door in area within 10 inches above floor or ground plane.
 - 3. Glazing in doors:

- a. Glazing shall be insulated.
 - b. Glazing shall be fully tempered, as required by code.
- 4. Glazing Stops and Gaskets: Square, snap-on, extruded-aluminum stops and preformed gaskets.
 - a. Provide nonremovable glazing stops on outside of door.

B. Entrance Door Hardware: As specified in Division 08 Section "Door Hardware."

2.6 ACCESSORY MATERIALS

- A. Joint Sealants: For installation at perimeter of aluminum-framed systems, as specified in Division 07 Section "Joint Sealants."
- B. Bituminous Paint: Cold-applied, asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos; formulated for 30-mil thickness per coat.

2.7 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Framing Members, General: Fabricate components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fitted joints with ends coped or mitered.
 - 3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior.
 - 4. Physical and thermal isolation of glazing from framing members.
 - 5. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 - 6. Provisions for field replacement of glazing from exterior.
 - 7. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- D. Thermally Barriers: Fabricate aluminum framing, including receptor head, sill, and sub-sill members, with an integral, concealed, low-conductance thermal barrier; located between exterior materials and members exposed on interior side; in a manner that eliminates direct metal-to-metal contact. Provide one of the following thermal barrier systems:
 - 1. Dual-Thermal Struts: Glass-reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions.
 - 2. Pour and Debridge Thermal Barrier: Integral structural two-part polyurethane thermal break; thermal barrier pocket of aluminum extrusion shall be abraded or lanced to create a mechanical lock. Subject to compliance with requirements, provide the following:
 - a. Product: AZON USA, AZO-Abrader or Lancer; No substitutions are permitted.
- E. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- F. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.8 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.
- B. Color Schedule: see drawings for finish colors.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General:
 - 1. Comply with manufacturer's written instructions.
 - 2. Do not install damaged components.
 - 3. Fit joints to produce hairline joints free of burrs and distortion.
 - 4. Rigidly secure nonmovement joints.
 - 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration.
 - 6. Seal joints watertight unless otherwise indicated.
- B. Metal Protection:
 - 1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or applying sealant or tape, or by installing nonconductive spacers as recommended by manufacturer for this purpose.
 - 2. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
 - 3. Where aluminum will contact preservative treated wood members, separate aluminum from wood member with either 1/4 inch (minimum) polyethylene or nylon spacers or 10 mil polyethylene separation film.
- C. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.
- D. Install continuous aluminum sill flashings below all aluminum storefront sill members including jamb if jamb is continuous to the bottom of the opening.
 - 1. Extend flashing completely beneath the opening and turn up behind and beside the window unit to form a watertight "pan".
 - 2. Drain pan to the exterior with positive slope.
 - 3. Flashing shall be sealed at the corners.
 - 4. Do not penetrate the horizontal portion of flashing.
 - 5. Turn up flashing at edges sufficiently to account for differential air pressure.
 - 6. Seal sill flashing to frame to prevent air infiltration except at internal drainage weep holes. Do not seal internal drainage weep holes.
- E. Set continuous sill members and flashing in full sealant bed as specified in Division 07 Section "Joint Sealants" to produce weathertight installation.
- F. Install components plumb and true in alignment with established lines and grades, and without warp or rack.

- G. Install glazing as specified in Division 08 Section "Glazing."
- H. Entrance Doors: Install doors to produce smooth operation and tight fit at contact points.
 - 1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
 - 2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.
- I. Install perimeter joint sealants as specified in Division 07 Section "Joint Sealants" to produce weathertight installation.

3.3 ERECTION TOLERANCES

- A. Install aluminum-framed systems to comply with the following maximum erection tolerances:
 - 1. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet; 1/4 inch over total length.
 - 2. Alignment:
 - a. Where surfaces abut in line, limit offset from true alignment to 1/16 inch.
 - b. Where surfaces meet at corners, limit offset from true alignment to 1/32 inch.
- B. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch.

3.4 ADJUSTING

- A. Adjust operating entrance door hardware to function smoothly as recommended by manufacturer.
 - 1. For entrance doors accessible to people with disabilities, adjust closers to provide a 3-second closer sweep period for doors to move from a 70-degree open position to 3 inches from the latch, measured to the leading door edge.

END OF SECTION 08 41 13

SECTION 08 45 23 - FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes aluminum-framed assemblies incorporating fiberglass-sandwich panels as follows:
 - 1. Skylight assemblies.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for aluminum components of panel assemblies.
- B. Shop Drawings: For panel assemblies.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
 - 2. Include details of provisions for assembly expansion and contraction and for draining moisture within the assembly to the exterior.
- C. Samples: In manufacturer's standard size.
 - 1. For each type of fiberglass-sandwich panel.
 - 2. For each type of exposed finish for framing members.
- D. Delegated-Design Submittal: For panel assemblies indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

- A. Sample Warranties: For special warranties.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For panel assemblies to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: For fiberglass-sandwich panels, a qualified manufacturer whose facilities, processes, and products are monitored by an independent, accredited quality-control agency for compliance with applicable requirements in ICC-ES AC04 or ICC-ES AC177.
- B. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 1. Build mockup of typical panel assemblies.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of panel assemblies that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including, but not limited to, excessive deflection.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - c. Water leakage.
 - 2. Warranty Period: Five years from date of Substantial Completion.
- B. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace fiberglass-sandwich panels that exhibit defects in materials or workmanship within specified warranty period.
 - 1. Defects include, but are not limited to, the following:
 - a. Fiberbloom.
 - b. Delamination of coating, if any, from exterior face sheet.
 - c. Color change exceeding requirements.
 - d. Delamination of panel face sheets from panel cores.
 - 2. Warranty Period: 20 years from date of Substantial Completion.
- C. Special Aluminum-Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes fail within specified warranty period. Warranty does not include normal weathering.
 - 1. Failures include, but are not limited to, checking, crazing, peeling, chalking, and fading of finishes.
 - 2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design fiberglass-sandwich-panel assemblies.
- B. Structural-Test Performance: Provide panel assemblies tested according to ASTM E330, as follows:
 - 1. When tested at positive and negative wind-load design pressures, assemblies do not show evidence of deflection exceeding specified limits.
 - 2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not show evidence of material failures, structural distress, and permanent deformation of main framing members exceeding 0.2 percent of span.
 - 3. Test Durations: As required by design wind velocity, but not less than [10] seconds.
- C. Water Penetration under Static Pressure: Provide panel assemblies that do not evidence water penetration through fixed glazing and framing areas when tested according to ASTM E331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 15 lbf/sq. ft.
- D. Water Penetration under Dynamic Pressure: Provide panel assemblies that do not evidence water leakage through fixed glazing and framing areas when tested according to AAMA 501.1 under dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
 - 1. Maximum Water Leakage: No uncontrolled water penetrating aluminum-framed systems or water appearing on systems' normally exposed interior surfaces from sources other than

condensation. Water leakage does not include water that is controlled by flashing and gutters and drained to the exterior, or water that cannot damage adjacent materials or finishes.

- E. Thermal Movements: Allow for thermal movements from ambient- and surface-temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- F. Energy Performance – Skylight Assemblies: Provide skylight assemblies with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below and certified and labeled according to NFRC:
 - 1. Thermal Transmittance (U-Factor): Fixed glazing and framing areas shall have U-factor of not more than 0.28 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
 - 2. Solar Heat Gain Coefficient (SHGC): Fixed glazing and framing areas shall have a SHGC of no greater than 0.21 as determined according to NFRC 200.
 - 3. Air Infiltration: Maximum air leakage through fixed glazing and framing areas of of fixed wall area as determined according to ASTM E283 at a minimum static-air-pressure differential of 6.24 lbf/sq. ft.
 - 4. Light Transmission: 23 percent as determined according to NFRC 200

2.2 FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

- A. Fiberglass-Sandwich-Panel Assemblies: Translucent assemblies that are supported by aluminum framing and glazed with fiberglass-sandwich panels.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Kalwall Corporation.
 - b. Major Industries, Inc.

2.3 FIBERGLASS-SANDWICH PANELS

- A. Fiberglass-Sandwich Panels: Uniformly colored, translucent, thermoset, fiberglass-reinforced-polymer face sheets bonded to both sides of a grid core.
- B. Panel Thickness: 2-3/4 inches.
- C. Grid Core: Mechanically interlocked, extruded-aluminum I-beams, with a minimum flange width of 7/16 inch.
 - 1. Extruded Aluminum: ASTM B221, in alloy and temper recommended in writing by manufacturer.
 - 2. I-Beam Construction: Thermally broken, extruded aluminum.
 - 3. Grid Pattern: Inline rectangle, nominal 12 by 24 inches.
- D. Exterior Face Sheet:
 - 1. Thickness: 0.070 inch.
 - 2. Color: Crystal.
 - 3. Protective Weathering Surface: Integral, embedded-glass erosion barrier.
- E. Interior Face Sheet:
 - 1. Thickness: 0.045 inch.
 - 2. Color: Crystal.
- F. Fiberglass-Sandwich-Panel Adhesive: Manufacturer's standard for permanent adhesion of facings to cores.

- G. Panel Strength:
 - 1. Maximum Panel Deflection: 3-1/2 inches when a 4-by-12-foot panel is tested according to ASTM E72 at 34 lbf/sq. ft., with a maximum 0.090-inch set deflection after five minutes.
 - 2. Panel Support Strength: Capable of supporting, without failure, a 300-lbf concentrated load when applied to a 3-inch- diameter disk according to ASTM E661.
- H. Panel Performance:
 - 1. Self-Ignition Temperature: 650 deg F or more according to ASTM D1929.
 - 2. Smoke-Developed Index: 450 or less according to ASTM E84, or 75 or less according to ASTM D2843.
 - 3. Combustibility Classification: Class CC1 based on testing according to ASTM D635.
 - 4. Roof-Covering Classification: Class B according to ASTM E108 or UL 790.
 - 5. Interior Finish Classification: Class B based on testing according to ASTM E84.
 - 6. Color Change: Not more than 3.0 units Delta E, when measured according to ASTM D2244, after outdoor weathering compliant with procedures in ASTM D1435.
 - a. Outdoor Weathering Conditions: Sixty months in southern Florida.
 - 7. Impact Resistance: No fracture or tear at impact of 60 ft. x lbf by a 3-1/4-inch- diameter, 5-lb freefalling ball according to UL 972 test procedure.
 - 8. Haze Factor: Greater than 90 percent when tested according to ASTM D1003.

2.4 ALUMINUM FRAMING SYSTEMS

- A. Components: Manufacturer's standard extruded-aluminum members of thickness required and reinforced as required to support imposed loads.
 - 1. Construction: Thermally broken, extruded aluminum.
- B. Aluminum: Alloy and temper recommended in writing by manufacturer for type of use and finish indicated.
 - 1. Sheet and Plate: ASTM B209.
 - 2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B221.
 - 3. Extruded Structural Pipe and Tubes: ASTM B429.
 - 4. Structural Profiles: ASTM B308.
- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning skylight components.
- D. Fasteners and Accessories: Manufacturer's standard, corrosion-resistant, nonstaining, and nonbleeding fasteners and accessories; compatible with adjacent materials.
 - 1. At closures, retaining caps, or battens, use ASTM A193, 300 series stainless-steel screws.
 - 2. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 - 3. At movement joints, use slip-joint linings, spacers, and sleeves of material and type recommended in writing by manufacturer.
- E. Anchor Bolts: ASTM A307, Grade A, galvanized steel.
- F. Concealed Flashing: Corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- G. Exposed Flashing and Closures: Aluminum sheet not less than 0.063-inch-thick, finished to match framing.
- H. Framing Gaskets: Manufacturer's standard.
- I. Frame-System Sealants: As recommended in writing by manufacturer.

- J. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 FABRICATION

- A. Frame System Fabrication:
 - 1. Fabricate components that, when assembled, have the following characteristics:
 - a. Profiles that are sharp, straight, and free of defects or deformations.
 - b. Accurately fitted joints with ends coped or mitered.
 - c. Internal guttering systems or other means to drain water passing through joints, and moisture migrating within assembly to exterior.
 - 2. Fabricate sill closures with weep holes and for installation as continuous component.
 - 3. Reinforce components as required to receive fastener threads.
- B. Panel Fabrication: Factory assemble and seal panels.
 - 1. Laminate face sheets to grid core under a controlled process using heat and pressure to produce straight adhesive bonding lines that cover width of core members and that have sharp edges.
 - a. White spots indicating lack of bond at intersections of grid-core members are limited in number to four for every 40 sq. ft. of panel and limited in diameter to 3/64 inch.
 - 2. Fabricate with grid pattern that is symmetrical about centerlines of each panel.
 - 3. Fabricate panel to allow condensation within panel to escape.
 - 4. Reinforce panel corners.

2.6 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written instructions.
 - 1. Do not install damaged components.
 - 2. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
 - 3. Rigidly secure nonmovement joints.
 - 4. Install anchors with separators and isolators to prevent metal corrosion, electrolytic deterioration, and immobilization of moving joints.
 - 5. Seal joints watertight unless otherwise indicated.
- B. Metal Protection: Where aluminum components will contact dissimilar materials, protect against galvanic action by painting contact surfaces with corrosion-resistant coating or by installing nonconductive spacers as recommended in writing by manufacturer for this purpose.
- C. Install components plumb and true in alignment with established lines and elevations.

- D. Skylight Assemblies: Install continuous aluminum sill closures with weatherproof expansion joints and locked and sealed corners. Locate weep holes at rafters. Install components to drain water passing through joints and moisture migrating within assembly to exterior.
- E. Erection Tolerances: Install panel assemblies to comply with the following maximum tolerances:
 - 1. Alignment: Limit offset from true alignment to 1/32 inch where surfaces abut in line, edge to edge, at corners, or where a reveal or protruding element separates aligned surfaces by less than 3 inches; otherwise, limit offset to 1/8 inch.
 - 2. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet, but no greater than 1/2 inch over total length.

END OF SECTION 08 45 23

SECTION 085213 – ALUMINUM CLAD WOOD WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes aluminum-clad wood windows.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review, discuss, and coordinate the interrelationship of wood windows with other exterior wall components. Include provisions for anchoring, flashing, weeping, sealing perimeters, and protecting finishes.
 - 3. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
 - 4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for wood windows.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- C. Samples: For each exposed product and for each color specified, 2 by 4 inches in size.
- D. Product Schedule: For wood windows. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each type of wood window, for tests performed by a qualified testing agency.
- B. Sample Warranties: For manufacturer's warranties.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating wood windows that meet or exceed performance requirements indicated and of documenting this performance by test reports, and calculations.
- B. Installer Qualifications: An installer acceptable to wood window manufacturer for installation of units required for this Project.
- C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockup of typical wall area as shown on Drawings.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace wood windows that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.
 - b. Structural failures including excessive deflection, water leakage, and air infiltration.
 - c. Faulty operation of movable sash and hardware.
 - d. Deterioration of materials and finishes beyond normal weathering.
 - e. Failure of insulating glass.
 2. Warranty Period:
 - a. Window: Ten years from date of Substantial Completion.
 - b. Glazing Units: Five years from date of Substantial Completion.
 - c. Aluminum-Cladding Finish: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain wood windows from single source from single manufacturer.

2.2 WINDOW PERFORMANCE REQUIREMENTS

- A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.
 1. Window Certification: WDMA certified with label attached to each window.
- B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:
 1. Minimum Performance Class: CW.
 2. Minimum Performance Grade: 30.
- C. Unit energy performance:
 1. U-Factor = 0.38 for fixed sashes (max.)
 2. U-Factor = 0.40 for operable sashes (max.)
 3. Solar Heat-Gain Coefficient (SHGC) = 0.40 (max.)

2.3 ALUMINUM-CLAD WOOD WINDOWS

- A. Basis of Design:
 1. Marvin: Signature Ultimate Clad Double Hung G2
 2. Pella: Architect Series, Traditional Wood, Clad LX
- B. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 1. Marvin Windows and Doors.
 2. Pella Corporation.
 3. Pozzi Custom Collection; JELD-WEN, Inc.

4. Windsor Windows & Doors.
- C. Operating Types: Provide the following operating types in locations indicated on Drawings:
1. Single hung.
 2. Double hung.
 3. Fixed.
- D. Frames and Sashes: Fine-grained wood lumber complying with AAMA/WDMA/CSA 101/I.S.2/A440; kiln dried to a moisture content of not more than 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch deep by 2 inches wide; water-repellent preservative treated.
1. Exterior Finish: Aluminum-clad wood.
 - a. Aluminum Finish: Manufacturer's standard high-performance organic finish.
 - b. Color: As selected by Architect from manufacturer's full range.
 2. Interior Finish: Manufacturer's standard factory-prime coat.
- E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.
- F. Insulating Glass: Silicone-glazed 11/16-inch clear, low-E coated, insulating glass.
1. Basis of Design: Cardinal LowE 180; argon filled.
 2. U-Factor: 0.26 (max.)
 3. SHGC: 0.37 SHGC: 0.69 (max.)
 4. VLT: 74 percent min.
- G. Hardware, General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock windows, and sized to accommodate sash weight and dimensions.
1. Exposed Hardware Color and Finish: As selected by Architect from manufacturer's full range.
- H. Hung Window Hardware:
1. Counterbalancing Mechanism: Complying with AAMA 902, concealed, of size and capacity to hold sash stationary at any open position.
 2. Locks and Latches: Allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.
 3. Tilt Hardware: Releasing tilt latch allows sash to pivot about horizontal axis to facilitate cleaning exterior surfaces from the interior.
- I. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
- J. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.
- K. Limit Device (Window Opening Control Device): to restrict window opening to less than 4-inches in accordance with ASTM F2090-10 for window fall prevention standards.
1. Provide limit device on operable window units with sill heights of 36 inches or less above finished floor. (Lower sash only for double hung units.)
 2. Factory applied hardware shall be recessed into the stiles of the top sash, strike place shall be mounted to the bottom sash check rail. Color shall match other hardware.

2.4 ACCESSORIES

- A. Dividers (False Muntins): Provide divider grilles simulated divided lites with spacer bar (SDLS) in designs indicated for each sash lite.
 - 1. Basis of Design: Pella Corporation; Integral Light Technology Glazing and Grilles
 - a. Insulating glass contains non-glare grid between panes of glass (grilles between the glass).
 - b. Room Side Grilles: Solid 7/8-inch wide clear Pine.
 - c. Exterior Grilles: Extruded aluminum; profile as selected by Architect. Configuration to match room side grilles.
 - d. Bars shall be adhered to both sides of insulating glass with VHB acrylic adhesive tape and aligned with non-glare grid.
 - e. Finish: Finish color to match interior and exterior finish colors.
- B. Exterior Trim: Aluminum-clad trim matching window units of size and configuration indicated.
- C. Insulating-Foam Sealant: Low-pressure, polyurethane window and door insulating-foam sealant;
 - 1. Dow Great Stuff Window & Door.
- D. Anchors, Nail Fins, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.
- E. Reinforcing Members: Aluminum, or nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.

2.5 INSECT SCREENS

- A. General: Fabricate insect screens to integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.
 - 1. Type and Location: Full, outside for double-hung or Half, outside for single-hung sashes.
- B. Aluminum Frames: Manufacturer's standard aluminum alloy complying with SMA 1004 or SMA 1201. Fabricate frames with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC spline/anchor concealing edge of frame.
 - 1. Tubular Framing Sections and Cross Braces: Roll formed from aluminum sheet.
 - 2. Finish for Exterior Screens: Baked-on organic coating in color selected by Architect from manufacturer's full range.
- C. Glass-Fiber Mesh Fabric: 18-by-14 (1.1-by-1.4-mm) or 18-by-16 (1.0-by-1.1-mm) mesh of PVC-coated, glass-fiber threads; woven and fused to form a fabric mesh resistant to corrosion, shrinkage, stretch, impact damage, and weather deterioration. Comply with ASTM D 3656.
 - 1. Mesh Color: Manufacturer's standard.

2.6 FABRICATION

- A. Fabricate wood windows in sizes indicated. Include a complete system for installing and anchoring windows.
- B. Glaze wood windows in the factory.
- C. Weather strip each operable sash to provide weathertight installation.

- D. Mullions: Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units.
- E. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.
 - 1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
 - 2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches of opening.
 - 3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
- C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E2112.
- B. Install sill pan according to manufacturer's installation instructions. Sill pan is in addition to flexible flashing provided as a part of the weather barrier system opening flashing.
- C. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.
- D. Install windows to be weather-tight and freely operating.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action (dissimilar materials, treated lumber, etc.) at points of contact with other materials.
- F. For fin method of attachment, integrate window system installation with exterior weather-resistant barrier using flashing/sealant tape. Apply and integrate flashing/sealant tape with weather-resistant barrier using watershed principles in accordance with window manufacturer's instructions.

- G. Place interior seal around window perimeter using insulating foam sealant to maintain continuity of building thermal and air barrier.
- H. Seal window to exterior wall cladding with sealant and related backing materials at perimeter of assembly.
- I. Leave window units closed and locked.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.
- B. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
 - 1. Keep protective films and coverings in place until final cleaning.
- C. Clean factory-glazed glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
- D. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.
- E. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.

END OF SECTION 08 52 13

SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Hardware for wood doors.
- B. Hardware for metal doors.
- C. Thresholds, weather-stripping, seals and gasketing.

1.2 RELATED SECTIONS

- A. Division 08 Section "Aluminum-Framed Entrances and Storefronts."
- B. Division 08 Section "Stile and Rail Wood Doors."

1.3 REFERENCES

- A. ANSI/ICC A117.1-American National Standard for Accessible and Usable Buildings and Facilities; International Code Council 1998
- B. DHI (LOCS)-Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 1990
- C. DHI WDHS.3-Recommended Locations for Architectural Hardware for Wood Flush Doors; Door and Hardware Institute; 1993
- D. NFPA 80-Standard for Fire Doors and Windows; National Fire Protection Association; 1999
- E. NFPA 101-Code for Safety to Life from Fire in Buildings and Structures; National Fire Protection Association; 2000
- F. UBC Std. 7-2, Part II- Test Standard for Smoke and Draft Control Assemblies; International Conference of Building Officials; 1997
- G. UL 10B-Fire Test of Door Assemblies; Underwriters Laboratories INC. (UL)
- H. UL 10C-Positive Pressure Fire Tests of Door Assemblies; Underwriters Laboratories INC. (UL)
- I. BHMA-Builders Hardware Manufacturers Association
- J. UL (BMD)-Building Materials Directory; Underwriters Laboratories INC. (UL)

1.4 SUBMITTALS

- A. Submittals:
 - 1. List all doors per set with opening number, opening location (both sides of door), hand, fire rating, size, material and any special features.
 - 2. List all hardware required for openings with quantity, description, product number, handing, finish and manufacturer.
 - 3. Include any special installation and operation instructions.

4. For electrical systems, include operational instructions, riser diagrams and point to point wiring diagrams.
5. Include manufacturer's catalogue information for all products listed.
6. Include any templates for door machining.
7. Supplier to visit project sight to verify all existing conditions for compatibility with any new hardware to be furnished before submitting submittals.

1.5 QUALITY ASSURANCE

- A. Hardware supplier to be company specializing in supplying of commercial door hardware.
- B. Hardware supplier to have a certified Architectural Hardware Consultant (AHC), as certified by the Door and Hardware Institute (DHI), as a full-time employee to oversee submittal completion and be available for consultation during the course of the project.

1.6 PRE-INSTALLATION MEETING

- A. Installer and supplier to convene prior to commencing of installation of doors and hardware for any special installation instructions.

1.7 DELIVER, STORAGE AND PROTECTION

- A. Package hardware items individually, label and identify each package with opening and set number to match hardware submittal.
- B. Contractor to secure all delivered hardware in secure, dry location.
- C. Supplier to deliver hardware to project sight or other locations as directed by contractor.

1.8 COORDINATION

- A. Hardware supplier to verify cylinder type, finish, quantity etc. with any door supplier that hardware supplier is furnishing cylinders for.
- B. Hardware supplier to verify voltage and amperage requirements with electrical contractor, fire alarm systems contractor and access control systems contractor.
- C. Conduit and wiring provided by electrical contractor.
- D. Hardware supplier to furnish any templates to door and frame manufactures and installers for door and frame preparation.
- E. Sequence delivery, installation etc. to ensure utility connections and security are achieved in an orderly and expeditious manner.
- F. Hardware supplier to coordinate keying requirements with owner.
- G. Hardware supplier to visit project site to verify any existing conditions for compatibility with any new doors, frames and hardware.

1.9 MAINTENANCE

- A. Contractor to retain and turn over to owner any special installation an adjustment tools furnished with the hardware.

- B. Contractor to retain and turn over to owner any installation, adjustment and operational directions that are furnished with the hardware.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Hinges:
 - 1. McKinney (MK)
 - 2. Hager
 - 3. Bommer
 - 4. Hinges on outswing doors with keyed locks to have non-removable pins (NRP).
 - 5. All hinges to have ball tip.
 - 6. All wood screws for top hinge of each wood door to be 2½" long for both jamb and door leaf of hinge. Color to match hinge.
- B. Mortise Locks:
 - 1. Sargent (SA), 8200 Series, CER Design (Contemporary Escutcheon + Rockport lever handles)
 - 2. Corbin/Ruswin, ML2000 Series, Merlot Lever & R Escutcheon
 - 3. Schlage L Series, M55 lever handle and 360L escutcheon
 - 4. Furnish strikes with longer lips, as required for extended wood jambs.
 - 5. Furnish proper thru bolts and fasteners for up to 2¼" thick doors.
- C. Bored Auxiliary Locks:
 - 1. Sargent (SA) 480 Series Deadbolt, thumb turn inside
 - 2. Corbin/Ruswin DL2200 Series
 - 3. Schlage B-600 Series
 - 4. Furnish strikes with longer lips, as required for extended wood jambs.
 - 5. Furnish proper thru bolts and fasteners for up to 2¼" thick doors.
- D. Astragals (for pairs of doors) surface mounted:
 - 1. Pemko (PE) 375_R surface mounted overlapping astragal
 - 2. McKinney
 - 3. Reese
 - 4. BHMA A156.22.
- E. Cylinders:
 - 1. Supplier to furnish cylinders to match each individual store so a store owner can have new cylinders keyed to their existing store key.
 - 2. Furnish length as required for up to 2¼" thick doors.
- F. Exit Devices (Exit Panic Devices) traditional look style:
 - 1. Sargent (SA), 90 Series with Rockport lever handle.
 - 2. Corbin/Ruswin, ED3000 Series with Dirke B33 lever Series.
 - 3. Von Duprin 55/88 Series with L trim and style 12 lever handle
 - 4. Supplier to furnish any shims or brackets required for proper installation.
 - 5. Cylinder dogging to be furnished with any non-rated and non-electrical exit device.
 - 6. Furnish proper fasteners for up to 2¼" thick doors.
- G. Surface Bolts:
 - 1. Rockwood (RO)
 - 2. Trimco
 - 3. McKinney
 - 4. Ives

- H. Automatic and self-latching flush bolts:
1. Automatic and Self-Latching Flush Bolts: BHMA A156.16; minimum 3/4-inch (19-mm) throw; designed for mortising into door edge. Include dust proof strike at threshold and strike plates on active leaf. Provide bolts at top and bottom of inactive leaf.
 2. Burns Manufacturing.
 3. Cal-Royal Products, Inc.
 4. Dorma.
 5. Ives (Ingersoll Rand / Allegion).
 6. Hager. 296W for wood doors.
 7. Rockwood (Assa Abloy).
- I. Closers:
1. Sargent (SA), 1431 Series
 2. Norton, 7500 Series.
 3. Corbin/Ruswin, DC8000 Series
 4. LCN, 4110 Series
 5. Supplier to furnish all drop plates and mounting brackets as required for proper installation.
 6. Furnish arm type as noted in hardware sets.
 7. Install closers on side of door for least visibility, unless mounting is required for maximum door swing or protect closure from moisture or corrosive materials.
 8. Installer to properly adjust all hydraulic and spring adjustments for proper operation of closer and door.
 9. Contractor to check and adjust all closers when mechanical systems are in operation.
 10. All closers to have full plastic covers.
 11. Closer cylinder to be 1½" diameter.
- J. Overhead coordinators:
1. BHMA A156.3; consisting of active-leaf, hold-open lever and inactive-leaf release trigger; fabricated from steel with nylon-coated strike plates; with built-in, adjustable safety release.
 2. Architectural Buildings Hardware (ABH) Manufacturing Inc.
 3. Cal-Royal Products, Inc.
 4. Glynn-Johnson (Ingersoll Rand / Allegion).
 5. Hager. 297D
- K. Overhead Stops and Holders:
1. BHMA A156.8.
 2. Allegion. (Glynn Johnson 90 Series Heavy Duty)
 3. Architectural Builders
 4. Rixson
 5. Assa Abloy (Sargent)
- L. Protection Plates:
1. Rockwood (RO)
 2. Trimco
 3. McKinney
 4. Ives
 5. Protection plates to be fastened with countersunk, oval head screws.
 6. Protection plates to be beveled on all four sides.
 7. Protection plate size as noted in hardware sets unless restricted by bottom rail of door.
- M. Wall and Floor Stops:
1. Rockwood (RO)
 2. Trimco
 3. McKinney
 4. Ives

5. Wall bumper shells to be cast brass or bronze.

N. Weatherstripping, Gasketing and Thresholds:

1. Pemko (PE)
2. McKinney
3. Reese
4. Any weatherstrip aluminum housing attached to metal surfaces to be attached with self-drilling TEK screws.
5. Any weatherstrip that is screw applied in an aluminum housing shall have the end fastening screw be 1" or less from the end of the aluminum housing. The hole for this end fastening screw to be drilled in field as required.
6. All fire rated doors are to meet UL10C, Positive Pressure Fire Testing, and are to be Category A doors with concealed intumescence furnished as required by the door manufacturer.
7. Any thresholds that project beyond the face of the door a half inch or more are to be furnished opening width plus four inches and coped around the face of the frame.

O. Silencers:

1. All silencers for hollow metal frames to be furnished and installed by frame supplier.
2. Silencers are not required at frames that are to have gasketing or weatherstripping installed.

2.2 GENERAL REQUIREMENTS FOR DOOR HARDWARE

A. Finishes:

1. Oil Rubbed Bronze (US10B), unless otherwise noted.
2. Closers to be painted dark bronze in color, unless otherwise noted.

B. Provide products that comply with the following:

1. Applicable provisions of Federal, State and Local Codes.
2. ANSI/ICC A117.1, American national Standard for Accessible and Usable Buildings and Facilities.
3. Applicable provisions of NFPA 101, Life Safety Code.
4. NFPA 80, Fire Rated Doors.
5. All hardware on fire rated doors to be listed and classified by UL as suitable for the purpose specified and indicated.
6. Electrical hardware to be listed and classified by UL as suitable for the purpose specified and indicated.
7. Hardware for positive pressure and smoke rated doors to comply with UBC Std. 7-2, Part II 1997 and UL 10C.

2.3 KEYING

A. Locks and cylinders to be keyed per building owner's (or tenant's) instructions.

1. Key to existing system upon request.
2. Key randomly unless instructed otherwise.

B. Furnish two copies of each key per cylinder, and deliver to building owner (or tenant).

C. Deliver all keys, with identifying tags and keying system, to owner (or tenant) or per owner's instructions. Person receiving keys to sign for delivery of them, with a copy of the receipt to be kept by the receiver and supplier.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that all doors and frames are ready to receive door hardware as specified.
- B. Verify that frames are level, plum and set at correct dimensional opening.
- C. Verify that correct wire gauges are provided to supply correct electrical power to electrically operated devices.
- D. Supplier to visit project sight to verify all existing conditions with contractor's representative.

3.2 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions.
- B. Use templates provided with hardware.
- C. Install hardware on fire rated doors and frames in accordance with applicable codes and NFPA 80.
- D. Mounting heights of hardware to be per DHI recommended locations and accessibility codes.
- E. All fire rated doors are to meet UL10C, Positive Pressure Fire Testing, and are to be Category A doors with concealed intumescence furnished as required by the door manufacturer.

3.3 FIELD QUALITY CONTROL

- A. Provide an Architectural Hardware Consultant to inspect installation and certify that hardware has been furnished and installed in accordance with manufacturer's instructions, applicable codes and as specified, as requested by the Architect.
 - 1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.
 - 2. Reports shall be in a spreadsheet format, inclusive of all doors on the project, indicate opening number, condition of hardware including acceptable or deficient items, and status of deficiency correction.
 - 3. Reviews/reports: Perform initial and subsequent reviews as required to assure all work is corrected.
 - 4. Final Report: The AHC shall reconfirm deficiencies are corrected and submit an updated spreadsheet showing the status of completed for all items.

3.4 ADJUSTING

- A. Adjust hardware for smooth and proper operation.

3.5 PROTECTION OF FINISHED WORK

- A. Protect finished work under provisions of Section 01 73 00.
- B. Do not permit adjacent work to damage hardware or other products.

3.6 BASIS OF DESIGN FOR HARDWARE SCHEDULE

Finishes:

For aluminum doors, match the aluminum door frame and storefront system.

For wood doors, match US10B (613) dark bronze.

Hinges:	McKinney: T4A 3386 x BT NRP 5"x5" (heavy weight)
Mortise lock levers (dormitory/exit - wide stile)	Sargent: 31 8225 CE R (with Rockport Levers)
Mortise lock levers (dormitory/exit - narrow stile)	Adams Rite: 2190 small format with Style 01 levers
Deadlock with interior thumb-turn.....	Adams Rite: MS 1950 series (narrow stile alum. door)
Exit panic (traditional mortise wide stile)	Sargent: 9900 series Function 13 (key outside unlocks/locks trim) ET Trim with Rockport lever handle
Mortise auxiliary lock	Sargent 4875 series mortise deadbolt (interior thumb turn)
Lock cylinder.....	if not already provided with hardware
Flush bolts top & bottom set (manual, metal).....	(inactive leaf) Ives FB457/458 series
Surface bolts top & bottom set (manual, metal)	Rockwood 630 (24" top, 12" bottom)
Pull plate (traditional)	Ives: 8311, 3½" x 15"
Push bar	Rockwood Manufacturing: 31-PB 3/8" x 5/4" flat stock
Door pull	Rockwood Manufacturing: RM 5670 plain offset, 1" diameter, 12" long; plain ends
Closer (with selective hold open and stop).....	Sargent: 1431 series CPSH
Floor stop & manual door holder (floor mounted with hook)	Ives: FS450
Wall bumper (convex rubber)	Ives: WS406CVX
Protection plate (door or kick plate):.....	Rockwood K1050 6" 4BE CSK
Surface T astragal:	(inactive leaf) Pemko 355_S
Astragal brush gasketing	(pair) Pemko: 18061_NB
Perimeter gasketing:.....	Pemko: 303_S

Sweep (door bottom, brush gasketing)Pemko: 18061_NB

Threshold (5" thermal barrier saddle).....Pemko: 252X3AFG mill aluminum
(verify depth & length)

Mail Slot (glass door mounted)..... C. R. Laurence Co.: MS125_ (2 "x 11")

Mail Slot (wood door mounted) Salsbury Ind. mail slot wide #4045A antique finish

Signage UDBH: to read: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED."
1" tall letters with contrasting background
decal, mount to glass approximately 5' above floor line (verify)

3.7 HARDWARE SCHEDULE

<i>Quantity</i>	<i>Description</i>	
Set 1	existing single door	DOOR TO UPSTAIRS
TYPE:	WOOD DOOR IN WOOD FRAME	
HANDING:	LHR	
3	HINGES	
1	MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)	
1	LOCK CYLINDER	
1	CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)	
1 SET	PERIMETER GASKETING	
1	SWEEP (DOOR BOTTOM, BRUSH GASKETING)	
1	THRESHOLD (5" THERMAL BARRIER SADDLE)	
Set 2-14	existing single door	STORE ENTRANCE
TYPE:	WOOD DOOR IN WOOD FRAME	
HANDING:	LH	
3	HINGES	
1	MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)	
1	LOCK CYLINDER	
1	CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)	
1 SET	PERIMETER GASKETING	
1	SWEEP (DOOR BOTTOM, BRUSH GASKETING)	
1	THRESHOLD (5" THERMAL BARRIER SADDLE)	
Set 2-16	existing single door	STORE ENTRANCE
TYPE:	WOOD DOOR IN WOOD FRAME	
HANDING:	LH	
3	HINGES	
MARSHALLTOWN - FACADE REHABILITATION		DOOR HARDWARE
RDG 3005.009.00		08 71 00-8

- 1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)
- 1LOCK CYLINDER
- 1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)
- 1 SETPERIMETER GASKETING
- 1SWEEP (DOOR BOTTOM, BRUSH GASKETING)
- 1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 2-18 existing single door **STORE ENTRANCE**

- TYPE: WOOD DOOR IN WOOD FRAME
- HANDING: RH
- 3HINGES
 - 1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)
 - 1LOCK CYLINDER
 - 1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)
 - 1 SETPERIMETER GASKETING
 - 1SWEEP (DOOR BOTTOM, BRUSH GASKETING)
 - 1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 3A new single door **DOOR TO UPSTAIRS**

- TYPE: ALUM DOOR IN ALUM FRAME
- HANDING: LHR
- 3HINGES
 - 1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)
 - 1LOCK CYLINDER
 - 1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)
 - 1 SETPERIMETER GASKETING
 - 1SWEEP (DOOR BOTTOM, BRUSH GASKETING)
 - 1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 3B new single door **BACK DOOR**

- TYPE: ALUM DOOR IN ALUM FRAME
- HANDING: RHR
- 3HINGES
 - 1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)
 - 1LOCK CYLINDER
 - 1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)
 - 1 SETPERIMETER GASKETING

1SWEEP (DOOR BOTTOM, BRUSH GASKETING)

1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 5 existing single door **DOOR TO UPSTAIRS**

TYPE: WOOD DOOR IN WOOD FRAME

HANDING: LHR

3HINGES

1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)

1LOCK CYLINDER

1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)

1 SETPERIMETER GASKETING

1SWEEP (DOOR BOTTOM, BRUSH GASKETING)

1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 6 new single door **STORE ENTRANCE**

TYPE: ALUM DOOR IN ALUM FRAME

HANDING: LHR

3HINGES

1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)

1LOCK CYLINDER

1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)

1 SETPERIMETER GASKETING

1SWEEP (DOOR BOTTOM, BRUSH GASKETING)

1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 8A new single door **STORE ENTRANCE**

TYPE: WOOD DOOR IN WOOD FRAME

HANDING: LHR

3HINGES

1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)

1LOCK CYLINDER

1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)

1 SETPERIMETER GASKETING

1SWEEP (DOOR BOTTOM, BRUSH GASKETING)

1THRESHOLD (5" THERMAL BARRIER SADDLE)

Set 8B new single door **DOOR TO UPSTAIRS**

TYPE: WOOD DOOR IN WOOD FRAME

HANDING: RHR

3HINGES

1MORTISE LOCK LEVERS (DORMITORY/EXIT - WIDE STILE)

1LOCK CYLINDER

1CLOSER (WITH SELECTIVE HOLD OPEN AND STOP)

1 SETPERIMETER GASKETING

1SWEEP (DOOR BOTTOM, BRUSH GASKETING)

1THRESHOLD (5" THERMAL BARRIER SADDLE)

END OF SECTION 08 71 00

SECTION 08 80 00 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:
 - 1. Storefront windows.
 - 2. Windows.
 - 3. Doors.
- B. This Section includes:
 - 1. Clear glass.
 - 2. Ceramic coated spandrel glass.

1.2 DEFINITIONS

- A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.
- C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.
- D. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:
 - 1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
 - a. Specified Design Wind Loads: As indicated, but not less than wind loads applicable to Project as required by ASCE 7 "Minimum Design Loads for Buildings and Other Structures": Section 6.0 "Wind Loads."
 - b. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.

- c. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.
 - 1) For monolithic-glass lites heat treated to resist wind loads.
 - 2) For insulating glass.
 - d. Minimum Glass Thickness: Not less than 6.0 mm.
- C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.4 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.
- B. Samples: For the following products, in the form of 12-inch- square Samples for glass.
 - 1. Insulating glass for each designation indicated.
- C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.
- D. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
 - 1. For insulated glass units, provide documentation demonstrating that fabricator of insulated glass units is certified by primary glass manufacturer.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.
- B. Source Limitations for Glass: Obtain the following through one source from a single manufacturer for each glass type: clear float glass, laminated glass, fire-resistive glass, coated float glass, and insulating glass.
- C. Source Limitations for Insulated Glass: Obtain insulated glass in fabricated units from a manufacturer that is certified by primary glass manufacturer.
- D. Source Limitations for Glazing Accessories: Obtain glazing accessories through one source from a single manufacturer for each product and installation method indicated.
- E. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified testing agency based on testing glass products.
 - 1. Glass Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- F. Elastomeric Glazing Sealant Product Testing: Obtain sealant test results for product test reports in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period.

1. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.
 2. Test elastomeric glazing sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
- G. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.
1. Subject to compliance with requirements, obtain safety glazing products permanently marked with certification label of the Safety Glazing Certification Council or another certification agency or manufacturer acceptable to authorities having jurisdiction.
 2. Where glazing units, including Kind FT glass and laminated glass, are specified in Part 2 articles for glazing lites more than 9 sq. ft. in exposed surface area of one side, provide glazing products that comply with Category II materials, for lites 9 sq. ft. or less in exposed surface area of one side, provide glazing products that comply with Category I or II materials, except for hazardous locations where Category II materials are required by 16 CFR 1201 and regulations of authorities having jurisdiction.
- H. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
1. GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
 2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."
- I. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following testing and inspecting agency:
1. Insulating Glass Certification Council.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.7 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings and glass panel partitions. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1.9 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer's standard form, made out to Owner and signed by coated-glass manufacturer agreeing to replace coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 10 years from date of Substantial Completion.
- B. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS, GENERAL

- A. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with specified performance requirements indicated.
 1. Minimum Glass Thickness: Not less than 6.0 mm (1/4 inch).
- B. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heat-treated float glass, or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened glass is indicated, provide Kind HS heat-treated float glass or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- C. Size: Provide products in sizes as indicated on the Drawings. Where the manufacturer requires heat treated or tempered glass to be used due to the size of the glass or the Insulated Glazing Unit, provide products as required by the manufacturer.

2.2 GLASS PRODUCTS

- A. Clear Annealed Float Glass: ASTM C 1036, Type I, Class 1 (clear), Quality-Q3.
- B. Clear Fully Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) as indicated, Quality-Q3.
 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- C. Clear Heat-Strengthened Float Glass: ASTM C 1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) as indicated, Quality-Q3.
 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- D. Ceramic-Coated Spandrel Glass: ASTM C 1048, Type I, Condition B, Quality-Q3.

2.3 INSULATING GLASS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Cardinal Glass Industries
 2. Guardian Industries
 3. Oldcastle Glass
 4. Pilkington North America
 5. PPG Industries
 6. Viracon

- B. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190.
1. Provide Kind HS (heat-strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in "Performance Requirements" Article.
 2. Provide Kind FT (fully tempered) glass lites where indicated or where safety glass is required by code, or unless otherwise indicated.
 3. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating-glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
 4. Sealing System: Dual seal, with polyisobutylene and silicone primary and secondary sealants.
 5. Spacer: Stainless steel or nonmetallic.
 6. Desiccant: Molecular sieve or silica gel, or a blend of both.
- C. Clear, Insulating-Glass Units, for use in wood or aluminum framed storefronts (IGU-1):
1. Overall Unit Thickness: 25.4 mm (1 inch).
 2. Thickness of Each Lite: 6.0 mm (1/4 inch).
 3. Interspace Content: Air or Argon.
 4. Outdoor Lite: Class 1; clear float glass.
 - a. Annealed, unless FT (fully tempered) is indicated or required by code.
 5. Indoor Lite: Class 1; clear float glass.
 - a. Annealed, unless FT (fully tempered) is indicated or required by code.
 6. Solar Control Film: as specified in Division 08 Section "Solar Control Films."
 - a. Provide on glazing surface as specified.
- D. Ceramic-Coated, Spandrel Insulating Glass Units (SIGU-1):
1. Overall Unit Thickness: 25.4 mm (1 inch).
 2. Thickness of Each Lite: 6.0 mm (1/4 inch).
 3. Interspace Content: Air or Argon.
 4. Outdoor Lite: Class 1; clear float glass.
 - a. Heat-strengthened, unless FT (fully tempered) is indicated or required by code.
 5. Indoor Lite: Ceramic Coated spandrel glass
 - a. Provide Kind HS (heat strengthened), unless FT (fully tempered) is indicated or required by code.
 - b. Ceramic Coating Location: Fourth Surface
 - c. Color: As selected by Architect from manufacturer's full range.
- E. Clear, Insulating-Glass Units for use in wood or metal doors:
1. Overall Unit Thickness: 16.0 mm (5/8 inch).
 2. Thickness of Each Lite: 5.0 mm (3/16 inch).
 3. Interspace Content: Argon.
 4. Outdoor Lite: Class 1; clear float glass.
 - a. FT (fully tempered) as required by code.
 5. Indoor Lite: Class 1; clear float glass.
 - a. FT (fully tempered) as required by code.
 6. Solar Control Film: as specified in Division 08 Section "Solar Control Films." Install on glazing surface as specified.
- F. Clear, Insulating-Glass Units for use in wood windows: as specified in Division 08 Section "Wood Windows."

2.4 GLAZING GASKETS

- A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:
 - 1. EPDM, ASTM C 864.
 - 2. Silicone, ASTM C 1115.
 - 3. Any material indicated above.
- B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below; complying with ASTM C 509, Type II, black; and of profile and hardness required to maintain watertight seal:
 - 1. EPDM.
 - 2. Silicone.
 - 3. Any material indicated above.

2.5 GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
 - 1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
 - 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
 - 3. Colors of Exposed Glazing Sealants: As indicated by manufacturer's designations.
- B. Elastomeric Glazing Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
 - 1. Class 25 Neutral-Curing Silicone Glazing Sealant:
 - a. Available Products:
 - 1) Dow Corning Corporation; 795.
 - 2) Tremco; Tremsil 600.
 - b. Type and Grade: S (single component) and NS (nonsag).
 - c. Class: 25/50.
 - d. Use Related to Exposure: NT (nontraffic).
 - e. Uses Related to Glazing Substrates: G, A, and, as applicable to glazing substrates indicated, O.
 - 1) Use O Glazing Substrates: Coated glass.

2.6 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; non-staining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
 - 1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 - 2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

2.7 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

2.8 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine framing glazing, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Presence and functioning of weep system.
 - 3. Minimum required face or edge clearances.
 - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
- C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge

damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass lites where length plus width is larger than 50 inches as follows:
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.

- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

3.5 GASKET GLAZING (DRY)

- A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 CLEANING AND PROTECTION

- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.
- D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.
- E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION 08 80 00

SECTION 08 81 13 - DECORATIVE GLASS GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Decorative film overlay, used to obscure glass, typically producing a "frosted" or other patterned effect.
- B. Related Requirements:
 - 1. Division 08 Section "Glazing."

1.2 COORDINATION

- A. Coordinate glazing channel dimensions to provide minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.3 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
 - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review temporary protection requirements for glazing during and after installation.

1.4 SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For decorative glass. Show fabrication and installation details. Include the following:
 - 1. Decorative Glazing Schedule: List decorative glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.
- C. Glazing Samples: For the following products, 12 inches square:
 - 1. Each type of decorative glazing.
 - 2. Each edge treatment on type of decorative glazing.
 - 3. Each decorative film overlay on type of decorative glazing.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of decorative film overlay to include in maintenance manuals.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect decorative glass and glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install decorative glass until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is

operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

- B. Field Measurements: Verify actual dimensions of openings and construction contiguous with decorative glass by field measurements before fabrication and installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer, for each product and installation method.

2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed glazing systems shall withstand normal thermal movement and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; deterioration of glazing materials; or other defects in construction.

2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and "GANA's "Glazing Manual" unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.

2.4 FILM PRODUCTS

- A. Decorative Film Overlay: Translucent, dimensionally stable, cast PVC film, 2-mil- minimum thickness, with pressure-sensitive, clear adhesive back for adhering to glass and releasable protective backing.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Avery Dennison, Graphics.
 - b. FDC Graphic Films, Inc.; Premium Frosted Etched Glass Vinyl Film Series 3500.
 - c. 3M; Fasara Glass Finish, frost or matte, as selected by Architect.
 - 2. Use: Suitable for exterior and interior applications.
 - 3. Outdoor Durability: Not less than five years.
 - 4. Pattern: As selected by Architect from manufacturer's full range.

2.5 GLAZING MATERIALS

- A. Glazing, Glazing Sealants, Tapes, and Miscellaneous Glazing Materials: As specified in Section 08 80 00 "Glazing."

2.6 DECORATIVE-GLASS FABRICATION

- A. Decorative Film Overlay: Apply squarely aligned to glass edges, uniformly smooth, and free from tears, air bubbles, wrinkles, and rough edges, in pattern indicated on the back face of clean glass, according to manufacturer's written instructions, including surface preparation and application temperature limitations.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine decorative-glass framing members, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Minimum required face or edge clearances.
 - 3. Effective sealing between joints of decorative-glass framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing scheduled to receive film overlay according to manufacturer's written instructions immediately before installation.

3.3 INSTALLATION

- A. Set decorative film overlay in locations indicated on Drawings.

3.4 GLAZING, GENERAL

- A. Decorative Glass: Install glazing as specified in Section 08 80 00 "Glazing."
- B. Comply with combined written instructions of manufacturers of glass, gaskets, sealants, tapes, and other glazing materials unless more stringent requirements are indicated, including those in referenced glazing publications.

3.5 CLEANING AND PROTECTION

- A. Immediately after installation, remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.
- C. Remove and replace glass that is damaged during construction period.
- D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION 08 81 13

SECTION 08 87 13 – SOLAR CONTROL FILMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Film products applied to glass surfaces to impart solar control performance for solar heat and UV reduction, glare reduction, privacy, fade protection, or aesthetic characteristics.
- B. Related Requirements:
 - 1. Division 08 Section "Glazing."

1.2 SUBMITTALS

- A. Product Data: Submit product data, including manufacturer's data sheet, for specified products.
- B. Samples: submit 8 x 8 inch samples of each specified film(s) applied to 1 pane of ultra-clear glass or insulated glazing unit and sample of ultra-clear glass or insulated glazing unit without film for comparison.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company experienced in manufacturing the product specified in this Section with minimum five years documented product development, testing, and manufacturing experience.
- B. Installer Qualifications: Engage an experienced installer certified, licensed, or otherwise qualified by the film manufacturer as having the necessary experience, staff, and training to install manufacturer's products according to specified requirements.
- C. Mockups: Apply glazing films in locations as directed to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
 - 1. Obtain approval of field samples before continuing with remainder of installation.
 - 2. Maintain field samples during remainder of installation in an undisturbed condition as a standard for judging the completed Work.
 - 3. Approved field samples may become part of the completed Work.
- D. Pre-installation Conference: Before installing glazing films, conduct conference at Project site. Conduct pre-installation conference in conjunction with installation of mockup.
 - 1. Meet with Owner, Architect, glazing film Installer and glazing film manufacturer's representative.
 - 2. Review methods and procedures related to installation, including manufacturer's written instructions.
 - 3. Examine substrate conditions for compliance with requirements.
 - 4. Review temporary protection measures required during and after installation.
 - 5. Document proceedings, including corrective measures or actions required, and furnish copy of record to each participant.

1.4 WARRANTY

- A. Manufacturer's standard warranty agreeing to replace films that fail within 10 years from date of original installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. 3M
 - 2. Eastman Chemical Co.
 - 3. Saint-Gobain

2.2 PERFORMANCE

- A. Clear, without tint.
- B. Visible light transmissibility: greater than 73%.
- C. Ultra-violet transmissibility: less than 1%.
- D. Thickness shall be a minimum of 1.5 mils.
- E. The inward facing surface shall have a factory applied, optically clear, abrasion resistant coating sufficient to protect against optical hazing as a result of washing and wiping.
- F. The film shall have a factory installed, optically clear adhesive, protected with a silicone coated polyester release liner.

2.3 ACCESSORIES

- A. General: Provide products complying with requirements of glazing film manufacturer for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Adhesive: Water activated, dry adhesive system that forms a molecular bond between the film and glass.
 - 1. Protect adhesive form contamination by applying a release liner that will be removed and discarded at installation.
- C. Cleaners, Primers, and Sealers: Types recommended by glazing film manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine glass and surrounding adjacent surfaces for conditions affecting installation.
 - 1. Report conditions that may adversely affect installation. In report, include description of any glass that is broken, chipped, cracked, abraded, or damaged in any way.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Beginning of installation means acceptance of conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions for surface preparation.

- B. Immediately before beginning installation of films, clean glass surfaces of substances that could impair glazing film's bond, including mold, mildew, oil, grease, dirt and other foreign materials.
- C. Protect window frames and surrounding conditions from damage during installation.

3.3 INSTALLATION

- A. General: Comply with glazing film manufacturers' written installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
 - 1. Install film continuously. Install with no gaps or overlaps. Overlay seams and butt seams shall not be permitted. Each pane of glass shall be filmed with a single sheet.
 - 2. Do not remove release liner from film until just before each piece of film is cut and ready for installation.
 - 3. Install film with mounting solution and custom cut to the glass with neat, square corners and edges to within 1/8 inch of the window frame.
 - 4. Remove air bubbles, wrinkles, blisters, and other defects.
- B. As a measure of correct installation, when viewed against a bright, uniform sky, the applied film shall be optically clear with no distortion from a distance of 10 feet. Film shall appear uniform in appearance with no visible streaks, banding, thin spots or pinholes.
 - 1. If installed film does not meet these criteria, remove and replace with new film.
- C. Install film on the interior (or inside) face of the glass or insulated glazing unit.

3.4 CLEANING

- A. Remove excess mounting solution at finished seams, perimeter edges, and adjacent surfaces.
- B. Use cleaning methods recommended by glazing film manufacturer.
- C. Replace films that cannot be cleaned.

END OF SECTION 08 87 13

SECTION 09 01 20 – MAINTENANCE OF PLASTER AND STUCCO

PART 1 - GENERAL

1.1 SUMMARY

- A. For the application of stucco to existing exterior masonry or for repairs.
- B. Cleaning existing exterior stucco.

1.2 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi.
- B. Low-Pressure Spray: 100 to 400 psi.
- C. Medium-Pressure Spray: 400 to 800 psi.
- D. High-Pressure Spray: 800 to 1200 psi.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples of all specified materials as appropriate.
- C. Install mortar samples on masonry—preferably on the building. Do not make samples in cups or apply to plywood or other non-masonry surfaces.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installer who is approved by manufacturer for application of overlayment products required for this Project.
- B. Pre-installation Conference: Conduct conference at Project site.
- C. Mortar Samples: Prepare, install, and finish each sample repair according to the product data sheet instructions. All samples must be applied to masonry. Prepare samples in an area where they will be exposed to the same conditions as will be present on the building during curing. Allow samples to cure at least three days (or longer, if possible) before obtaining Owner's approval for color match. Mortar colors will continue to lighten as they cure and are exposed to the weather, so samples should be installed as far in advance as possible. A slightly darker color will give better long-term results. Samples should be viewed from a minimum distance of 18 to 22 feet.
- D. Manufacturer recommends that only experienced stucco or plastering contractors, or trained stucco product applicators use material specified. Without knowledge of sufficient substrate saturation, the substrate might draw the moisture out of the product too quickly, and bond will not be achieved. Contact a technical representative of the product manufacturer for more assistance.
- E. Cleaning Program: Prepare a written cleaning program for both buildings that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations.

1. Perform the work in compliance with historic guidelines established by the Secretary of the Interior and Standards for the Treatment of Historic Properties, unless otherwise indicated. Notify Architect of any discrepancies that may exist.
 2. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- F. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 30 feet away by Architect. Perform additional paint and stain removal, general cleaning, and spot cleaning of small areas that are noticeably different, so that surface blends smoothly into surrounding areas.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to comply with manufacturer's written instructions to prevent deterioration from moisture or other detrimental effects.
- B. Materials are to be delivered, stored, and handled to protect them from damage, extreme temperature, and moisture in accordance with Manufacturer's written instructions.
- C. Deliver and store material in Manufacturer's original, unopened containers with the production date shown on the container or packaging.
- D. Comply with the Manufacturer's written specifications and recommendations for mixing, application, and curing of mortars.

1.6 PROJECT CONDITIONS

- A. Cold Weather Requirements: Do not work in temperatures below 40° F, when the substrate is colder than 40° F, or when the temperature is expected to fall below 40° F for 48 hours after installation of repair mortars. Building an enclosure and heating areas to maintain this temperature may only be done with the written approval of the Specifier.
- B. Hot Weather Requirements: Protect repair mortar from direct sunlight and wind. Do not use or prepare mortar when ambient air temperature is above 90° F.

PART 2 - PRODUCTS

2.1 STUCCO REPAIR

- A. JAHN M60 STUCCO/PLASTER MORTAR. Jahn Restoration Mortars are distributed by Cathedral Stone® Products, Inc., 7266 Park Circle Drive, Hanover, MD 21076; tel. (410) 782-9150; fax. (410) 782-9155; website: www.cathedralstone.com email: info@cathedralstone.com.
- B. Mortars are premixed cementitious repair materials formulated to match the color and texture of the existing stucco/plaster, and do not contain any acrylic, latex, or other synthetic polymer additives. Mix the mortar with clean, potable water.
- C. Substitutions: If proposed equal is submitted, lab test to establish equivalent performance levels. Use an independent testing laboratory, as determined by the Architect, and paid for by the submitting party.

- D. Wire Lathe/Mesh: If wire lathe/mesh is desired, stainless steel wire lathe/mesh must be used. In addition, all anchors or attachments for the lathe/mesh must be stainless steel.

2.2 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140° to 160° F.
- C. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 1/2 cup of laundry detergent, and 20 quarts of hot water for every 5 gal. of solution required.
- D. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of hot water for every 5 gal. of solution required.
- E. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
 - 1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Diedrich Technologies Inc.; Diedrich 910PM Polished Marble Cleaner.
 - b. Dominion Restoration Products, Inc.; Bio-Cleanse.
 - c. Dumond Chemicals, Inc.; Safe n' Easy Architectural Cleaner/Restorer.
 - d. Price Research, Ltd.; Price Non-Acid Masonry Cleaner.
 - e. PROSOCO; Enviro Klean 2010 All Surface Cleaner.
 - f. Cathedral Stone Products; Bio-Cleaner.

2.3 CHEMICAL CLEANING SOLUTIONS

- A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended by chemical-cleaner manufacturer.

PART 3 - EXECUTION

3.1 WORKMANSHIP

- A. Do not use any additives, such as bonding agents, accelerators, or retardants in the mortar.

3.2 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored and building site from harm resulting from masonry restoration work.
- B. Comply with chemical-cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical-cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
 - 1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or

- porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
2. Keep wall wet below area being cleaned to prevent streaking from runoff.
 3. Do not clean surfaces during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
 4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
 5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

3.3 PREPARATION FOR REPAIRS

- A. Remove all existing loose stucco/plaster down to the substrate prior to installation of the stucco/plaster. "Sound" masonry with a hammer to verify its integrity. If necessary, cut away an additional 1/2" of the substrate to ensure the surface to be repaired is solid and stable. Remove any sealant residue.
- B. Where cramp anchors, threaded rod anchors, or dowels have been cut and pieces remain embedded in the substrate: Anchors that are free of rust, solidly embedded may remain so long as they are covered with a minimum of 3/4 inch of stucco/plaster. All others should be removed.
- C. If repairing existing stucco/plaster, cut the edges of the repair area to provide a minimum depth of 1/2". The edges of the repair should be square cut. Do not allow any feathered edges in the repair area.
- D. Install mechanical anchors in all repair areas if specified on the Contract Drawing or as otherwise directed by the Specifier.
- E. Install anchors as follows:
 1. Drill holes to diameter specified on Contract Drawing.
 2. Clean holes using compressed, oil-free air, and bristle brushes, until no dust cloud is produced when a brush, inserted the full depth of the hole, is pulled out of the hole.
 3. Embed anchors in back-up using mortar, mixed according to manufacturer's instructions.
 4. Anchors should be covered with a minimum of 3/4 inch repair material.
- F. Clean all dust from surface and pores of the substrate, using clean water and a scrub brush.
- G. For all surfaces, pre-wet the substrate ahead of time to prevent the substrate from drawing moisture out of the mortar too quickly. The substrate requires intensive presoaking prior to application of the mortar. Thoroughly presoak until saturated (Saturated Surface Dry or SSD).

3.4 MIXING MORTAR FOR REPAIR

- A. It is recommended that a dust mask be worn during mixing. Do not mix more material than can be used within 30 minutes. Discard any mixed material that has been unused for 30 minutes or more.
- B. Mixing ratio for stucco is approximately 4 parts powder to 1 part water by volume, depending on temperature and humidity. This ratio can be altered as needed to suit local conditions. (Verify with stucco manufacturer's recommendations.)
- C. Add water to dry ingredients and mix well. Adjust amount of water according to the weather and the porosity of the substrate.

3.5 APPLICATION OF REPAIR MATERIAL

- A. Material can be applied by trowel in a single application, or lifts if desired. Minimum thickness of the stucco is 1/2 inch.
- B. If applying stucco in lifts, additional surface preparation is required to maintain adhesion between layers. Scratch or brush and comb the surface of the initial coat to remove the cement skin formed during troweling. This will open the pores before an additional layer of material is applied. Then scratch again with a plasterer's comb to create more surface area for mechanical bonding. Apply the second coat 48 to 72 hours later; making sure the surface is properly presoaked.

3.6 FINISHING TECHNIQUES

- A. The waiting period before finishing will vary, depending on wind, temperature and humidity. After initial set up, while the stucco/plaster is still workable, finish the surface with a dry sponge/float or wooden float to prevent surface map cracking of the material. Never use a damp sponge/float for final finishing. Final texture will vary depending on the float chosen for finishing.
- B. Install faux joints, block lines, or historic tooling immediately after finishing while the stucco/plaster is still workable.
- C. Clean any mortar residues from area surrounding the application/repair by sponging as many times as necessary with clean water. This should be done before repair material sets.
- D. After the repair has been cured and allowed to dry for at least one week, if the appearance of a repair does not meet the specifications of the job, the surface color of the repair may be enhanced by applying a vapor permeable, mineral based pigmented stain approved by the stucco manufacturer.

3.7 CURING PROCEDURE

- A. Lightly mist the repair with water to wet the entire surface of the finished repair approximately 30 minutes to 1 hour after completion on hot sunny days, and approximately 2 hours or longer, on cool or cloudy days. Time will vary with temperature and humidity. Mist several times a day on the three days following the repair installation. Should access to the repairs be impossible for a period, plastic may be used to cover them temporarily. The application of plastic, however, does not remove the need for normal curing techniques. Never cover repairs with plastic immediately after finishing the water in the repair will be trapped on the surface, causing it to lighten.

3.8 CLEAN UP, REPAIRS

- A. Remove uncured mortar from the perimeter of the repair before it dries using clean water and a rubber sponge. Repeat several times with clean water to prevent a halo effect (staining of adjacent masonry). Cured mortar may only be removed chemically or mechanically.
- B. Remove uncured mortar from tools and equipment with water as soon as possible. Cured material may only be removed chemically or mechanically.

3.9 CLEANING SURFACES, EXISTING, GENERAL

- A. Proceed with cleaning in an orderly manner; work from bottom to top of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.

- B. Use only those cleaning methods indicated for each surface material and location.
 - 1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being used. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.
 - 2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.
 - a. Equip units with pressure gages.
 - 3. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
 - 4. For water-spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.
 - 5. For heated water-spray application, use equipment capable of maintaining temperature between 140° and 160° F at flow rates indicated.
 - 6. For steam application, use steam generator capable of delivering live steam at nozzle.
- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- D. Water Application Methods:
 - 1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.
 - 2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- E. Steam Cleaning: Apply steam to masonry surfaces at the very low pressures indicated for each type of masonry material. Hold nozzle at least 6 inches from surface of masonry and apply steam in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- F. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces to comply with chemical-cleaner manufacturer's written instructions; use brush application. Do not spray apply at pressures exceeding 50 psi. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.
- G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off cleaned area to determine that chemical cleaner is completely removed.
 - 1. Apply neutralizing agent and repeat rinse if necessary, to produce tested pH of between 6.7 and 7.5.
- H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.10 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible before removal. Remove loose soil and debris from open masonry joints to whatever depth they occur.

- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, calking, asphalt, and tar.

3.11 CLEANING PLASTER AND STUCCO

- A. Hot-Water Wash: Use hot water applied by low-pressure spray.
- B. Detergent Cleaning:
 - 1. Wet surfaces with cold water applied by low-pressure spray.
 - 2. Scrub surfaces with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet.
 - 3. Rinse with hot water applied by low-pressure spray to remove detergent solution and soil.
 - 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- C. Mold, Mildew, and Algae Removal:
 - 1. Wet surfaces with cold water applied by low-pressure spray.
 - 2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
 - 3. Scrub surfaces with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that surface remains wet.
 - 4. Rinse with hot water applied by low-pressure spray to remove mold, mildew, and algae remover and soil.
- D. Nonacidic Liquid Chemical Cleaning:
 - 1. Wet surfaces with water applied by low-pressure spray.
 - 2. Apply cleaner to surface material in two applications by brush or low-pressure spray. Let cleaner remain on surface for period indicated below:
 - a. As recommended by chemical-cleaner manufacturer.
 - b. As established by mockup.
 - 3. Rinse with water applied by low-pressure spray to remove chemicals and soil.
 - 4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use hot-water or steam cleaning.

END OF SECTION

SECTION 09 24 23 – PORTLAND CEMENT STUCCO

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes direct-applied exterior finish system, including, but not limited to:
 - 1. Application of new, exterior cement-based stucco systems.
 - 2. Premixed, Portland cement based stucco base coat and finish coat.
 - 3. Metal trim and accessories.

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. C144 - Standard Specification for Aggregate for Masonry Mortar.
 - 2. C897 - Standard Specification for Aggregates for Job-Mixed Portland Cement Based Plasters.
 - 3. C932 - Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering.
 - 4. C1063 - Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster.
- B. National One Coat Stucco Association (NOCSA).

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's technical information and application instructions.
- B. Shop Drawings: Show locations and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other work.
- C. Samples for Verification: For each type of factory-prepared, colored, textured finish coat indicated; 12 by 12 inches, and prepared on rigid backing.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 2 years' experience in work of this Section.
- B. Mockups: Before installing finish system, install mockups of at least 16 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Install mockups for each type of finish indicated.
 - 2. Show plaster color and texture, trim, and overall workmanship.
 - 3. Simulate finished lighting conditions for review of mockups.
 - 4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
 - 5. Not Acceptable: Lines in stucco caused by variations in application or finishing techniques, cold joints, and other surface defects visible when viewed from a distance of 20 feet.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened containers bearing identifying labels.

- B. Store materials inside under cover, off ground or floor, and keep them covered, dry and protected against damage from freezing, weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.
- C. Neatly stack sheathing panels flat to prevent sagging. Handle boards to prevent damage to edges, ends, and surfaces. Do not bend or otherwise damage metal corner beads and trim.

1.6 PROJECT CONDITIONS

- A. Weather Limitations: Maintain ambient temperatures above 40° F for a minimum of 24 hours before, during, and after adhesives or coatings are applied. Do not apply adhesives or coatings during rainfall. Proceed with installation only when existing and forecasted weather conditions and ambient outdoor air, humidity, and substrate temperatures permit direct-applied exterior finish system to be applied, dried, and cured according to manufacturers' written instructions and warranty requirements.
- B. Protect applied stucco from uneven and rapid evaporation during hot, dry, or windy weather by one of following methods:
 - 1. Fog surface with clean water.
 - 2. Cover with minimum 6 mil polyethylene film weighted or taped in place.
- C. Factory-Prepared Finishes: Comply with manufacturer's written recommendations for environmental conditions for applying finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Ash Grove packaging (1-kote)
 - 2. BASF Building Systems (Senergy)
 - 3. Dryvit Systems, Inc
 - 4. Eagle Building Materials
 - 5. Expo Stucco Products
 - 6. Formulated Solutions, LLC
 - 7. IMASCO Minerals, Inc
 - 8. Omega Products International (E-Z Wall)
 - 9. Prowall Building Products, Inc
 - 10. Quikrete
 - 11. Spec Mix, Inc
 - 12. Sto Corp

2.2 MATERIALS

- A. Base Coat:
 - 1. Manufacturer's standard premixed, concentrated one coat stucco base coat consisting of Portland cement, fibers, and proprietary ingredients.
 - 2. Sand: ASTM C144 or ASTM C897, natural or manufactured, uniformly graded.
- B. Finish Coat:
 - 1. Type: Cement based colored stucco finish coat consisting of Portland cement, lime, graded aggregate, colorant, and proprietary ingredients.
 - 2. Color to be selected from manufacturer's full color range.

- 3. Color-stabilizing spray: Fog coat in color to match finish coat, consisting of Portland cement, lime, graded aggregate, colorant, and proprietary ingredients.
- C. Water: Potable.
- D. Metal Trim and Accessories:
 - 1. Material: Hot-dip galvanized steel, thickness to suit stucco thickness.
 - 2. Corner bead: J-shaped metal, general purpose type, with expanded or perforated flanges.
 - 3. Casing bead: [Square] [Rounded] profile, expanded or flanged to suit project conditions.
 - 4. Control joint: Accordion profile with 1/4-inch slot.
 - 5. Expansion joint: Adjustable type, free-floating, with adjustment from 1/4 to 5/8 inch.
 - 6. Weep screed: Foundation sill screed, perforated for drainage.

2.3 ACCESSORIES

- A. Fasteners:
 - 1. Type and size suited to application, hot-dip galvanized steel.
 - 2. Masonry backup: Minimum 1/2-inch penetration.
- B. Tie Wire: 16-gage, galvanized steel, soft annealed.
- C. Bonding Agent: ASTM C932; type recommended for bonding plaster directly to masonry surfaces.

2.4 MIXES

- A. Mix materials in accordance with manufacturer's instructions.
- B. Use mechanical mixer; hand mixing not permitted unless authorized in advance by Architect.
- C. Mix each batch separately; double batching with single batch discharge not acceptable.
- D. Accurately proportion materials for initial mixture using measuring devices of known volume.
- E. Withhold 10 percent of water until mixing is nearly complete, then add remainder as required to achieve workable mix.
- F. Clean mixing equipment after each batch.
- G. Maintain mixer in continuous operation while adding materials.
- H. Mixtures may be retempered one time after initial mixing.
- I. Discard frozen, caked, and hardened mixes. Discard mixes not used within 60 minutes after initial mixing.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.

- B. Clean substrate surfaces of oil, release agents, other deleterious materials, and loose and foreign matter.
- C. Wet high suction bases with fine water spray to produce uniformly damp surface.
- D. Apply bonding agent in accordance with manufacturer's instructions.
- E. Verify that metal lath or wire mesh is tight, properly secured, and overlapped.

3.2 INSTALLATION, GENERAL

- A. General: Install all materials in accordance with manufacturer's printed instructions, and to comply with governing regulations, specified standards, industry standards applicable to the Work, and to resist seismic loading and upward and downward wind forces as set forth by local building code.

3.3 INSTALLATION OF ACCESSORIES

- A. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten sheathing to the supports. Otherwise, fasten flanges to comply with manufacturer's recommendations.
- B. Expansion Joints: In addition to the locations indicated on the drawings, provide at locations where dimensions would exceed 20'-0" in either direction.

3.4 INSTALLATION OF METAL TRIM

- A. Install casing beads where stucco abuts dissimilar material or stops with edge exposed.
- B. Install corner beads at external corners.
- C. Install control joints
 1. Locate as follows unless otherwise indicated on Drawings:
 - a. As required to limit each area of plaster to 144 square feet with no dimension exceeding 12 feet.
 - b. Vertically above and below each side of openings.
 - c. Horizontally at each floor line.
 2. Run vertical joints continuous; butt horizontal joints into vertical joints.
 3. Apply joint sealer to form water-stop behind joints at intersections.
- D. Install expansion joints at locations indicated on Drawings.
- E. Install weep screeds at bottom of wall, at each floor line, and at heads of openings in walls.
- F. Set level and true to line. Wire tie to metal lath or wire mesh at maximum 12 inches on center. Screw to supports at maximum 12 inches on center.

3.5 APPLICATION OF BASE COAT

- A. Apply base coat in accordance with manufacturer's instructions.
- B. Apply to minimum 3/8-inch thickness from face of concrete masonry.
- C. Provide proper consolidation of base coat.

- D. Rod surface to acceptable plane.
- E. Float or lightly broom surface to provide bond with finish coat.
- F. Work from wet edges to apply unbroken area in one continuous operation to eliminate joints.
- G. Finish surfaces true to plane, plumb and with neat, sharp corners and intersections.
- H. Work in panels to nearest natural break formed by intersections, corners, trim, and accessories.
- I. Tool base coat to V-joint at trim, grounds and accessories.
- J. The pattern of the substrate shall not be visible beneath the surface of the base coat. Leave surface smooth and flat. Allow base to cure for 24 hours before application of finish coat.

3.6 APPLICATION OF FINISH COAT

- A. Apply finish coat in accordance with manufacturer's instructions.
- B. Apply to minimum thickness recommended by manufacturer; using sufficient trowel pressure or spray velocity to bond finish coat to base coat.
- C. Apply in number of coats required to produce consistent finish.
- D. Provide smooth trowel texture to match approved mockup.
- E. Work from wet edges to apply unbroken area in one continuous operation to eliminate joints.
- F. Finish surfaces true to plane, plumb and with neat, sharp corners and intersections.
- G. Work in panels to nearest natural break formed by intersections, corners, trim, and accessories.
- H. Apply fog coat by brush, roller, or spray in number of coats required to produce consistent finish matching approved mockup.
- I. Allow fog coat to dry, then mist with water twice daily for 2 days.
- J. The finish system shall have a uniform color when cured. If color is mottled, take such steps as necessary or required to correct the color.

3.7 CURING

- A. Moist cure Portland cement base coat [and finish coat] with fog spray of clean water applied at frequency to maintain stucco uniformly moist for 48 to 72 hours after application.

3.8 INSTALLATION TOLERANCES

- A. Stucco: Maximum 1/8 inch in 5 feet variation from true flatness.
- B. Trim: Maximum 1/4 inch in 10 feet variation from plumb, level, or true plane, noncumulative.

3.9 ADJUSTING

- A. Repair or replace damaged, discolored, and defective work.

- B. Blend patched areas to surrounding surfaces.

3.10 REPAIRS

- A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

3.11 CLEANING AND PROTECTION

- A. Clean stucco from trim and accessories before initial set occurs.
- B. Remove temporary protection and enclosure of other work. Promptly remove plaster from doorframes, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during application of direct-applied exterior finish system.
- C. Provide final protection and maintain conditions, in a manner suitable to Installer, which ensures direct-applied exterior finish system being without damage or deterioration at time of Substantial Completion.

END OF SECTION 09 24 23

SECTION 09 30 13 - CERAMIC TILING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Ceramic mosaic tile.
 - a. Floor installation.
 - b. Unglazed.
 - c. Slip resistant.
 - d. Exterior application.
 - e. Wet environment.

1.2 DEFINITIONS

- A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.
- B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in its "Specifications for Installation of Ceramic Tile."
- C. Module Size: Actual tile size plus joint width indicated.
- D. Face Size: Actual tile size, excluding spacer lugs.

1.3 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
 - 1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.

1.4 SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
- C. Samples for Initial Selection: For tile, grout, and accessories involving color selection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.
 - 2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications, meet at least one of the following:
 - 1. Installer is a five-star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile Contractors' Association of America.
 - 2. Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification.
 - 3. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.
- B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Build mockup of floor tile installation.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.
- B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- D. Store liquid materials in unopened containers and protected from freezing.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Tile: Obtain tile of each type and color or finish from single source or producer.
 - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
- B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from single manufacturer and each aggregate from single source or producer.
 - 1. Obtain setting and grouting materials, except for unmodified Portland cement and aggregate, from single manufacturer.
 - 2. Obtain waterproof membrane and crack isolation membrane, except for sheet products, from manufacturer of setting and grouting materials.
- C. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer:
 - 1. Waterproof membrane.
 - 2. Crack isolation membrane.

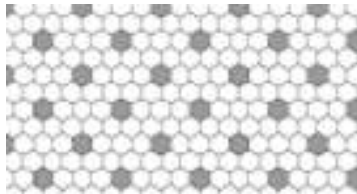
3. Cementitious backer units.

2.2 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
 1. Provide tile complying with Standard grade requirements.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.
- C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
- D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.
 1. Where tile is indicated for installation on exteriors or in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

2.3 TILE PRODUCTS

- A. Ceramic Floor Tile (Mosaic Hex Tile): Factory-mounted unglazed ceramic mosaic tile.
 1. Basis of design: Daltile Keystones.
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Olean (a division of Daltile).
 - b. Daltile.
 3. Composition: Impervious natural clay or porcelain.
 4. Certification: Porcelain tile certified by the Porcelain Tile Certification Agency.
 5. Module Size: 1 by 1 inch, hexagon. (Unless otherwise noted.)
 6. Thickness: approximately 1/4 inch.
 7. Face: Plain with cushion edges.
 8. Surface: Slip resistant, with abrasive admixture.
 9. Dynamic Coefficient of Friction: Not less than 0.42.
 10. Tile Color and Pattern: basis of design, black and white mosaics, in the following pattern.



11. Grout Color: As selected by Architect from manufacturer's full range.

2.4 CRACK ISOLATION MEMBRANE

- A. General: Manufacturer's standard product that complies with ANSI A118.12 for high performance and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

2.5 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
 - 1. Cleavage Membrane: Asphalt felt, ASTM D 226/D 226M, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils thick.
 - 2. Reinforcing Wire Fabric: Galvanized, welded-wire fabric, 2 by 2 inches by 0.062-inch diameter; comply with ASTM A 185/A 185M and ASTM A 82/A 82M, except for minimum wire size.
 - 3. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed.
- B. Standard Dry-Set Mortar (Thinset): ANSI A118.1.
- C. Modified Dry-Set Mortar (Thinset): ANSI A118.4.
- D. Medium-Bed, Modified Dry-Set Mortar: Comply with requirements in ANSI A118.4. Provide product that is approved by manufacturer for application thickness of 5/8 inch.
- E. Improved Modified Dry-Set Mortar (Thinset): ANSI A118.15.

2.6 GROUT MATERIALS

- A. Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored aggregate as required to produce color indicated.
- B. High-Performance Tile Grout: ANSI A118.7.

2.7 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Vapor-Retarder Membrane: Polyethylene sheeting, ASTM D 4397, 4.0 mils thick.

2.8 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
 2. Verify that concrete substrates for tile floors installed with adhesives, bonded mortar bed, or thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.
 - a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
 - b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.
 3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
 4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 CERAMIC TILE INSTALLATION

- A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
 1. For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:
 - a. Exterior tile floors and walls.
 - b. Tile floors and walls in wet areas.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

- E. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.
- F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
 - 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
 - 2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
 - 3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.
- G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 - 1. Ceramic Mosaic Tile: 1/8 inch.
- H. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.
- I. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
 - 1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
- J. Floor Sealer: Apply floor sealer to cementitious grout joints in tile floors according to floor-sealer manufacturer's written instructions. As soon as floor sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.4 CRACK ISOLATION MEMBRANE INSTALLATION

- A. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.
- B. Allow crack isolation membrane to cure before installing tile or setting materials over it.

3.5 ADJUSTING AND CLEANING

- A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.
- B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
 - 1. Remove grout residue from tile as soon as possible.
 - 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3.6 PROTECTION

- A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.
- B. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.
- C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

END OF SECTION 09 30 13

SECTION 09 91 00 – PAINTS AND COATINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and the application of interior and exterior paints, stains, and coatings systems.

1.2 SUBMITTALS

- A. Product Data: For each type of product, including printed statement of VOC content. Include preparation requirements and application instructions.
- B. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
 - 5. Wood Finishes: Submit three 3/4 x 3 x 6 inch Samples of each wood finish specified applied to wood of same species specified.
- C. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.3 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45° F and maximum of 90° F.

1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.
- D. Comply with OSHA standards and local fire regulations.

1.5 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50° and 95° F.
- B. Do not apply paints in snow, rain, fog, or mist, when relative humidity exceeds 85 percent; at temperatures less than 5° F above the dew point; or to damp or wet surfaces.
- C. Apply varnishes only when temperature of surfaces to be varnished and ambient air temperatures are not less than 65° F for interior or exterior applications, unless otherwise approved by manufacturer.
- D. Provide lighting level of not less than 80 foot-candles measured mid-height at substrate surface.
- E. Lead-Based Paint: Lead-based paint may be present on interior and exterior painted surfaces of the buildings. Renovation activities may result in exposure to lead. Perform lead-based paint removal and abatement and all renovation work affected by the presence of lead-based paint in compliance with state and Federal Occupational Safety and Health Administration (OSHA) requirements.
1. No lead-based paint abatement program will be performed by the Owner.
 2. Sanding, stripping and refinishing operations on surfaces containing lead paint shall be performed in accordance with all regulatory rules and standards, including OSHA's Lead Standard for the Construction Industry (29 CFR 1926.62).
 3. Legal disposal of lead-based paint waste is the responsibility of the contractor.
 4. Reference the U.S. Department of the Interior, National Park Service Preservation Briefs #37 Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing at <http://www.nps.gov/hps/tps/briefs/brief37.htm>.
- F. Contractor shall assume existing paints and coatings contain lead-based paint. If contractor testing reveals existing paints and coatings are not lead-based, the Owner may issue a Change Order to reduce costs of removal, disposal, and other associated costs.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Benjamin Moore & Co.
 2. Glidden Professional.
 3. PPG Architectural Finishes, Inc.
 4. Sherwin-Williams Company (The).
 5. Diamond Vogel

2.2 PAINT, GENERAL

- A. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Colors: Match Architect's samples.

2.3 ACCESSORY MATERIALS

- A. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve finishes specified; commercial quality.
- B. Patching Materials: Latex filler.
- C. Fastener Head Cover Materials: Latex filler.

2.4 PAINT AND COATING REMOVERS

- A. Solvent-Type Paste Paint or Transparent-Finish Remover: Manufacturer's standard water-rinsable, solvent-type paste or gel formulation for removing paint or transparent finish from masonry, stone, wood, plaster, or metal as required to suit Project.
 1. Diedrich Technologies, Inc.
 2. Drummond Chemicals, Inc.
 3. PROSOCO, Inc.
 4. Restorco, Inc.
 5. Shore Corporation.

2.5 WOOD REPAIR MATERIALS

- A. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.
 1. Products: Subject to compliance with requirements, provide the following:
 - a. Abatron, Inc.; LiquidWood.
- B. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.
 1. Products: Subject to compliance with requirements, provide the following:
 - a. Abatron, Inc.; LiquidWood with WoodEpoxy.

2.6 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
 1. Owner may engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
 2. Testing agency will perform tests for compliance with product requirements.
 3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Concrete:..... 12 percent
 - 2. Masonry (Clay and CMU): 12 percent
 - 3. Wood: 15 percent
 - 4. Gypsum Board: 12 percent
 - 5. Plaster: 12 percent
- C. Plaster Substrates: Verify that plaster is fully cured.
- D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and field or shop-applied primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Surfaces: Correct defects and clean surfaces capable of affecting work of this section. Remove or repair existing coatings exhibiting surface defects.
- D. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- E. Plaster Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- F. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Use abrasive blast cleaning methods and surface profiling procedures recommended by the paint manufacturer. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- G. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceed that permitted in manufacturer's written instructions.

- H. Steel Substrates: Remove rust, grease, mill scale, weld splatter, and dirt, ensuring weld joints, bolts, and nuts are similarly cleaned. Clean using methods recommended in writing by paint manufacturer but not less than the following:
 - 1. SSPC-SP 3, "Power Tool Cleaning."
- I. Shop-Primed Steel Substrates: Sand and scrape to remove loose primer and rust. Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
 - 1. Feather edges to make touch-up patches inconspicuous.
- J. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- K. Aluminum Substrates: Remove loose surface oxidation.
- L. Wood Substrates – Paint Finish:
 - 1. Scrape and clean knots, and apply coat of knot sealer recommended in writing by topcoat manufacturer for applicable exposure before applying primer.
 - 2. Sand surfaces that will be exposed to view, and dust off.
 - 3. Prime edges, ends, faces, undersides, and backsides of wood.
 - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
- M. Wood Substrates - Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted caulking compound after sealer has been applied.

3.3 EXISTING SUBSTRATES

- A. For previously painted surfaces, remove surface grime by washing with detergent, TSP or sal soda solution. Rinse thoroughly with clean water until all residue is removed. Sand glossy surfaces to improve bond for new coats of paint. Scrap or use a wire brush to remove loose paint and blisters. Sand edges of chips and blisters.
- B. Extend existing paint and coatings installations using materials and methods compatible with existing installations and as specified.
- C. Existing Surfaces Scheduled to Receive Paint Finish:
 - 1. Perform paint removal, preparation, cleaning and neutralizing procedures in accordance with regulatory requirements and paint removal manufacturer's printed instructions.
 - 2. Remove hardware, hardware accessories, machined surfaces, and similar items in place and not to be finish painted or provide surface applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.
 - 3. Remove existing paint coatings by chemical strippers, heat (no burning allowed), and scraping and sanding.
 - 4. Completely remove existing paint to bare substrate.
 - 5. Remove all chemical paint remover residue and neutralize prior to painting.
 - 6. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly painted surfaces.

- D. Patching and Filling – Wood for Opaque Finish:
1. General: Patch surfaces that are damaged and exhibit depressions, holes, or similar voids, and that have limited rotted or decayed material.
 - a. Verify that surfaces are sufficiently clean and free of paint residue prior to patching.
 - b. Treat wood members with wood consolidant prior to application of patching compound. Coat wood surfaces by brushing, applying multiple coats until wood is saturated and refuses to absorb more. Allow treatment to harden before filling void with patching compound.
 - c. Remove rotted or decayed wood down to sound wood.
 2. Apply borate preservative treatment to accessible surfaces either before applying wood consolidant or after removing rotted or decayed wood. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.
 3. Apply wood-patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood.
 - a. Prime patch area with application of wood consolidant or manufacturer's recommended primer.
 - b. Mix only as much patching compound as can be applied according to manufacturer's written instructions.
 - c. Apply patching compound in layers as recommended by manufacturer until the void is completely filled.
 - d. Finish patch surface to match contour of adjacent wood member. Sand patching compound smooth and flush, matching contour of existing wood member.
 - e. Clean spilled compound from adjacent materials immediately.

3.4 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 4. Paint entire exposed surface of window frames and sashes.
 5. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 6. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
 7. Sand wood and metal surfaces lightly between coats to achieve required finish.
 8. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
 9. Where clear finishes are required, tint fillers to match wood. Work fillers into grain before set. Wipe excess from surface.
 10. Prime concealed surfaces of interior and exterior woodwork with primer paint.
 11. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. Minimum Coating Thickness: Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.

1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Concrete masonry that is coated with an epoxy finish shall have a pinhole free surface as final surface finish.
- F. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
 1. Paint shop primed equipment indicated to receive paint finish.
 2. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
 3. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are shop finished or occurring in unfinished interior spaces.
 4. Paint interior surfaces of air ducts and convector and baseboard heating cabinets visible through grilles and louvers with one coat of flat black paint applied to visible surfaces. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
 5. Paint exposed conduit and electrical equipment occurring in finished areas.
 6. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
 7. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
 8. Do not paint over telecommunications cables or detection or monitoring devices.

3.5 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.6 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.7 EXTERIOR PAINTING SCHEDULE

- A. Aluminum Substrates: High performance acrylic coating; two (2) finish coats over prime coat.
 - 1. Prime Coat:
 - a. Glidden Professional; Devoe Coatings Dev Flex Acrylic Primer Finish, 4020
 - b. PPG; Pitt Tech Plus Primer, 90-912.
 - c. Sherwin-Williams; Pro Industrial Pro-Cryl Universal Primer, B66-310 Series.
 - d. Diamond Vogel; Vers-Acryl 303 Acrylic DTM Primer/Finish Mid-Sheen
 - 2. Finish Coat:
 - a. Glidden Professional; Devoe Coatings Dev Flex 4216HP.
 - b. PPG; Pitt-Tech Plus. Semi-Gloss, 90-1210 Series.
 - c. Sherwin-Williams; Sher-Cryl HPA, Semi-Gloss, B66-350 Series
 - d. Diamond Vogel; Finium DTM-AT Acrylic Semi-Gloss
- B. Brick Masonry Stain: Penetrating, semi-transparent masonry stain. Apply two finish coats.
 - 1. Prime Coat: Tnemec; Series 662 Prime A Pell Plus at 100-125 sq. ft. per gallon
 - 2. Finish Coat: Tnemec; Conformal Stain Series 607 at 125-175 sq. ft. per gallon per coat.
- C. Concrete, Stucco, Brick: Acrylic coating; two (2) finish coats over prime coat.
 - 1. Prime Coat:
 - a. Glidden Professional; Hydro Sealer Primer Sealer, 6001.
 - b. PPG Paints; Perma-Crete Concrete Block & Masonry Surfacers/Filler, 4-100 XI.
 - c. Sherwin-Williams; Loxon Block Surfacers, A24W200.
 - d. Diamond Vogel; Dia Pro Acrylic Block Filler
 - 2. Finish Coats:
 - a. Glidden Professional; Fortis 450 Exterior Acrylic Satin, 6403.
 - b. PPG Paints; Manor Hall Timeless Satin, 73-410.
 - c. Sherwin-Williams; Emerald Exterior Acrylic Satin, K48 Series.
 - d. Diamond Vogel; PermAcryl Exterior Acrylic Latex Satin
- D. Ferrous Metal Substrates: High performance acrylic coating; two (2) finish coats over prime coat.
 - 1. Prime Coat: (Omit prime coat on factory-primed substrates.)
 - a. PPG Paints; Pitt Tech Plus Primer, 4020.
 - b. Sherwin-Williams; Pro Industrial Pro-Cryl Universal Primer, B66-310 Series.
 - c. Diamond Vogel; Vers-Acryl 303 Acrylic DTM Primer/Finish Mid-Sheen
 - 2. Finish Coat:
 - a. PPG Paints; Pitt-Tech Plus. Semi-Gloss, 4216HP.
 - b. Sherwin-Williams; Sher-Cryl HPA, Semi-Gloss, B66-350 Series.
 - c. Diamond Vogel; Finium DTM-AT Acrylic Semi-Gloss
- E. Fiber Cement Siding and Trim: Acrylic coating; two (2) finish coats over prime coat.
 - 1. Prime Coat: (Omit prime coat on factory-primed substrates.)
 - a. PPG Paints; Perma-Crete Alkali Resistant Primer, 4-603.
 - b. Sherwin-Williams; Loxon Concrete and Masonry Primer, A24W8300.
 - c. Benjamin Moore; Fresh Starte Moorwhite Penetrating Alkyd Primer K100
 - d. Diamond Vogel; Weather Plate Exterior 100% Acrylic Latex Prime
 - 2. Finish Coats:
 - a. PPG Paints; Manor Hall Timeless Satin, 73-410.
 - b. Sherwin-Williams; Emerald Exterior Acrylic Satin, K48 Series.
 - c. Benjamin Moore; Aura Exterior Paint, Satin
 - d. Diamond Vogel; PermAcryl Exterior Acrylic Latex Satin

- F. Galvanized Metal Substrates: High performance acrylic coating; two (2) finish coats over prime coat.
 - 1. Prime Coat:
 - a. PPG Paints; Pitt Tech Plus Primer, 4020.
 - b. Sherwin-Williams; Pro Industrial Pro-Cryl Universal Primer, B66-310 Series.
 - c. Diamond Vogel; Vers-Acryl 303 Acrylic DTM Primer/Finish Mid-Sheen
 - 2. Finish Coat:
 - a. PPG Paints; Pitt-Tech Plus. Semi-Gloss, 4216HP.
 - b. Sherwin-Williams; Sher-Cryl HPA, Semi-Gloss, B66-350 Series.
 - c. Diamond Vogel; Finium DTM-AT Acrylic Semi-Gloss
- G. Wood and MDX: Oil-based primer, acrylic coating.
 - 1. Exposed Surfaces: Two (2) finish coats over two (2) prime coats.
 - 2. Concealed Surfaces: One (1) finish coat over two (2) prime coats.
 - 3. Prime Coats:
 - a. PPG Paints; Speedhide Exterior Wood Primer, 17-941XI.
 - b. Sherwin-Williams; Exterior Oil Based Wood Primer, Y24W820.
 - c. Benjamin Moore; Multi-purpose oil based primer, Fresh Start, exterior
 - d. Diamond Vogel; Prime-O-Seal Exterior Alkyd Primer/Sealer
 - 4. Finish Coats:
 - a. PPG Paints; Manor Hall Timeless Satin, 73-410.
 - b. Sherwin-Williams; Emerald Exterior Acrylic Satin, K48 Series.
 - c. Benjamin Moore; Aura Exterior Paint Satin
 - d. Diamond Vogel; PermAcryl Exterior Acrylic Latex Satin
 - 5. Extend two finish coats over preprimed aluminum flashings used in conjunction with painted wood components.
- H. Wood; Varnish over Stain System MPI EXT 6.3E: remove existing finishes and prepare wood for new finishes.
 - 1. Wood Conditioner:
 - a. Minwax Pre-Stain Wood Conditioner.
 - 2. Stain Coat: Stain, exterior, solvent-based, semitransparent, MPI #13.
 - a. Minwax Gel Stain.
 - b. Color: as selected by architect from manufacturer's full standard line.
 - 3. First Intermediate Coat: Varnish matching topcoat.
 - 4. Second Intermediate Coat: Varnish matching topcoat.
 - 5. Topcoat: Varnish, with UV inhibitor, exterior, semi-gloss (MPI Gloss Level 5), MPI #30.
 - a. Minwax Helmsman Spar Varnish.

3.8 INTERIOR PAINTING SCHEDULE

- A. Steel Substrates: Acrylic coating, two (2) finish coats over prime coat.
 - 1. Prime Coat:
 - a. PPG Paints; Pitt Tech Plus Primer, 4020.
 - b. Sherwin-Williams; Pro Industrial Pro-Cryl Universal Acrylic Primer, B66-310 Series.
 - c. Diamond Vogel; Vers-Acryl 303 Acrylic DTM Primer/Finish Mid-Sheen
 - 2. Finish Coats:
 - a. PPG Paints; Pitt-Tech Int/Ext DTM Satin Finish, 90-474.
 - b. Sherwin-Williams; Pro Industrial DTM Acrylic Semi-Gloss, B66W1151 Series.
 - c. Diamond Vogel; Finium DTM-AT Acrylic Semi-Gloss
- B. Wood Substrates, Opaque Finish: Acrylic coating; two (2) finish coats over prime coat.
 - 1. Prime Coat:
 - a. PPG Paints; Gripper Primer 3210.
 - b. Sherwin-Williams; Premium Wall and Wood Primer, B28W8111.

- c. Benjamin Moore; Multi-purpose latex primer, Fresh Start, interior
 - d. Diamond Vogel; Mill Max Interior Latex Enamel Undercoat
- 2. Finish Coats:
 - a. PPG Paints; Manor Hall Interior Latex Eggshell, 82-300.
 - b. Sherwin-Williams; Emerald Interior Latex Satin, K37 Series.
 - c. Benjamin Moore; Aura Interior Paint, Eggshell
 - d. Diamond Vogel; PermAcryl Interior Latex Satin Enamel
- C. Wood Substrates, Transparent Finish: Stained, polyurethane coating; two (2) finish coats over stain coat and sanding sealer.
 - 1. Stain Coat:
 - a. PPG Paints; Deft DFT400 Interior Oil Based Stain.
 - b. Sherwin-Williams; Wood Classics Oil Stain, A49 Series.
 - c. Diamond Vogel; Old Masters Penetrating Stain
 - 2. Sanding Sealer:
 - a. PPG Paints; Deft DFT61 WB Sanding Sealer.
 - b. Sherwin-Williams; Wood Classics Sanding Sealer.
 - c. Diamond Vogel; Old Masters Oil-Based Sanding Sealer
 - 3. Intermediate Coat:
 - a. PPG Paints; Deft DFT159 WB Polyurethane Satin.
 - b. Sherwin-Williams; Wood Classics Polyurethane Varnish, A67 Series - Gloss.
 - c. Diamond Vogel; Old Masters Oil-Based Sanding Sealer
 - 4. Finish Coat:
 - a. PPG Paints; Deft DFT159 WB Polyurethane Satin.
 - b. Sherwin-Williams; Wood Classics Polyurethane Varnish, A67 Series - Satin.
 - c. Diamond Vogel; Old Masters Oil-Based Polyurethane

END OF SECTION 09 91 00

SECTION 10 73 13 - AWNINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fixed awnings.
 - 2. Retractable awnings, manually operated.
 - 3. Retractable awnings, motorized.
 - 4. Repairs to existing awnings.
- B. Related Requirements:
 - 1. Section 05 50 00 "Metal Fabrications" for blocking, shims, reinforcing, and supplemental support members for connecting to awning frame and anchorage.
 - 2. Section 06 10 00 "Rough Carpentry" for blocking, nailers, shims, reinforcing, framing, and furring for connecting to awning frame and anchorage.

1.2 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include styles, material descriptions, construction details, fabrication details, dimensions of individual components and profiles, hardware, fittings, mounting accessories, features, and finishes for awnings.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, mounting heights, and attachment details.
 - 2. Detail fabrication and assembly of awnings, including seam layout, spacing, and orientation of awning fabric.
 - 3. Show locations for blocking, reinforcement, and supplementary structural support.
- C. Samples: For each exposed product and for each color and texture specified.
- D. Samples for Verification: For the following:
 - 1. Awning Fabric: 12-inch- square section of fabric from dye lot to be used for the Work, with specified treatments applied. Mark face of fabric.
 - 2. Seam, Edge, and Corner Condition: Not less than 12-inch- long section showing seam, edge, and corner treatment.
 - 3. Valance: Full-size unit, not less than 12 inches long.
 - 4. Frame Finish: Not less than 6-inch lengths.
 - 5. Frame Corner and Frame Intersections: Not less than 12-inch sections showing finished joint construction and fabric and valance attachment to awning frame.
 - 6. Exposed Hardware Finishes: Manufacturer's standard-size unit, not less than 3 inches square.
 - 7. Accessories: Manufacturer's full-size unit.
- E. Product Schedule: For awnings. Use same designations indicated on Drawings.
- F. Delegated-Design Submittal: For awnings.
- G. Qualification Data: For Installer, fabricator and professional engineer.
- H. Welding certificates.

- I. Product Certificates: For each type of awning fabric.
- J. Evaluation Reports: For anchors and fasteners, from ICC-ES.
- K. Sample Warranty: For special warranty.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For awnings to include in operation and maintenance manuals.
 - 1. In addition to items specified in Section 01 78 23 "Operation and Maintenance Data," include the following:
 - a. Methods for maintaining awning fabrics and finishes.
 - b. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.
 - c. Operating hardware.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
 - 1. Fabricator is a Master Fabric Craftsman certified by the Industrial Fabrics Association International.
 - 2. Fabricator's responsibilities include fabricating and installing awnings and providing professional engineering services needed to assume engineering responsibility.
- B. Installer Qualifications: Fabricator of products.
- C. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
- D. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects, to set quality standards for materials and execution, and to set quality standards for fabrication and installation.
 - 1. Build mockup of typical awning as shown on Drawings.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of awnings in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Where awning installation is indicated to fit to other work, verify dimensions of other work by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for fenestration operation throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.6 WARRANTY

- A. Special Warranty: Manufacturer and fabricator agree to repair or replace components of awnings that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including framework.
 - b. Faulty operation of operator.
 - c. Deterioration of fabric including seam failure.
 - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 2. Fixed Awning Frame Warranty Period: 10 years from date of Substantial Completion.
 - 3. Retractable Awning Frame Warranty Period: 20 years from date of Substantial Completion.
 - 4. Fabric Warranty Period: 10 years from date of Substantial Completion.
 - 5. Thread Warranty Period: Lifetime of fabric or 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Fixed Awnings. Subject to compliance with requirements, provide products by one of the following, or an approved equal:
 - 1. Moeckly Fabrications Company, 107 Campus Drive, Huxley, Iowa 50124; (515) 360-9688.
 - 2. Dave Long Protective Products, 4852 Sand Road SE, Iowa City, IA 52240; (888) 484-3164.
 - 3. Red Oak Glass & Awning, 109 Oak Street, Red Oak, IA 51566; (800) 326-8199.
- B. Operable Awnings (drop arm, manual hand crank operation, non-motorized). Provide one detachable crank handle. Basis of Design: Robusta Heavy Duty Window Awning, by Nulmage Awnings, Futureguard Building Products, Inc. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - 1. Eclipse Shading Systems
 - 2. Kohler Awning, Inc.
 - 3. Nu Image Awnings, Futureguard Building Products, Inc.
- C. Operable Awnings (self supporting, hinged, projecting arm, manual hand crank operation, non-motorized). Provide one detachable crank handle. Basis of Design: G150 Series Retractable Awning, by Nulmage Awnings, Futureguard Building Products, Inc. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - 1. Eclipse Shading Systems
 - 2. Nu Image Awnings, Futureguard Building Products, Inc.
 - 3. Solair Shade Solutions.
 - 4. Sunesta.
 - 5. Toff Industries.
- D. Operable Awnings (self supporting, hinged, projecting arm, motorized). Basis of Design: G150 Series Retractable Awning, by Nulmage Awnings, Futureguard Building Products, Inc. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - 1. Eclipse Shading Systems
 - 2. Nu Image Awnings, Futureguard Building Products, Inc.
 - 3. Solair Shade Solutions.
 - 4. Sunesta.

5. Toff Industries.

- E. Source Limitations: Obtain fixed awnings from single source from a single manufacturer. Obtain operable awnings from single source from a single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design of awnings.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- C. Regulatory Requirements: Provide awnings complying with limitations of authorities having jurisdiction.

2.3 AWNING FABRICS

- A. Basis-of-Design Product: Sunbrella; TriVantage Mayfield Collection.
- B. Fabric Fiber Content: 100-percent solution-dyed acrylic; fluorocarbon finish.
1. Fabric Weight: 9.25 oz per sq yard.
2. Width: 46/47-inches.
3. Bottom Hem: As indicated in an Awning Schedule.
4. Trim: As indicated in an Awning Schedule.
5. Fringe: As indicated in an Awning Schedule.
6. Color: As selected by Architect from full range of samples from Sunbrella TriVantage Mayfield Collection.
7. Applied Treatment: Water repellent.
8. Performance Characteristics: As follows:
- a. Mildew Resistance: Showing no growth when tested according to ASTM G 21.
- C. Thread: 100 percent expanded PTFE, UV-light, mildew, and rot resistant, to last the lifetime of the fabric.
1. Basis of Design: Gore Tennara.

2.4 AWNING FRAMES

- A. Steel Frames:
1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
2. Cold-Formed Steel Tubing: ASTM A 500/A 500M, grade as required by structural loads.
3. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless another weight is indicated or required by structural loads.
4. Steel Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513 or steel tubing fabricated from steel complying with ASTM A 1011/A 1011M and complying with dimensional tolerances in ASTM A 500/A 500M.
5. Steel Finish: Hot-dipped galvanized following fabrication, with powder-coat finish. Comply with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness.
6. Steel Finish: Cold-formed, zinc galvanizing system – Approved product substitution: Allied Mechanical Gatorshield.

- B. Aluminum Frames: Alloy and temper recommended by awning manufacturer for type of use and finish indicated and with not less than the strength and durability properties of alloy and temper required by structural loads.
1. Aluminum Plate and Sheet: ASTM B 209.
 2. Aluminum Extrusions: ASTM B 221.
 3. Extruded Structural Pipe and Round Tubing: ASTM B 429/B 429M, standard weight (Schedule 40) unless another weight is indicated or required by structural loads.
 4. Drawn Seamless Tubing: ASTM B 210.
 5. Aluminum Finish: Mill finish complying with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness.
- C. Anchors, Fasteners, Fittings, Hardware, and Installation Accessories: Complying with performance requirements indicated and suitable for exposure conditions, supporting structure, anchoring substrates, and installation methods indicated. Corrosion-resistant or noncorrodible units; weather-resistant, tamperproof, vandal- and theft-resistant, compatible, nonstaining materials. Provide as required for awning assembly, mounting, and secure attachment. Number as needed to comply with performance requirements and to maintain uniform appearance; evenly spaced. Where exposed to view, provide finish and color as selected by Architect from manufacturer's full range.
1. Wood Screws: ASME B18.6.1.
 2. Lag Bolts: ASME B18.2.1..
 3. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
 4. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing according to ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - a. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.
 5. Adhesive-Bonded Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing according to ASTM E 1512 conducted by a qualified independent testing and inspecting agency.
 - a. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.
 6. Grommets: Zinc-coated brass, No. 1 or 2.
 - a. Grommet Spacing: 6 inches o.c.
 7. Lacing: 100 percent polyester, braided No. 4; or 8" black plastic cable locking ties.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint for regalanizing welds in steel, complying with SSPC-Paint 20.
- E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.5 AWNING FABRICATION

- A. Fabrics: Reinforce wear points and hardware attachment points with nonwoven webbing. Seam fabrics as follows:
1. Fabric Edges and Seams: Fold and stitch selvedge and cut fabric edges. Cut and sew, do not staple fabric to frame.
- B. Decorative Trims: As indicated in Awning Schedule.

1. Colors:
 - a. Basis of Design: Sunbrella; TriVantage Mayfield Collection. Actual fabric to be selected by Architect from Sunbrella TriVantage Mayfield Collection.
- C. Frames: Preassemble awning frames in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
 1. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
 2. Form exposed work true to line and level with accurate angles and surfaces and straight edges.
 3. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Fabricate slip-fit connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
 4. Weld corners and connections continuously. Obtain fusion without undercut or overlap. Remove welding flux immediately. At exposed corners and connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
 5. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications in place and to properly transfer loads.
- D. Colors of Metal and Plastic Components Exposed to View: As selected by Architect from manufacturer's full range.

2.6 RETRACTABLE-AWNING OPERATORS

- A. Manual Operation: With gear and crank operator.
 1. Manual Operation Assist Mechanism: Manufacturer's standard spring assist for operating heavy awnings.
 2. Crank Handle: One per building address, detachable.
 3. Awning Coupler System: Not required.
 4. Operating Function: Stop and hold awning at any position, at any angle, in ascending or descending travel
- B. Motorized Operator: Provide factory-assembled, motorized, retractable-awning operator designed for retracting awnings of type, size, weight, construction, use, and operation frequency indicated.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. Control Equipment: Comply with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6.
- E. Electric Motors: UL-approved or -recognized, totally enclosed, insulated motor, complying with NEMA MG 1, with thermal-overload protection and internal limit switches; sized by awning manufacturer to start and operate size and weight of awning considering service factor or considering Project's service conditions without exceeding nameplate ratings.
 1. Service Factor: According to NEMA MG 1 unless otherwise indicated.
 2. Motor Characteristics: Single phase, 110 V, 60 Hz.
 3. Coordinate wiring requirements and electrical characteristics of motors with building electrical system.
 4. Motor Mounting: Within manufacturer's standard roller enclosure.
- F. Remote Controls: Electric controls with NEMA ICS 6, Type 4 enclosure for surface mounting. Provide the following devices for remote-control activation of awnings:

1. Keyed Control Stations: Momentary-contact, three-position, switch-operated control station with open, close, and off functions. Provide two keys per station.
- G. Awning Hood: Sheet metal enclosure sized to fit awning roller and operating hardware inside and designed for UV-light, dust, weather, and vandal protection. Finish and color to match awning framing unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for supporting members, blocking, inserts, installation tolerances, operational clearances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install awnings at locations and in position indicated, securely connected to supports, free of rack, and in proper relation to adjacent construction. Use mounting methods of types described and in compliance with Shop Drawings and fabricator's written instructions.
- B. Install awnings after other finishing operations, including joint sealing and painting, have been completed.
- C. Attach fabric to frames as recommended by fabricator, using lacing method as required to conceal ends of lacing to ensure tight, wrinkle-free fit of fabric to frame.
- D. Join frame connections accurately together to form hairline joints, and tighten to secure.
- E. Anchoring to In-Place Construction: Use anchors, fasteners, fittings, hardware, and installation accessories where necessary for securing awnings to structural support and for properly transferring load to in-place construction.
- F. Corrosion Protection: Coat concealed surfaces of aluminum that come in contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.
- G. Coordinate awning installation with flashing and joint-sealant installation so these materials are installed in sequence and in a manner that prevents exterior moisture from passing through completed exterior wall and roof assemblies.

3.3 REPAIRS (EXISTING AWNING FRAME)

- A. Document existing operable awning conditions. Demonstrate intended operations and awning projection dimensions.
- B. Remove existing fabric and dispose of fabric.
- C. Remove and salvage existing awning, frame, and hardware from building. Dismantle as necessary for cleaning and repair work.
- D. Clean and scrape existing frame and hardware in the shop. Prep and spot prime areas showing rust on the frame and hardware. Paint frame and hardware.

- E. Make repairs to existing parts as necessary. Replace parts that are missing, damaged, or deteriorated beyond repair. Adjust existing and replacement components as necessary for complete and smooth operation.
- F. Furnish and install new fabric.
- G. Lubricate moving parts, including pivot points and gears.
- H. Demonstrate operations to Owner and adjust as necessary for smooth and complete operation.

3.4 ADJUSTING

- A. Adjust hardware and moving parts to function smoothly and lubricate as recommended by retractable-awning manufacturer.

3.5 CLEANING AND PROTECTION

- A. Touchup Painting: Immediately after erection, clean field welds, connections, and abraded areas. Paint uncoated and abraded areas with same or compatible material as used for shop-applied finish painting.
 - 1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.
- B. Galvanized Surfaces: Clean field welds, connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain retractable awnings.

END OF SECTION 10 73 13

ORDINANCE 15058

**AN ORDINANCE TO AMEND THE CODE OF ORDINANCE, CITY OF
MARSHALLTOWN, IOWA BY AMENDING CHAPTER 76 TRAFFIC SCHEDULES,
SCHEDULE VIII SPEED LIMITS**

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

Section 1. The Code of Ordinances, City of Marshalltown, Iowa CHAPTER 76 TRAFFIC SCHEDULES, SCHEDULE VIII SPEED LIMITS, Section (3) is hereby amended by changing the following speed limits:

<i>On Street</i>	<i>From Street</i>	<i>To Street</i>	<i>MPH</i>
Lincoln Way	West city limits	Highland Acres Road	45
Lincoln Way	Highland Acres Road	Approx 200 ft West of Ann Rutledge Road	35
Lincoln Way	Approx 200-feet West of Ann Rutledge Road	9 th Street	30

Section 2. That this ordinance shall be in full force and effect after its passage and publication as by law.

Passed this ____ day of _____ 2023, and signed this ____ day of _____ 2023.

CITY OF MARSHALLTOWN, IOWA

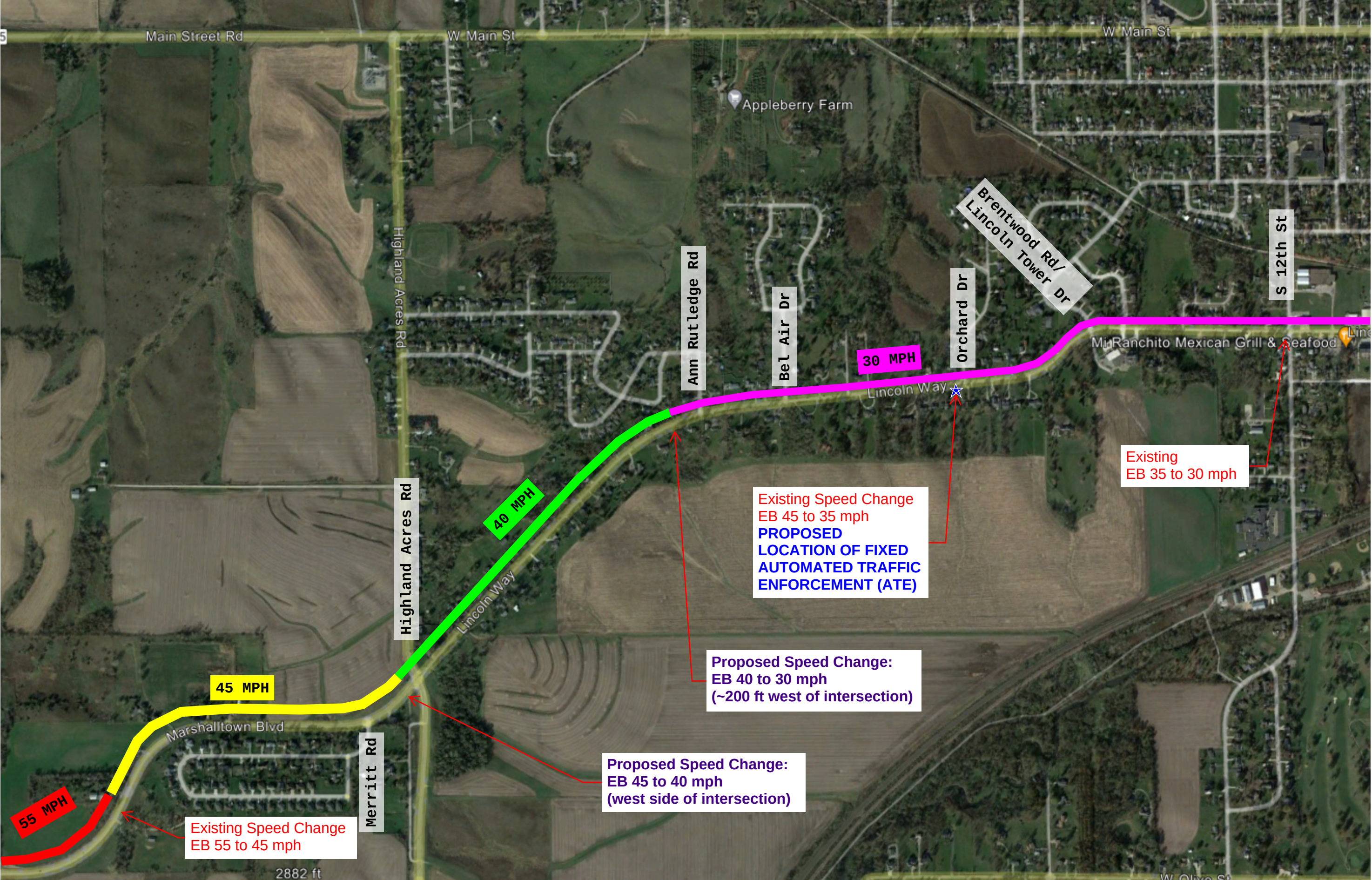
Joel Greer, Mayor

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 _____, 2023, and was published in the Marshalltown Times-Republican, a newspaper of general circulation in the City of Marshalltown, Iowa, on the ____ day of _____, 2023.

Alicia Hunter, City Clerk



MARSHALLTOWN

I O W A

Joel Greer, Mayor
Jessica Kinser, City Administrator
24 North Center Street
Marshalltown, IA 50158
PH 641.754.5701 | FX 641.754.5717

TO: Mayor Greer and City Council
FROM: Heather Thomas, Public Works Director
DATE: February 27, 2023
RE: Chapter 76, Schedule VIII. Speed Limit – Proposed Amendment

Strategic Plan:

- ☐ Strategy 1: Expand and improve development in the community.
- ☐ Strategy 2: Enhance Marshalltown's public image.
- ☒ Strategy 3: Continually improve and sustain the City's infrastructure, organization, and services.
- ☐ Strategy 4: Partner with citizens, for-profit, non-profit, and others to improve quality of life.

Plan Objective:

Review City policies, procedures, plans, ordinances, programs, and services for updates and efficiencies.

Recommendation:

Approval of this reading of this proposed ordinance amendment.

Budget Impact:

Staff time and materials within the street department to modify and install speed signs in this area.
Funded through Fund 110, Road Use Tax.

Description/Background:

"Chapter 76, Schedule VIII: Speed Limits" of the City of Marshalltown ordinances outlines street speed limits standards, in addition to a table of designated street sections that do not follow the set standards. Lincoln Way is currently in the table for specific speed designations.

As a result of the upcoming fixed Automated Traffic Enforcement planned to be located on Lincoln Way near the intersection of Orchard Drive and there currently being a speed change in close proximity to said location, we are proposing a revision to the speed limits in this area to avoid having the ATE located closely near a speed change. City engineering staff completed a review of Lincoln Way speeds from the western city limits to W Madison Street.

We are recommending the following changes to the locations in which the speed steps down from 45 mph to 30 mph through this stretch. See also the attached exhibit.

CITY COUNCIL

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TITLE VII: TRAFFIC CODE; CHAPTER 76: TRAFFIC SCHEDULES - SCHEDULE VIII. SPEED LIMITS.

(A) *Speed restrictions.*

(3) The maximum speed limits on the following designated streets, avenues, roads or drives is hereby established at the rates designated as follows:

<i>On Street</i>	<i>From Street</i>	<i>To Street</i>	<i>mph</i>
Lincoln Way	West city limits	Orchard Drive Highland Acres Road	45
Lincoln Way	Orchard Drive Highland Acres Road	12th Street Approximately 200-ft west of Ann Rutledge Road	35
Lincoln Way	12th Street Approximately 200-ft west of Ann Rutledge Road	9th Street	30

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CITY COUNCIL

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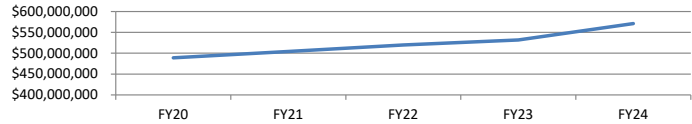
City of Marshalltown

100% Valuations - All property including TIF

	Before Gas and Electric	Gas and Electric	Total
1/1/16 (FY18)	\$ 1,145,065,306	\$ 307,764,842	\$ 1,452,830,148
1/1/17 (FY19)	\$ 1,200,823,259 4.87%	\$ 375,124,239 21.89%	\$ 1,575,947,498 8.47%
1/1/18 (FY20) *Alliant plant	\$ 1,215,818,380 1.25%	\$ 435,377,442 16.06%	\$ 1,651,195,822 4.77%
1/1/19 (FY21) *Tornado 7/19/2018	\$ 1,274,489,291 4.83%	\$ 445,705,906 2.37%	\$ 1,720,195,197 4.18%
1/1/20 (FY22)	\$ 1,288,987,501 1.14%	\$ 441,966,524 -0.84%	\$ 1,730,954,025 0.63%
1/1/21 (FY23) *Derecho 8/10/2020	\$ 1,364,146,165 5.83%	\$ 455,112,249 2.97%	\$ 1,819,258,414 5.10%
1/1/22 (FY24)	\$ 1,399,399,767 2.58%	\$ 456,902,691 0.39%	\$ 1,856,302,458 2.04%

City of Marshalltown	A	B	C	D	E	F	G	H	I	
Taxable Valuations (not including Agriculture & Railroads & Utilities without Gas/Electric valuations or Military Tax Credit)	1/1/18 Valuations for FY20 Tax Levies	1/1/19 Valuations for FY21 Tax Levies	1/1/20 Valuations for FY22 Tax Levies	1/1/21 Valuations for FY23 Tax Levies	As of January 2023 1/1/22 Valuations for FY24 Tax Levies *Multi-res incl in Res	Inc(Dec) from FY23 Increase (Decrease)	Updated March 2023 1/1/22 Valuations for FY24 Tax Levies *Multi-res incl in Res	FY24 valuation changes Increase (Decrease)	Totoal Change from FY23	
Residential Non-TIF	\$ 485,708,210	\$ 502,056,341	\$ 516,296,530	\$ 530,001,359	\$ 584,740,766	\$ 54,739,407	\$ 565,616,328	\$ (19,124,438)	\$ 35,614,969	Residential Non-TIF
Residential TIF	\$ 3,266,027	\$ 2,238,069	\$ 3,483,444	\$ 1,807,697	\$ 5,634,152	\$ 3,826,455	\$ 5,510,620	\$ (123,532)	\$ 3,702,923	Residential TIF
Total Residential	\$ 488,974,237	\$ 504,294,410	\$ 519,779,974	\$ 531,809,056	\$ 590,374,918	\$ 58,565,862	\$ 571,126,948	\$ (19,247,970)	\$ 39,317,892	Total Residential
									\$ -	
Commercial Non-TIF	\$ 196,851,727	\$ 205,938,772	\$ 201,679,406	\$ 220,402,490	\$ 195,650,273	\$ (24,752,217)	\$ 194,370,734	\$ (1,279,539)	\$ (26,031,756)	Commercial Non-TIF
Commercial TIF	\$ 10,052,352	\$ 11,432,930	\$ 15,578,062	\$ 7,283,855	\$ 17,047,383	\$ 9,763,528	\$ 17,110,831	\$ 63,448	\$ 9,826,976	Commercial TIF
Total Commercial	\$ 206,904,079	\$ 217,371,702	\$ 217,257,468	\$ 227,686,345	\$ 212,697,656	\$ (14,988,689)	\$ 211,481,565	\$ (1,216,091)	\$ (16,204,780)	Total Commercial
(See Note 2 below)									\$ -	(See Note 2 below)
Industrial Non-TIF	\$ 58,442,250	\$ 55,862,462	\$ 58,282,660	\$ 60,528,379	\$ 64,123,343	\$ 3,594,964	\$ 63,943,409	\$ (179,934)	\$ 3,415,030	Industrial Non-TIF
Industrial TIF	\$ 3,738,299	\$ 3,535,264	\$ 5,016,916	\$ 3,710,349	\$ 7,346,671	\$ 3,636,322	\$ 7,406,755	\$ 60,084	\$ 3,696,406	Industrial TIF
Total Industrial	\$ 62,180,549	\$ 59,397,726	\$ 63,299,576	\$ 64,238,728	\$ 71,470,014	\$ 7,231,286	\$ 71,350,164	\$ (119,850)	\$ 7,111,436	Total Industrial
									\$ -	
Multiresidential Non-TIF	\$ 32,069,892	\$ 27,264,034	\$ 28,839,194	\$ 29,048,904	\$ -	\$ (29,048,904)	\$ -	\$ -	\$ (29,048,904)	Multiresidential Non-TIF
Multiresidential TIF	\$ 667,190	\$ 404,001	\$ 715,063	\$ 234,322	\$ -	\$ (234,322)	\$ -	\$ -	\$ (234,322)	Multiresidential TIF
Total Multiresidential	\$ 32,737,082	\$ 27,668,035	\$ 29,554,257	\$ 29,283,226	\$ -	\$ (29,283,226)	\$ -	\$ -	\$ (29,283,226)	Total Multiresidential
									\$ -	
Gas & Electric Utilities (Note 1)	\$ 99,912,110	\$ 108,397,416	\$ 99,110,016	\$ 81,543,454	\$ 101,329,850	\$ 19,786,396	\$ 101,329,850	\$ -	\$ 19,786,396	Gas & Electric Utilities (Note 1)
TOTAL OF THESE TYPES	\$ 890,708,057	\$ 917,129,289	\$ 929,001,291	\$ 934,560,809	\$ 975,872,438	\$ 41,311,629	\$ 955,288,527	\$ (20,583,911)	\$ 20,727,718	TOTAL OF THESE TYPES

Residential

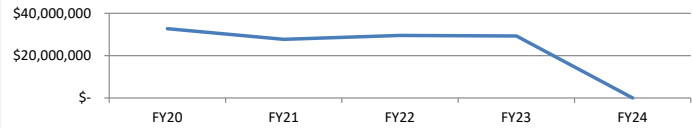


Rollback:

FY20:	56.9180%
FY21:	55.0743%
FY22:	56.4094%
FY23:	54.1302%
FY24: Changed from 56.4919	54.6501%

Growth capped at 3%; No state backfill

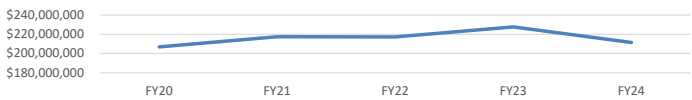
Multi-residential



FY20:	75.00%
FY21:	71.25%
FY22:	67.50%
FY23:	63.75%
FY24: Now at residential rate	0.00%

No state backfill

Commercial



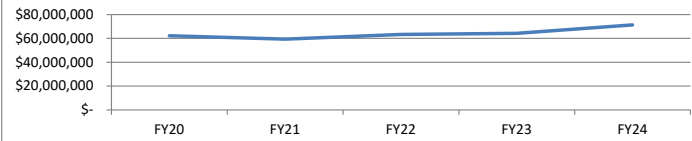
FY20:	90.00%
FY21:	90.00%
FY22:	90.00%
FY23:	90.00%
FY24: First \$150,000 at residential rate, then 90%	90.00%

*State backfill being phased out

*State Legislature has to appropriate every year

*State will pay for Bus. Prop. Tax Credit

Industrial



FY19:	90.00%
FY20:	90.00%
FY21:	90.00%
FY22:	90.00%
FY23:	90.00%
FY24: First \$150,000 at residential rate, then 90%	90.00%

*State backfill being phased out

*State Legislature has to appropriate every year

*State will pay for Bus. Prop. Tax Credit

Note 1: Gas and Electric Utilities is based on the generation, distribution and delivery of electricity and natural gas.

Note 2: The first \$150,000 of taxable valuation on Commercial, Industrial, and Railroad properties in FY24 are subject to the residential rollback and the 90% after that.

City of Marshalltown

Regular Taxable Valuations (excludes TIF and Ag Land)

					BEFORE LEGISLATURE CHANGED	AFTER LEGISLATURE CHANGED
	FY20: January 1, 2018 With Gas & Electric	FY21: January 1, 2019 With Gas & Electric	FY22: January 1, 2020 With Gas & Electric	FY23: January 1, 2021 With Gas & Electric	FY24: January 1, 2022 With Gas & Electric	FY24: January 1, 2022 With Gas & Electric
Regular Valuations (not debt or ag)	\$ 878,122,328	\$ 904,620,601	\$ 908,963,073	\$ 925,979,613	\$ 949,833,200	\$ 929,248,952
\$ increase from prior fiscal year	\$ 44,243,398	\$ 26,498,273	\$ 4,342,472	\$ 17,016,540	\$ 23,853,587	\$ 3,269,339
% increase from prior fiscal year	5.306%	3.018%	0.480%	1.872%	2.576%	0.353%
Property Taxes for General Fund						
\$8.10 regular general levy	7,112,791	7,327,427	7,362,601	7,500,435	7,693,649	7,526,917
\$.27 Emergency levy	\$ 237,093	\$ 244,248	\$ 245,420	\$ 250,014	\$ 256,455	\$ 250,897
Business Prop Tax Credits (GF only)	included in valuations	included in valuations	included in valuations	included in valuations	\$ 226,940	\$ 242,006
	<u>\$ 7,349,884</u>	<u>\$ 7,571,674</u>	<u>\$ 7,608,021</u>	<u>\$ 7,750,449</u>	<u>\$ 8,177,044</u>	<u>\$ 8,019,820</u>
\$ increase from prior fiscal year	\$ 370,317	\$ 221,791	\$ 36,346	\$ 142,428	\$ 426,595	\$ 269,371
% increase from prior fiscal year	5.306%	3.018%	0.480%	1.872%	5.504%	3.476%

Business Prop Tax Credits: Prior to FY24, business owners who applied, received a tax credit on their property tax bill. In FY24, they don't receive a credit; rather, the first \$150,000 is taxed at the residential rate. The State Legislature has a standing appropriation of up to \$125 million annually to be distributed amongst local governments. LSA estimates this amount to be sufficient through FY2029 before this current legislative update.

MARSHALLTOWN

— I O W A —

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
Diana Steiner, Finance Director
Date: March 6, 2023
RE: Impacts of SF181

The Governor signed Senate File 181 into law on February 20th, which resulted in the Iowa Department of Revenue issuing a new (lower) residential rollback number to all County Auditors for the fiscal year that starts July 1, 2023. The residential rollback dropped from 56.4919% to 54.6501%, which means there are changes to the proposed fiscal year 2024 budget for the City. These changes effectively break down into 3 different areas for updates/discussion: Capital Improvement Tax Levy Funds; General Fund; and Total Property Tax Levy. The individual discussions on the items below highlight questions or items to give direction on so that we may bring back the notice to set the public hearing to the March 27th City Council meeting.

Capital Improvement Tax Levy Funds – No Council Action Required

Fund 030 and 032 are both funded with the Capital Improvement tax levy (\$.675 per every \$1,000 of taxable valuation). This levy is not part of the Maximum Property Tax Levy public hearing/notice. Due to the decrease in overall taxable valuations, \$.675 is less dollars with the current valuations than those we started the budget process with. Specifically, the rollback reduction results in \$13,141 fewer dollars to be collected to support capital projects. Fortunately, this impact is one that was able to be absorbed by the Fund 030 and 032.

However, we did have two other changes in Fund 030. Chief Tupper was able to locate two vehicles for purchase, so the FY23 vehicle replacement budget was increased by \$60,000 to \$190,000 to accommodate the additional costs. This created a small deficit in FY25, so staff computer purchases were reduced by \$2,500 in that year to accommodate. No action is needed on this item unless there is objection to any of the proposed projects/purchases, and it is for your awareness only.

General Fund – Council Action Required

The General Fund is supported with an \$8.10 general levy along with the Emergency Levy of \$0.27. Since these both have caps, the dollars decrease when taxable valuations decrease. The resulting reduction to the General Fund is \$164,595. The Council did bring the General Fund into balance for FY24 with the prior valuations using a number of options. The three options below are considerations for closing (or leaving) the new deficit.

1. Option 1- General Fund-Fund Balance

The City is starting FY24 with a \$3.5 million fund balance in the General Fund. This does not include the Cash Flow Reserve Fund. This is approximately 20% of the proposed General Fund expenditures for fiscal year 2024, and is at a percentage threshold recommended by the Government Finance Officers Association (GFOA) as a healthy fund balance. As a one-time measure, the Council could choose to proceed with

City Council
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the \$164,595 deficit as is. Ultimately fund balance would only be utilized if actual expenses exceeding the actual revenues exists as of June 30, 2024.

PRO: Does not tie up other revenues; does not harm the overall GF fund balance

CON: One-time dollars; short-term budgetary measure

2. Option 2- Council-Designated LOST

The Council directed the use of Council-designated local option sales tax (LOST) to fill the original General Fund deficit following the first round of budget reductions discussed at the January 30th budget meeting. The LOST fund has \$164,595 available to address the new deficit in FY24.

PRO: Readily available source of revenue

CON: Ties up funds with an allocation through FY24

3. Option 3- Expenditure Reductions

Following the January 30th meeting, there were really only two recommended reductions still on the table: furlough days for non-public safety employees (\$15,843 per day) or the non-bargaining COLA reduction from 3 percent (\$43,261 reduced per 1% reduction). Both received a lot of negative feedback from Council, but still remain as considerations.

PRO: Reductions today will positively impact future fiscal years

CON: Harmful to employee morale; reduces services to the public

The January 30th meeting brought forth the question of what else could be eliminated before getting into personnel reductions. I verbally stated that we are at the point of personnel reductions if trying to cut further expenses from the General Fund, which I still believe to be a true statement. Between FY20 and the proposed FY24 budget, General Fund expenditures have grown 17 percent. The chart below shows the growth in personnel costs (wages and benefits) from the fiscal year that ended June 30, 2020, to the fiscal year we are currently budgeting. Wages have increased by \$1 million or 11 percent during this time period, while the number of FTEs has actually decreased. Benefits have also increased by \$700,000 or 19 percent during this same time period.

PERSONNEL COSTS IN GENERAL FUND

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All other General Fund expenditures, or the areas we have been cutting over the last five budget cycles, are where a lot of pressure and growth is seen despite reductions. These expenditures include all things besides personnel, including transfers out, insurance, utilities, fuel, materials and supplies, maintenance & service agreements, training, contracted services, and many other line items that help to accomplish the provision of services. In FY20, these other expenditures were just over \$3 million, while in FY24 they are proposed at nearly \$4 million, or an increase of 32 percent from FY20 to FY24. This is the impact of inflation on those services or items that the City really cannot control or eliminate without a broader service reduction.

The revenue side of the equation is not shown on the graph above, but is where Marshalltown sees the most trouble. From FY20 to the proposed FY24 budget, the taxable valuations increased by 6 percent. Unfortunately, current legislative proposals designed to cap individual property assessment growth, provide further rollbacks to commercial and industrial properties and to eliminate certain property tax levies do not provide a bright outlook that property tax revenue will be our highest revenue in the General Fund.

We will be discussing the process for implementing the franchise fee, which remains the only untapped revenue option. Automated Traffic Enforcement revenues are budgeted very conservatively as well, but some legislative bills could impact what Marshalltown is allowed to collect. Given two large revenue unknowns, now might not be the time to implement significant service level changes, but we are getting closer to the point where we have fewer options.

Total Property Tax Levy – Council Action Required

As a result of lower taxable valuations, any individual tax levies based on a dollar amount result in the tax levy increasing to meet the dollar amount required. We are proposing to keep the dollar amounts the same as what was presented in the Maximum Property Tax Levy public hearing and for the debt service levy. The loss of valuation forced the overall levy rate to increase \$0.13 from \$15.36 to \$15.49. In practical terms a house assessed at \$100,000 would pay \$7.25 more in City property taxes than if the original taxable valuations had remained.

As a reminder, the staff had proposed and Council had not objected to the use of other funds on hand to keep the levy at \$15.36 in our original conversations. This included \$932,747 in LOST- Property Tax Relief, and \$1,086,770 from Employee Benefit and Police & Fire Retirement funds.

There are some options the Council has with this new information.

1. Option 1- Keep the levy at \$15.49

The levy with the increase from SF181 would still include using more than \$2 million to keep it at this level, but does not deviate from what was originally proposed.

If the Council wants to go with this option, it is possible to use #2 in Option 2 to use Debt Service fund balance in place of LOST- Property Tax Relief. This does not have any major effect but is a budgetary change that needs to be reflected in the public hearing and final budget documents.

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2. Option 2- Buy down the levy to \$15.36

If Council desires to keep the overall levy rate exactly the same for FY24 as FY23 at \$15.36, then another \$127,230 would need to be used. This could come from the following sources:

1. LOST Property Tax Relief – Not all property tax relief dollars were allocated (intentionally) in the FY24 budget to buy down the tax levy. This LOST would be available for the entire \$127,230, and would take the projected fund balance at the end of FY24 to \$66,389.
2. Debt Service Fund Balance – The Debt Service Fund has a smaller amount of fund balance. Using \$127,230 in the current fiscal year would leave a balance in this fund at 6/30/24 of approximately \$159,083.

3. Option 3- Increase levy beyond \$15.49

As mentioned earlier, there are some significant dollars going into keeping the tax rate lower for fiscal year 2024, which leaves open the option/question of whether this is too much given the unknown of what next year could be. The Council could pull back on some of the LOST Property Tax Relief of \$932,747 to keep additional funds with a plan to buy down the FY25 tax levy.

Cash Balances before any changes made to keep property tax rate the same as FY23 and just using LOST:

Fund	Fund Name	ENDING CASH 06/30/22	REVISED FY 23 NET BUDGET	ESTIMATED 06/30/23 ENDING BALANCE	FY 24 NET BUDGET	FY 24 ESTIMATED ENDING
121	LOCAL OPTION SALES TAX - Prop tax relief only	1,810,778.00	(719,224.00)	1,091,554.00	(897,935.00)	193,619.00
200	GO BONDS DEBT FUND	172,476.91	35,252.00	207,728.91	78,584.00	286,312.91

All changes made at the March 13th meeting will be incorporated into the final budget which will come back before the Council on a resolution to set the public hearing at the March 27th meeting. The public hearing on the budget will be held on April 10th. This leaves the City in a good position to complete the budget process before the new, one-time April 30th deadline.

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PROPERTY TAXES: Same amount for levies as before SF181 except those levies that are a % of taxable valuations

[illegible]

City of Marshalltown, Iowa
City Capital Plan Equipment Replacment
 FY '23 thru FY '27

SOURCES AND USES OF FUNDS

Source		FY '23	FY '24	FY '25	FY '26	FY '27
030 - CIP FUND						
Beginning Balance		545,653	210,979	83,906	210	56,076
<u>Revenues and Other Fund Sources</u>						
<i>USE OF MONEY & PROPERTY</i>						
4610.000 INTEREST EARNED		10,000	6,000	1,000	1,000	1,000
	<i>Total</i>	10,000	6,000	1,000	1,000	1,000
<i>Revenue</i>						
4875.000 REIMBURSEMENTS		606	0	0	0	0
SALE OF FIXED ASSET		6,000	0	0	0	0
	<i>Total</i>	6,606	0	0	0	0
<i>PROPERTY TAXES</i>						
4085.000 PROPERTY TAXES- CIP LEVY		531,281	533,157	546,237	552,037	557,892
4339.000 SF295 BACKFILL		14,734	12,481	10,524	8,419	6,314
Business Property Tax Credit Backfill		0	17,712	16,000	16,000	16,000
	<i>Total</i>	546,015	563,350	572,761	576,456	580,206
Total Revenues and Other Fund Sources		562,621	569,350	573,761	577,456	581,206
Total Funds Available		1,108,274	780,329	657,667	577,666	637,282
<u>Expenditures and Uses</u>						
<i>Capital Projects & Equipment</i>						
<u>AIRPORT</u>						
Sealing Runway Materials (Labor from Street Dept)	AIR0002	(10,000)	0	0	0	0
CIP Planning Study	ARP_A	0	(50,000)	0	0	0
Snow Removal Equipment	ARP_SRE	0	(50,000)	0	0	0
	<i>Total</i>	(10,000)	(100,000)	0	0	0
<u>CITY CLERK</u>						
Copier	E8402010001	(5,474)	0	0	0	0
	<i>Total</i>	(5,474)	0	0	0	0
<u>CITY WIDE BUILDING MAINTENANCE</u>						
Pickup Truck - Facilities Superintendent	BLDG_VEH	0	0	(40,000)	0	0
	<i>Total</i>	0	0	(40,000)	0	0
<u>FIRE</u>						
Portable Radios	E0030fir	0	(32,000)	(32,000)	0	0
Thermal Imaging Camera	E0042fir	(9,388)	(9,388)	0	0	0
Alumacraft 16' Boat Replacement	E0045fir	0	0	0	0	(8,000)

Source		FY '23	FY '24	FY '25	FY '26	FY '27
030 - CIP FUND						
Dexter T-600 40 lb Washer	E0049fir	0	0	0	0	(8,000)
SCBA Bottles	E0073fir	(9,465)	0	0	0	0
Lucas CPR Device	E0074fir	(19,990)	0	0	0	0
Exercise Equipment	V0064fir	0	0	(8,000)	0	0
<i>Total</i>		(38,843)	(41,388)	(40,000)	0	(16,000)
<u>HOUSING</u>						
COPIER: Replace Lanier	E2023	(5,000)	0	0	0	0
<i>Total</i>		(5,000)	0	0	0	0
<u>INFORMATION SYSTEMS</u>						
Body Camera Servers - MPD	BdyCmraServ	0	0	(15,000)	0	0
Audio Visual Equipment for Council Chambers	Council22	(10,000)	0	0	0	0
Staff Computers	E1000	(22,500)	(22,500)	(20,000)	(22,500)	(22,500)
Servers	E3010	(15,000)	0	(15,000)	0	0
SERVER MPD FILES	ServerPDfile	0	(15,000)	0	0	0
Tyler Servers	Servers	(24,000)	(20,000)	0	0	0
SERVERS-PD (Evidence)	SERVERS-PD	0	0	(15,000)	0	0
<i>Total</i>		(71,500)	(57,500)	(65,000)	(22,500)	(22,500)
<u>LIBRARY</u>						
Upgraded Automation System	11	(19,462)	(20,435)	(21,457)	(22,530)	(23,656)
Mobile Services Outreach Unit	LIBVEH	(61,489)	0	0	0	0
<i>Total</i>		(80,951)	(20,435)	(21,457)	(22,530)	(23,656)
<u>PARK & RECREATION</u>						
Aquatic Center Improvements	20PR009	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)
Sidewalk and Trail Maintenance	20PR002	(50,000)	(15,000)	(50,000)	(50,000)	(50,000)
Pickleball Pocket Park	21ColAlley	(9,209)	0	0	0	0
Elks Park Improvements	21PR004	(110,432)	0	0	0	0
Replace Mower 823	22PR002	(27,500)	0	0	0	0
Replace Truck 811 and Snow Blade	23PR007	(52,000)	0	0	0	0
Replace Mower 712	23PR008	(28,250)	0	0	0	0
Peterson Park Improvements	23PR010	(120,000)	0	0	0	0
Parks Wayfinding Signs	24PR001	0	(50,000)	0	0	0
Replace Mower 714 w/Snow Equipment	24PR004	0	(25,000)	0	0	0
Timber Creek Park Bathroom	24PR005	0	(70,000)	0	0	0
Jaycees Park Improvements	25PR001	0	0	(150,000)	0	0
Vehicle/Mower Replacement	25PR002	0	0	(50,000)	0	0
Arnolds Park Improvements	26PR001	0	0	0	(150,000)	0
Vehicle/Mower Replacement	26PR003	0	0	0	(50,000)	0
Vehicle/Mower Replacement	27PR001	0	0	0	0	(50,000)
Assistance League Improvements	27PR002	0	0	0	0	(150,000)
Goldfinch fishing dock	L2973	(33,000)	0	0	0	0
Riverview Park Entry Sign	Sign 21.22	(12,736)	0	0	0	0
Vehicle/Mower Replacement	TR709	0	(50,000)	0	0	0
<i>Total</i>		(463,127)	(230,000)	(270,000)	(270,000)	(270,000)

Source		FY '23	FY '24	FY '25	FY '26	FY '27
030 - CIP FUND						
<u>POLICE</u>						
BODY CAMERAS	BODY CAMERA	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)
COPIER REPLACEMENT	COPIERS	0	0	(34,000)	0	0
TACTICAL EQUIPMENT	TACT EQUIP	0	(5,000)	0	(5,000)	0
TASERS	TASERS	(6,000)	(6,000)	(6,000)	(6,000)	(8,000)
TRAINING EQUIPMENT	TRN EQUIP	0	(5,000)	0	(5,000)	0
VEHICLE IT EQUIPMENT - MPD	VEH IT	0	(5,000)	0	(5,000)	0
VEHICLE REPLACEMENT	VEH RPLCMT	(190,000)	(193,000)	(150,000)	(155,000)	(200,000)
BODY ARMOR REPLACEMENT	VESTS	(11,400)	(10,000)	(16,000)	(15,560)	(15,650)
	<i>Total</i>	(222,400)	(239,000)	(221,000)	(206,560)	(238,650)
<u>STREET DIVISION</u>						
Dual A/C Machine - City Mechanic Equipment	E3942	0	(8,100)	0	0	0
	<i>Total</i>	0	(8,100)	0	0	0
Total Expenditures and Uses		(897,295)	(696,423)	(657,457)	(521,590)	(570,806)
Change in Fund Balance		(334,674)	(127,073)	(83,696)	55,866	10,400
Ending Balance		210,979	83,906	210	56,076	66,476

Source		FY '23	FY '24	FY '25	FY '26	FY '27
032 - CIP LARGE VEHICLE/EQUIPMENT						
Beginning Balance		0	93,755	187,841	289,153	141,140
<u>Revenues and Other Fund Sources</u>						
<i>Revenue</i>						
4085.000 PROPERTY TAXES		93,755	94,086	101,312	101,987	102,672
	<i>Total</i>	93,755	94,086	101,312	101,987	102,672
Total Revenues and Other Fund Sources		93,755	94,086	101,312	101,987	102,672
Total Funds Available		93,755	187,841	289,153	391,140	243,812
<u>Expenditures and Uses</u>						
<i>Capital Projects & Equipment</i>						
<u>FIRE</u>						
R-177 Replacement	V0070fir	0	0	0	(250,000)	0
	<i>Total</i>	0	0	0	(250,000)	0
Total Expenditures and Uses		0	0	0	(250,000)	0
Change in Fund Balance		93,755	94,086	101,312	(148,013)	102,672
Ending Balance		93,755	187,841	289,153	141,140	243,812

Local Option Sales Tax (L.O.S.T) Balances				
Updated revenues and additional LOST CD approvals through Feb 12 2023				
	LOST- Prop. Tax Relief	LOST- Council Designated	LOST- Capital Projects	TOTAL FUND 121
Fund balance 6/30/2022	1,810,778	3,143,395	1,700,459	6,654,632
ROW				
1 Budgeted L.O.S.T. Revenues (78% Relief, 22% Council) Adopted \$4.2M	2,886,000	814,000	-	3,700,000
2 Interest on Investments	36,551	63,449		100,000
Sub-Total Revenues	2,922,551	877,449	-	3,800,000
3 Buy down property tax levy-current revenues (Trsf to fund 200 Debt)	(3,276,000)			(3,276,000)
4 Buy down property tax levy-fund bal	(365,775)			(365,775)
5 Cash Flow reserve 16% (goal is 20%). Every 1% is \$170K		(91,512)		(91,512)
6 Fireworks		(5,000)		(5,000)
7 Transfer to Fund 311: Edgewood Extension (incl \$108,854.16 N. 5th Ave land purchase)			(1,053,079)	(1,053,079)
8 Transfer to Fund 311: Edgewood Extension				-
9 Transfer to Fund 395 for S. 7th Ave extension (Discussed 5/24/21)		(5,131)	(279,104)	(284,235)
10 Res 2022-354 Use Fund 360 bond up so now STREET IMPROVEMENTS \$343,276. Trs to 363			(128,026)	(128,026)
11 Res 2022-354 Use Fund 360 bond up so now STREET IMPROVEMENTS \$343,276. Trs to 364			(100,000)	(100,000)
12 City Centre Parking Lot (discussed 1/31/22, use LOST instead of bond funds)		(71,500)		(71,500)
13 Transfer to Fund 132/340 - Bike Trail Engineering & Design FY19 \$8401.50: \$65,000		(56,599)		(56,599)
14 Transfer to Fund 132: Downtown Revitalization (DTR) grant \$500,000 total split between FY		(92,091)		(92,091)
15 Police/Fire recruitment video \$5,000:10,000		(5,000)		(5,000)
16 Marketing \$40,000 split between FY & Mediacom/VISION split		(15,219)		(15,219)
17 New Home Buyer Incentive (100 homes @ \$2500/each)		(250,000)		(250,000)
18 Sidewalk Improvement citizen reimbursemet (Res.2020-076)		(50,000)		(50,000)
19 Downtown New Construction Incentive Hopkins Elevator		(50,000)		(50,000)
20 Downtown New Construction Incentive Uncommitted		(50,000)		(50,000)
21 Res 2022-038 National Community Survey and National Employee Survey		(20,495)		(20,495)
22 Res 2022-132 Funding for public safety cameras		(150,000)		(150,000)
23 Res 2022-135 Simms Co. Renovation 26 E. Main St.		(100,000)		(100,000)
24 Res 2022-217 Purchase of Coliseum Veterans Gallery cabinets		(43,000)		(43,000)
25 Res 2022-218 MCBF Holiday Wreaths Reimbursement		(8,000)		(8,000)
26 Res 2022-290 Riverside Cemetery Well Reimbursement		(45,000)		(45,000)
27 Res 2022-237 Purchase of 23 W. Main \$80,000		(79,690)		(79,690)
28 Res 2022-294 Stump & Ash Tree Removal \$75K		(75,000)		(75,000)
29 Res 2022-344 Park stump & ash tree removal additional needed		(11,340)		(11,340)
30 Res 2022-341 Downtown Site Furnishings for Main St & Vets Courtyard		(160,000)		(160,000)
31 Res 2022-367 Compensation study for non-union positions		(23,400)		(23,400)
32 Res 2022-371 Year-end inflationary payment; Transf to 001, 611,690,741		(157,000)		(157,000)
33 Res 2023-013 Site certification studies for 100 acres industrial development		(99,500)		(99,500)
34 River's Edge Trail paving 1.78 miles for grant application Destination Iowa not awarded-keep on for now		(250,000)		(250,000)
35 Transfer to deficit in fund 183 Econ Dev \$12,364.25		(12,364)		(12,364)
37 TBD City/Owner Contribution for DTR Project - 21 and 23 West Main Street				
Total Budgeted Expenses	(3,641,775)	(1,976,841)	(1,560,209)	(7,178,825)
38 Projected Fund balance 6/30/2023	1,091,554	2,044,003	140,250	3,275,807
39 Budgeted L.O.S.T. Revenues (78% Relief, 22% Council)	2,886,000	814,000	-	3,700,000
40 Interest on Investments	34,812	65,188		100,000
Sub-Total Revenues	2,920,812	879,188	-	3,800,000
41 Buy down property tax levy-current revenues (Trsf to fund 200 Debt)	(2,886,000)			(2,886,000)
42 Buy down property tax levy-fund bal (Trsf to fund 200 Debt)	(932,747)			(932,747)
43 Cash Flow reserve 16% \$110K (goal is 20%). Every 1% is \$178K		(288,000)		(288,000)
44 Transfer to 311: Edgewood Extension			(25,000)	(25,000)
45 Transfer to Fund 132: Downtown Revitalization (DTR) grant \$500,000 total split between FY		(375,000)		(375,000)
46 Transf to 364: Street improvements budgeted in CIP (Center St Median, 18th Ave patch)			(115,250)	(115,250)
47 Fireworks		(5,000)		(5,000)
48 MCBF operations (FY23 \$40,000 funded with TIF)		(95,000)		(95,000)
49 Transfer to General Fund 001 (includes \$4,000 mosquito spray)		(163,931)		(163,931)
Total Budgeted Expenses	(3,818,747)	(926,931)	(140,250)	(4,885,928)
50 Projected Fund balance 6/30/2024	193,619	1,996,260	0	2,189,879

PROJECTED CASH BALANCES 3/13/23

Changes (excl Insurance)

Changes (excl Insurance)

Fund	Fund Name	ENDING CASH 06/30/22	REVISED FY 23 NET BUDGET	ESTIMATED 06/30/23 ENDING BALANCE	FY 24 NET BUDGET	FY 24 ESTIMATED ENDING
001	GENERAL FUND (incl. \$8.10 levy)	3,567,795.12	(49,633.00)	3,518,162.12	(164,596.00)	3,353,566.12
010	CASH FLOW RESERVE FUND (17% of fund 001 exp)	2,597,495.17	146,512.00	2,744,007.17	348,000.00	3,092,007.17
030	CAPITAL RESERVE (CIP-GF; Levy in Fund 300)	-	-	-	-	-
031	CAPITAL RSRV-BLDG MAINT	260,113.94	(14,858.00)	245,255.94	(138,275.00)	106,980.94
032	CIP LARGE VEHICLE/EQUIPMENT (CIP: Levy in Fund 300)	-	93,755.00	93,755.00	94,086.00	187,841.00
	TOTAL GENERAL FUNDS	6,425,404.23	175,776.00	6,601,180.23	139,215.00	6,740,395.23
110	ROAD USE TAX	6,303,147.02	191,650.00	6,494,797.02	(468,734.00)	6,026,063.02
112	EMPLOYEE BENEFITS FUND (Levy for actual amt needed)	3,417,943.48	103,433.00	3,521,376.48	(740,650.00)	2,780,726.48
117	POLICE/FIRE RETIREMENT (Levy for actual amount needed)	582,899.93	83,143.00	666,042.93	(186,360.00)	479,682.93
119	EMERGENCY FUND (Levy maximum \$.27)	-	-	-	-	-
121	LOCAL OPTION SALES TAX (L.O.S.T.)	6,654,632.96	(3,378,825.00)	3,275,807.96	(1,085,928.00)	2,189,879.96
125	TAX INCREMENT FINANCING (TIF)	469,295.69	(483,016.00)	(13,720.31)	32,077.00	18,356.69
130	CITY TORT LIABILITY (Insurance Claims)	82,551.75	(14,437.00)	68,114.75	1,000.00	69,114.75
132	GRANTS-STATE/LOCAL AGENCIES (Catalyst Grant, CDBG, Revitalization, MICA, IGP, TSIP, Elks Park, MICA, etc.)	(226,794.55)	256,330.00	29,535.45	255,477.00	285,012.45
133	Undesignated Federal Grants (incl. Brownfield)	(27,785.30)	8,916.00	(18,869.30)	8,500.00	(10,369.30)
140	PARK & REC DONATION FUND (Incl. Park improvements, benches, trees, etc.)	270,158.41	5,174.00	275,332.41	(85,175.00)	190,157.41
141	MTOWN TENNIS ASSOC	2,821.58	50.00	2,871.58	20.00	2,891.58
142	SOFTBALL ASSOCIATION FUND (City is reimbursed)	(19,744.23)	-	(19,744.23)	-	(19,744.23)
144	LIVE HEALTHY IOWA (Hersey)	6,128.83	-	6,128.83	-	6,128.83
145	TORNADO GENERAL (Insurance & FEMA)	231,916.46	55,947.00	287,863.46	(181,000.00)	106,863.46
147	FEMA DEMO (tornado related)	-	-	-	-	-
148	FEMA- COVID19	(16,057.20)	2,622.00	(13,435.20)	13,435.00	(0.20)
149	FEMA - WINDS (Derecho)	(4,564,245.98)	4,909,703.00	345,457.02	56,792.00	402,249.02

Fund	Fund Name	ENDING CASH 06/30/22	REVISED FY 23 NET BUDGET	ESTIMATED 06/30/23 ENDING BALANCE	FY 24 NET BUDGET	FY 24 ESTIMATED ENDING
150	COPS FAST GRANTS (School Resource Officer)	(2,067.29)	3,595.00	1,527.71	-	1,527.71
151	DEPT OF JUSTICE GRANTS (Edward Byrne Justice Assistance Grant, Bulletproof Vest Partnership,MPACT)	(32,359.86)	32,360.00	0.14		0.14
152	POLICE UNDESIGNATED GRANTS (Violence Against Women, Drug Enforcement, DCAT-MPACT, Camp OT,, Cornovirus, etc.)	(36,541.82)	36,542.00	0.18	-	0.18
153	POLICE DEPT DONATION FUND (Incl. Child Safety Seats, Canine)	68,938.82	(26,580.00)	42,358.82	(27,650.00)	14,708.82
156	FIRE DEPT DONATION FUND	61,515.49	32,374.00	93,889.49	(14,000.00)	79,889.49
157	FIRE DEPT GRANTS	-	-	-	-	-
160	ECONOMIC DEVELOPMENT GIFT	53,662.00	900.00	54,562.00	1,000.00	55,562.00
161	SURETY DEPOSITS/SUBDIVIDER	11,195.29	185.00	11,380.29	185.00	11,565.29
170	LIBRARY DONATION FUND (Mobile unit & garage)	122,407.61	(4,374.00)	118,033.61	(10,265.00)	107,768.61
177	SEIZED ASSETS (Police Dept. Abandoned Assets)	25,431.36	(500.00)	24,931.36	(500.00)	24,431.36
183	FY 08 EDI (ECON DEV INCENTIVE)- Funds recovered when sell property	(13,389.25)	13,389.00	(0.25)		(0.25)
184	VOUCHERS - 002, 003 (Section 8 Housing Choice)	177,459.99	2,609.00	180,068.99	(35,148.00)	144,920.99
189	#6 HUD LEAD GRANT	23,925.54	(23,614.00)	311.54	(312.00)	(0.46)
	TOTAL SPECIAL REVENUES (Includes TIF 125 & 126)	13,627,046.73	1,807,576.00	15,434,622.73	(2,467,236.00)	12,967,386.73
200	GO BONDS DEBT FUND	172,476.91	35,252.00	207,728.91	78,584.00	286,312.91
300	CIP COLLECTION FUND (Levy \$.675/\$1,000)	545,652.93	(334,674.00)	210,978.93	(127,073.00)	83,905.93
310	FEDERAL STREET GRANTS	-	-	-	-	-
311	RISE STREET GRANTS (Edgewood extension)	-	8,580.00	8,580.00		8,580.00
312	AIRPORT PROJECT FUND	(47,352.21)	26,823.00	(20,529.21)	70,000.00	49,470.79
320	SPECIAL ASSESSMENT PROJECTS (Sidewalks)	(14,510.95)	500.00	(14,010.95)	500.00	(13,510.95)
340	BIKE PATH PROJECT FUND	(61,197.07)	113,922.00	52,724.93	(52,725.00)	(0.07)
341	TREES FOREVER PROJECT	34,323.40	(4,200.00)	30,123.40	(4,200.00)	25,923.40
350	GO BONDS CAPITAL PROJECTS	9,120.40	160.00	9,280.40	200.00	9,480.40

Fund	Fund Name	ENDING CASH 06/30/22	REVISED FY 23 NET BUDGET	ESTIMATED 06/30/23 ENDING BALANCE	FY 24 NET BUDGET	FY 24 ESTIMATED ENDING
354	POLICE & FIRE STATIONS	741.00	(741.00)	-		-
355	2015 GO BONDS (Dangerous&Delapidated)	476,711.83	(175,254.00)	301,457.83	(258,865.00)	42,592.83
357	2018 CY STREET PROJECTS (3rd St Bridge, Microsurfacing)	-	-	-		-
360	2019 GO BONDS & PROJECTS (sidewalks, streets, parks)	1,333,276.13	(1,333,276.00)	0.13		0.13
361	LIBRARY BUILDING ADDITION (Budget only, requires public hearing)	1,587.78	30.00	1,617.78	30.00	1,647.78
362	2020 GO BONDS (RR, trails, streets, sidewalks, tennis courts, etc)	721,249.58	(143,500.00)	577,749.58	(577,750.00)	(0.42)
363	2021 GO BONDS (Viaduct, State Street reconstruction, D&D, Street improvements, softball parking lot)	8,432,914.27	(2,622,065.00)	5,810,849.27	(5,269,260.00)	541,589.27
364	2022 GO BONDS (Street & park improvements, splashpad, sidewalks, parking lot, D&D blds)	-	3,738,647.00	3,738,647.00	(3,647,500.00)	91,147.00
365	2023 GO BONDS (Street infrastructure and improvements)	-	-	-	-	-
389	AMERICAN RESCUE PLAN (ARPA) (Edgewood Ext, State St, GF)	1,805,687.80	1,040,045.00	2,845,732.80	(2,632,863.00)	212,869.80
392	TIF DISTRICT III CAP PROJECTS	7,208.04	-	7,208.04		7,208.04
395	ECONOMIC DEVELOPMENT PROJECT (E. Merle Hibbs, S. 7th Ave, UPH access road, Creekside Estates)	-	5,130.00	5,130.00	-	5,130.00
	TOTAL CAPITAL PROJECTS	13,245,412.93	320,127.00	13,565,539.93	(12,499,506.00)	1,066,033.93
610	WATER POLLUTION CONTROL	-	-	-	-	-
611	WPCP REVENUE	18,918,270.02	1,462,107.00	20,380,377.02	(1,034,951.00)	19,345,426.02
612	WPCP REVENUE BOND FUND	-	-	-	-	-
614	WPCP CAPITAL IMPROVEMENT RSRV	1,094,108.09	25,000.00	1,119,108.09	25,000.00	1,144,108.09
615	WPCP PLANT & IMPROVEMENTS	-	-	-	-	-
616	SANITARY SEWER REHAB PROJECT	-	-	-	-	-
617	SANITARY SEWER NEW CONSTRUCTN REVENUE	147,976.84	8,500.00	156,476.84	8,500.00	164,976.84
690	TRANSIT OPERATING	638,326.81	167,311.00	805,637.81	(185,295.00)	620,342.81

Fund	Fund Name	ENDING CASH 06/30/22	REVISED FY 23 NET BUDGET	ESTIMATED 06/30/23 ENDING BALANCE	FY 24 NET BUDGET	FY 24 ESTIMATED ENDING
740	STORM SEWER UTILITY	1,941,702.25	(547,382.00)	1,394,320.25	(142,961.00)	1,251,359.25
741	2016 GO STORM WATER PROJ	1,340,270.37	(983,108.00)	357,162.37	2,000.00	359,162.37
742	TORNADO-STORM/SEWER	-	-	-	-	-
750	COMPOSTING FACILITY	139,211.51	(114,479.00)	24,732.51	(18,772.00)	5,960.51
760	P&R CONCESSIONS ENTERPRISE	(18,805.93)	23,827.00	5,021.07	7,709.00	12,730.07
	MARSHALLTOWN WATER WORKS			-		-
	TOTAL PROPRIETARY FUNDS	24,201,059.96	41,776.00	24,242,835.96	(1,338,770.00)	22,904,065.96
TOTAL	GRAND TOTAL CITY	57,671,400.76	2,380,507.00	60,051,907.76	(16,087,713.00)	43,964,194.76

	Marshalltown Water Works will be added later			-		-
	TOTAL CASH BALANCES	57,671,400.76	2,380,507.00	60,051,907.76	(16,087,713.00)	43,964,194.76

Adoption of Budget and Certification of City Taxes

CITY BUDGET DRAFT WORKPAPER - NOT FOR PUBLICATION

64-611
DRAFTThe City of: MarshalltownCounty Name: MARSHALL

The below-signed certifies that the City Council, on the date stated above, lawfully approved the named resolution adopting a budget for next fiscal year, as summarized on this and the supporting pages. Attached is Long Term Debt Schedule Form 703 which lists any and all of the debt service obligations of the City.

Telephone Number

Signature

January 1, 2021 Property Valuations

Regular
DEBT SERVICE
Ag Land

With Gas & Electric	Without Gas & Electric
2a 929,248,952	2b 827,919,102
3a 959,277,158	3b 857,947,308
4a 5,790,975	

Last Official Census

27,591

TAXES LEVIED

Code Sec.	Dollar Limit	Purpose	(A) Request with Utility Replacement	(B) Property Taxes Levied	(C) Rate
384.1	8.10000	Regular General levy	5 7,526,917	6,706,145	43 8.10000
(384)		Non-Voted Other Permissible Levies			
12(8)	0.67500	Contract for use of Bridge	6	0	44 0
12(10)	0.95000	Opr & Maint publicly owned Transit	7 275,000	245,014	45 0.29594
12(11)	Amt Nec	Rent, Ins. Maint of Civic Center	8 100,000	89,092	46 0.10761
12(12)	0.13500	Opr & Maint of City owned Civic Center	9	0	47 0
12(13)	0.06750	Planning a Sanitary Disposal Project	10	0	48 0
12(14)	0.27000	Aviation Authority (under sec.330A.15)	11	0	49 0
12(15)	0.06750	Levee Impr. fund in special charter city	13	0	51 0
12(17)	Amt Nec	Liability, property & self insurance costs	14 371,954	331,391	52 0.40027
12(21)	Amt Nec	Support of a Local Emerg.Mgmt.Comm.	462 36,337	32,372	465 0.03910
(384)		Voted Other Permissible Levies			
12(1)	0.13500	Instrumental/Vocal Music Groups	15 9,000	8,023	53 0.00989
12(2)	0.81000	Memorial Building	16	0	54 0
12(3)	0.13500	Symphony Orchestra	17	0	55 0
12(4)	0.27000	Cultural & Scientific Facilities	18	0	56 0
12(5)	As Voted	County Bridge	19	0	57 0
12(6)	1.35000	Missi or Missouri River Bridge Const.	20	0	58 0
12(8)	0.03375	Aid to a Transit Company	21	0	59 0
12(16)	0.20500	Maintain Institution received by gift/devise	22	0	60 0
12(18)	1.00000	City Emergency Medical District	463	0	466 0
12(20)	0.27000	Support Public Library	23 250,897	223,538	61 0.27000
28E.22	1.50000	Unified Law Enforcement	24	0	62 0
		Total General Fund Regular Levies (5 thru 24)	25 8,570,105	7,635,575	
384.1	3.00375	Ag Land	26 17,395	17,395	63 3.00375
		Total General Fund Tax Levies (25 + 26)	27 8,587,500	7,652,970	Do Not Add
		Special Revenue Levies			
384.8	0.27000	Emergency (if general fund at levy limit)	28 250,897	223,538	64 0.27000
384.6	Amt Nec	Police & Fire Retirement	29 943,378	840,503	1.01520
	Amt Nec	FICA & IPERS (if general fund at levy limit)	30 799,669	712,466	0.86055
Rules	Amt Nec	Other Employee Benefits	31 1,423,535	1,268,306	1.53192
		Total Employee Benefit Levies (29,30,31)	32 3,166,582	2,821,275	65 3.40767
		Sub Total Special Revenue Levies (28+32)	33 3,417,479	3,044,813	
		Valuation			
385	As Req	With Gas & Elec	Without Gas & Elec		
	SSMID 1 (A)	(B)	34	0	66 0
	SSMID 2 (A)	(B)	35	0	67 0
	SSMID 3 (A)	(B)	36	0	68 0
	SSMID 4 (A)	(B)	37	0	69 0
	SSMID 5 (A)	(B)	555	0	555 0
	SSMID 6 (A)	(B)	556	0	556 0
	SSMID 7 (A)	(B)	1177	0	### 0
	SSMID 8 (A)	(B)	1185	0	### 0
		Total Special Revenue Levies	39 3,417,479	3,044,813	
384.4	Amt Nec	Debt Service Levy 76.10(6)	40 1,840,836	1,646,384	70 1.91898
384.7	0.67500	Capital Projects (Capital Improv. Reserve)	41 627,243	558,845	71 0.67500
		Total Property Taxes (27+39+40+41)	42 14,473,058	12,903,012	72 15.49426

COUNTY AUDITOR - I certify the budget is in compliance with ALL the following:

Budgets that DO NOT meet ALL the criteria below are not statutorily compliant & must be returned to the city for correction.

- 1) The prescribed Notice of Public Hearing Budget Estimate (Form 631.1) was lawfully published, or posted if applicable, filed proof was evidenced.
- 2) Budget hearing notices were published or posted not less than 10 days, nor more than 20 days, prior to the budget hearing.
- 3) Adopted property taxes do not exceed published or posted amounts.
- 4) Adopted expenditures do not exceed published or posted amounts in each of the nine program areas, or in total.
- 5) Number of the resolution adopting the budget has been included at the top of this form.
- 6) The budget file uploaded to the SUBMIT Area matched the paper copy certified by the city to this office.
- 7) The long term debt schedule (Form 703) shows sufficient payment amounts to pay the G.O. debt certified by the city to this office.

(County Auditor)

LONG TERM DEBT SCHEDULE
GENERAL OBLIGATION BONDS, TIF BONDS, REVENUE BONDS, LOANS, LEASE-PURCHASE PAYMENTS
PAGE 1

City Name: Marshalltown

Fiscal Year
2021

				GO - TOTAL	5,200,000	905,988	6,105,988	5,500	0	1,371,830	4,739,658
				NON-GO TOTAL	848,000	642,858	1,490,858	1,800	0	572,733	919,925
				GRAND TOTAL	7,563,000	1,801,795	9,364,795	8,400	0	7,532,359	1,840,836
Debt Name (A)		Amount of Issue (B)	Type of Debt Obligation (C)	Debt Resolution Number (D)	Principal Due FY 2023 (E)	Interest Due FY 2023 (F)	Total Obligation Due FY 2023 =(G)	Bond Reg./ Paying Agent Fees Due FY 2023 +(H)	Reductions due to Refinancing or Prepayment of Certified Debt -(I)	Paid from Funds OTHER THAN Current Year Debt Service Taxes -(J)	Amount Paid Current Year Debt Service Levy =(K)
(1)	31129: 2012A General Obligation Bonds	5,000,000	GO	2012-055	400,000	18,563	418,563	500		183,438	235,625
(2)	31130: 2012B Crossover advance funding (2008B)		GO				0				0
(3)							0				0
(4)	31134: 2015 General Obligation Corporate Purpose Bonds	2,000,000	GO	2015-193	225,000	5,850	230,850	500		59,908	171,442
(5)	31135: 2016A General Obligation Bonds	5,000,000	GO	2016-147	580,000	49,200	629,200	500		192,296	437,404
(6)	31136: 2016B General Obligation Bonds (Pol/Fire Bldg)	4,780,000	GO	2016-228	275,000	50,100	325,100	500			325,600
(7)	31137 2017 General Obligation Bonds (Pol&Fire Bldg)	12,720,000	GO	2017-246	515,000	327,000	842,000	500			842,500
(8)	31138 2018 General Obligation Bonds	2,400,000	GO	2018-201	350,000	68,700	418,700	600			419,300
(9)	31139: 2019 General Obligation and Refunded 2011	8,830,000	GO	2019-312	1,160,000	121,400	1,281,400	600		504,518	777,482
(10)	31140: 2020A General Obligation and Refunded	9,590,000	GO	2020-257	790,000	72,350	862,350	600		431,670	431,280
(11)	31141: 2020B General Obligation (Airport)	2,030,000	GO	2020-258	210,000	22,225	232,225	600			232,825
(12)	31142 2021 General Obligation Bonds	9,130,000	GO	2021-334	695,000	170,600	865,600	600			866,200
(13)	31143 2022A General Obligation Bondd (Tax-exempt)	9,555,000	NON - GO	2022-326	210,000	565,781	775,781	600			776,381
(14)	31144 2022B General Obligation (Taxable)	610,000	NON - GO	2022-327	100,000	42,944	142,944	600			143,544
(15)			NON - GO				0	0			0
(16)	Iowa Econ Develop Authority Shared Wall Loan	500,000	NON - GO	2020-098			0				0
(17)	52012: 2013 Sewer Revenue Improvement	3,700,000	NO SELECTION	2013-096	269,000	27,943	296,943	500		297,443	0
(18)	59009: 2021 Sewer Revenue refunded 2015	4,335,000	NON - GO	2021-070	538,000	34,133	572,133	600		572,733	0
(19)	59008: 2020 Sewer Revenue Refunded 2012,2014	5,065,000	NO SELECTION	2019-339	530,000	59,682	589,682	600		590,282	0
(20)	59009: 2021A Sewer Rev Improve. & Refunding	3,646,000	NO SELECTION	2021-242	176,000	36,586	212,586			212,586	0
(21)	SAN21001&WPC21001:2023 Sewer Rev Improve-SRF CIPP & HEADW	13,125,000	NO SELECTION	2023-007	540,000	128,738	668,738			668,738	0
(22)			NO SELECTION				0				0
(23)	78% LOST for property tax relief \$3.7M		NO SELECTION				0			2,886,000	-2,886,000
(24)	Use Add'l \$932,747 LOST to make levy the same as LY		NO SELECTION				0			932,747	-932,747
(25)	Another \$127,230 needed to make levy the same as FY23 with new legi		NO SELECTION				0				0
(26)			NO SELECTION				0				0
(27)			NO SELECTION				0				0
(28)			NO SELECTION				0				0
(29)			NO SELECTION				0				0
(30)			NO SELECTION				0				0
TOTALS					7,563,000	1,801,795	9,364,795	8,400	0	7,532,359	1,840,836