

City Council Meeting Notice

Governing Body: City Council of Boone, Iowa

Date of Meeting: July 5, 2021

Time of Meeting: 6:00 P.M.

Place of Meeting: City Council Chambers
(923 8th Street, Second Floor)

The City will have this meeting available via Zoom. To join the meeting via internet and/or phone please use the link and/or phone number below. If your computer does not have a mic and you wish to speak you will have to call in.

Website: <https://us02web.zoom.us/j/85614837741?pwd=anRvUi9jZm40WnVSMHVmU3U2OEoxdz09>

Meeting ID: 856 1483 7741

Passcode: 830640

Phone: 1-301-715-8592 or 1-253-215-8782

1. ROLL CALL
2. APPROVAL OF AGENDA
3. PRESENTATION OF PETITIONS AND OTHER COMMUNICATIONS
 - A. Swearing in of Firefighter Jacob Demastus.
 - B. Swearing in of Police Officer Jessica Hinz.
 - C. Public Hearing on the Proposed Plans, Specifications, Form of Contract, and Estimate of Costs for the South Marshall Street Resurfacing Project.
 - D. Public Hearing on the Proposed Plans, Specifications, Form of Contract, and Estimate of Costs for the Water Treatment Facilities Exterior Wall Repair and Repointing Project.
4. REPORTS OF STANDING COMMITTEES
 - A. POLICY, ADMINISTRATION & EMPLOYEE RELATIONS COMMITTEE – McGinn, Chm.
 - B. PUBLIC SAFETY AND TRANSPORTATION COMMITTEE - Ray, Chm.
 - C. UTILITY COMMITTEE – Ray, Chm.
 - D. ECONOMIC DEVELOPMENT COMMITTEE – Piklapp, Chm.
 1. Update on Boone County Chamber of Commerce and Boone County Convention and Visitors Bureau (CVB).
5. DEPARTMENT REPORTS
 - A. BUILDING OFFICIAL – Ed Higgins
 - B. CLERK/FINANCE OFFICER – Ondrea Elmquist

C. CITY ATTORNEY – Jim Robbins

D. DIRECTOR OF PUBLIC WORKS – John Rouse

E. ENGINEER –

F. PUBLIC SAFETY

1. Chief Adams

a. Fireworks Permit Application.

b. Premises Update for Boone County Fairgrounds Alcohol License.

2. Chief Wiebold

G. CITY ADMINISTRATOR –WM Skare

1. Discuss Resolution Submitted June 21, 2021 by Councilmember Stines.

2. Review Bids for Air Handlers for Council Chambers and Auditorium.

3. Garbage Guys' Waste Hauler Application.

- 6. CONSENT AGENDA – All items listed under the Consent Agenda will be enacted by one motion. There will be no separate discussion of these items unless a request is made prior to the time Council votes on the motion.**

A. MINUTES of previous meeting(s)

B. BILLS PAYABLE

C. PERMITS

1. Alcohol Licenses

a. New License –

b. Renewal –

c. Transfer – none

2. Cigarette/Tobacco Permit –

D. RESOLUTIONS

1. 2894 – Resolution Approving Plans, Specifications, Form of Contract and Estimate of Cost for the South Marshall Street Resurfacing Project.

2. 2895 – Resolution Approving Plans, Specifications, Form of Contract and Estimate of Cost for the Water Treatment Facilities Exterior Wall Repair and Repointing Project.

3. 2896 – Resolution Approving the Hiring of Jacob Demastus as a New Full-Time Fire Fighter to Fill a Vacant Position for the Boone Fire Department.

4. 2897 – Resolution Approving the Hiring of Jessica Hinz as a New Full-Time Police Officer to Fill a Vacant Position for the Boone Police Department.

5. 2898 – Resolution Authorizing Pufferbilly Days Committee Certain Authorities within the Right-of-Way for the Purpose of Safety and

Organization of the Pufferbilly Days Event.

E. BOARD AND COMMISSION APPOINTMENTS

F. OTHER

- 1. Waste Hauler Collection Service Application – Garbage Guys.**

7. ORDINANCES

8. MAYOR’S COMMENTS

- A. Review/Discuss/Approve Community Dedication Award Winner.**

9. COUNCIL MEMBER’S COMMENTS

10. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA

11. MOTION TO ADJOURN

STATEMENT OF COUNCIL PROCEEDINGS

June 21, 2021 6:00 p.m.

The City Council of Boone, Iowa, met in regular session in the City Hall Council Chambers on June 21, 2021, at 6:00 p.m. with Mayor Slight presiding. The meeting was also available via a Zoom. The following Council Members were present: Byrd, McGinn, Stines, Moorman, Piklapp, Stecker, and Ray. Absent: none.

Piklapp moved; McGinn seconded to approve the agenda as presented. Ayes: McGinn, Stines, Moorman, Piklapp, Stecker, Ray, and Byrd. Nays: none.

TJ Klith, Solar Designer with Trusted Energy, stated that Iowa, and Boone in particular is a targeted market for solar energy systems. Klith advised that he wanted to make the Council aware of the potential for residents to utilize solar energy to reduce electric costs and proposed doing a Boone County group buy-in, in order to reduce the cost. Klith offered his skills and expertise to organize a group.

Ray moved; Piklapp seconded to set a public hearing for July 5, 2021 at 6:00 p.m. on the proposed plans, specifications, form of contract, and estimate of costs for the South Marshall Street Resurfacing Project. Ayes: Stines, Moorman, Piklapp, Stecker, Ray, Byrd, and McGinn. Nays: none.

Moorman moved; Piklapp seconded to set a public hearing for July 5, 2021 at 6:00 p.m. on the proposed plans, specifications, form of contract, and estimate of costs for the Water Treatment Facilities Exterior Wall Repair and Repointing Project. Ayes: Moorman, Piklapp, Stecker, Ray, Byrd, McGinn, and Stines. Nays: none.

Ray moved; Stecker seconded to set a public hearing for July 19, 2021 at 6:00 p.m. on the voluntary annexation of property located at NW 1/4 of NE 1/4, except Parcel A, as shown on Plat of Survey, recorded in Plat Book 29, Page 231, in the office of the Recorder of Boone County, Iowa AND the E 33 Feet of the N 1/2 of the NE 1/4 of the NW 1/4, all in Section 32, Township 84 North, Range 26 W of the 5th P.M., Boone County, Iowa, containing 33.69 Acres, with 0.65 Acres subject to Public Road, which includes the following property owned by the City of Boone, Iowa: Parcel D described as that part of the North Half of the Northeast Quarter of the Northwest Quarter and that part of the Northwest Quarter of the Northeast Quarter, all of which is in Section 32, Township 84 North, Range 26 West of the 5th P.M., Boone County, Iowa and being more particularly described as follows: Beginning at the North Quarter corner of said Section 32; thence South 89° 35' 02" East, along the north line of said Northwest Quarter of the Northeast Quarter of Section 32, a distance of 33.00 feet; thence South 00° 06' 56" East, a distance of 661.68 feet, to the easterly extension of the south line of said North Half of the Northeast Quarter of the Northwest Quarter of Section 32; thence North 89° 33' 59" West, along said easterly extension and the south line of the North Half of the Northeast Quarter of the Northwest Quarter of Section 32, a distance of 66.00 feet, to the west line of the East 2 rods of said North Half of the Northeast Quarter of the Northwest Quarter of Section 32; thence North 00° 06' 56" West, along said west line of the East 2 rods of the North Half of the Northeast Quarter of the Northwest Quarter of Section 32, a distance of 661.68 feet, to the north line of said Northeast Quarter of the Northwest Quarter of Section 32; thence South 89° 33' 16" East, along said north line of the Northeast Quarter of the Northwest Quarter of Section 32, a distance of 33.00 feet, to the Point of Beginning containing 1.00 acre, more or less subject to any and all restrictions, covenants and easements of record. Acres: AND to the middle of the right of way of Park Avenue located immediately north of the subject property, into the City of Boone. Ayes: Piklapp, Stecker, Ray, Byrd, McGinn, Stines, and Moorman. Nays: none.

Skare advised that our Wastewater Plant is at its capacity in regards to biochemical oxygen demand (BOD). AgCertain has had discussions with the City regarding a potential expansion and has inquired on whether the City would be willing to expand the wastewater system or if AgCertain needs to accommodate that with their own expansion plans. The Utility Committee recommended doing a Wastewater Expansion Study to give insight on what improvements are needed. Ray moved; McGinn seconded to direct

staff to move forward with a Wastewater Plant Expansion Study to handle additional BOD's. Ayes: Stecker, Ray, Byrd, McGinn, Stines, Moorman, and Piklapp. Nays: none.

Moorman announced that the intent for 628 Story Street is to develop a Community Wellness Center. Piklapp stated that the first phase is to demolish the building and look at grant opportunities.

Piklapp stated that the City has met with Boone County Chamber of Commerce and Boone County Convention and Visitors Bureau (CVB) Representatives and both parties have agreed to the terms of an agreement. Piklapp requested that any additional discussion be further tabled until the contract is signed by both parties.

Skare requested guidance from Council on their expectation from staff for the First Thursday Events setup. The Council had no objection with Public Works setting up for the August 5, 2021 First Thursday/Pufferbilly Days Celebration. Stecker requested Public Works support for the remainder of the First Thursday Events with moving the picnic tables and the setup of the fence for the July through October events. The Council discussed the rental of the Greenspace, and if the Arts Commission is requesting those fees to be waived and how to continue the upkeep of the Greenspace if fees are waived. The Council agreed to allow Public Works to setup for the First Thursday Events in July and August; and requested staff to bring the cost to Council for approval for the September and October events.

Piklapp advised that the outdoor piano is coming back and it will be in front of the Dutch Oven Bakery in July.

Higgins presented the Final Plat for the Eastern Star Cottages Subdivision; he advised that the infrastructure issues have been corrected with no cost to the City. Ray moved; McGinn seconded to approve Resolution 2890 certifying the Final Plat for the Eastern Star Cottages Subdivision. Ayes: Ray, Byrd, McGinn, Stines, Moorman, Piklapp, and Stecker. Nays: none.

Rouse stated that the citywide cleanup is finished.

Adams presented the Boone Fire Department's Civil Service List: Jacob Demastus and Matthew Dietrick. Ray moved; Stecker seconded to approve the Fire Department's Civil Service List as presented. Ayes: Byrd, McGinn, Stines, Moorman, Piklapp, Stecker, and Ray. Nays: none.

Adams stated that several agencies from the Fire Department, Law Enforcement, and EMS, are in the planning stages for a September 11th Memorial Breakfast.

Ray moved; Piklapp seconded to approve Resolution 2891 approving the execution of a Master Agreement for professional services between the City of Boone and Short Elliott Hendrickson, Inc. (SEH) for general city engineering consulting services. Ayes: McGinn, Stines, Moorman, Piklapp, Stecker, Ray, and Byrd. Nays: none.

Skare advised that the big window on the 2nd floor of City Hall is leaking and staff is working on trying to get it fixed.

Skare stated that the levels of the Wells are looking good.

Mayor Slight asked if there were any questions or items to be removed from the Consent Agenda; no requests were made.

Stines moved; Stecker seconded to approve the following items on the Consent Agenda: 1) Minutes of previous meetings. 2) Bills payable. 3) Resolution 2892 approving Fiscal Year 2022 wages for part-time and paid-on-call firefighters in the Boone Fire Department. 4) Resolution 2893 authorizing the City Clerk/Finance Officer to make the appropriate interfund transfers of sums and record the same in the appropriate manner for Fiscal Year 2021. Ayes: Stines, Moorman, Piklapp, Stecker, Ray, Byrd, and McGinn. Nays: none.

A & E Millwright & Repair	Repairs	420.00
ACCO Unlimited Corp	Parts	2,455.34
ACI Mechanical	Dehumidification Project	40,000.00
Alliant Energy	Utilities	1,830.99
Alliant Energy	Utilities	15,372.81
Allstate Benefit Group	Payroll	293.73
Amazon Capital Services	Pool Supplies	666.69
Amazon Capital Services	Miscellaneous Supplies	396.01
American Legion Post #56	Flags	168.00
Boone Fitness	Payroll	35.30
Archivesocial	Archive Software	2,388.00
Asian Buffet	Greenspace Kickoff Food	195.00
Atlantic Coca-Cola Bottling	Pool Concession Supplies	568.38
Bellucis	Greenspace Kickoff Food	320.00
Bomgaars	Parts/Supplies	85.50
Boone Ace Hardware	Parts/Supplies	226.82
Boone Bank & Trust Payroll	Payroll	612.50
Boone Chamber Of Commerce	Pufferbilly Assistance	5,000.00
Boone Convention & Visitors Bureau	Hotel Tax-3 rd Quarter	15,000.00
Boone Convention & Visitors Bureau	Hotel Tax-4 th Quarter	15,000.00
Boone County Hospital	Tests	126.36
Boone County Recorder	Recording Fees	64.00
Boone County Treasurer	628 Story Property Taxes	330.00
Boone County Treasurer	628 Story Property Taxes	2,256.00
Boone Hardware	Equipment	32.99
Gatehouse DB-Iowa Holdings	Publications	581.58
Bradley Rholl	Reimbursement	19.00
Builders First Source	Materials	308.54
CDS Global	Monthly Processing	1,789.96
CDS Global	Postage	1,908.13
CenturyLink	Line Charges	593.59
Cintas Corporation	Medicine Cabinet Refills	223.74
City Of Boone	Utilities	459.52
Clay Cornelis	Reimbursement	30.00
Collection Services Center	Payroll	563.68
Core & Main	Water Meters	29,551.56
Culligan Of Boone	Cooler Rental	68.10
David Moore	Reimbursement	60.00
Dick's Fire Extinguisher	Inspection	346.90
Dick's Fire Extinguisher	Inspection	45.00
The Door & Fence Store	Fencing	2,374.00
Dutch Oven Bakery	Greenspace Kickoff Food	60.00
Ecolab Institutional	Pest Control	99.06
Two Rivers Insurance	Insurance Premiums	124,919.54
Cox Tires	Repairs	294.10
Farmtek	Fans	781.65
Fox Engineering	Engineering	12,850.00
Galls Parent Holding	Clearing System	157.62
Graymont Western Lime	Chemicals	4,418.50
TC2	Tire Repairs	178.00
Heath Palmer Amsoil	Oil	264.10
Hiway Truck Equipment	Installations	16,396.95
Hy-Vee Food Store	Supplies	5.38
Iowa Department Of Public Safety	Warrants System	4,872.00
Iowa Department Transportation	Supplies	301.53
Iowa League Of Cities	Conference Registrations	656.00
ICMA Retirement Trust 457	Payroll	1,662.52

Infomax Office Systems	Printing Contract	833.08
Insanity Fightwear/905 Ink	Uniforms	400.00
IPERS	Payroll	17,267.20
Jim Robbins	Reimbursement	1,140.92
Jimmy's Barbeque Pit	Greenspace Kickoff Food	530.00
Jochum Metalworks	Sign Installation	850.00
Jodi Kuehl	Utility Billing Refund	211.92
Josh Eatock	Reimbursement	60.00
K & R Lawn Care	Nuisance Mowing	1,215.00
Kendall Hilsabeck	Reimbursement	19.00
Keystone Laboratories	Lab Testing	650.60
Kiefer Aquatics	Umbrellas	273.00
Kiefer Aquatics	Pool Equipment	10,442.34
Kruck Plumbing & Heating	Services	90.00
Riverfront Broadcasting Of IA	Advertising Contract	366.18
Lexipol	Subscription	9,795.00
Pal Incorporated	Firearm Buyback	615.25
Martin Marietta Materials	Gravel	5,466.45
Roger & Jane Martin	Fuel	13,865.12
Martins Flag Company	Parts	81.98
Members 1st Credit Union	Payroll	150.00
Midland Power Cooperative	Utilities	35.14
Miracle Recreation	Parts	1,014.69
Lucas Weigel	Nuisance Abatement	285.50
MNG Incorporated	Pool Sign	75.00
Moffitt's	Repairs	93.55
Municipal Emergency Services	Fire Equipment/Uniforms	5,806.19
Municipal Fire & Police Retirement	Payroll	28,432.89
Municipal Supply	Hydrant Materials	3,515.50
Mutual Of Omaha	Payroll	459.98
Nikkel & Associates	Repairs	1,234.15
New China Restaurant	Greenspace Kickoff Food	85.00
O'Halloran International	Parts	575.00
Optum-UHC Flex	Payroll	334.89
Rollins	Pest Control	79.11
LG Playground	Swing Seats	197.00
Pat Clemons Chevrolet	Part	46.16
Shane M Pearson	Repairs	314.75
Pitney Bowes	Postage Ink	169.98
Portable Pro	Portable Toilet Service	540.00
Psychology Associates	Evaluation	215.00
Quick Oil	Propane	1,088.62
R & W Power	Parts	550.25
R & W Power	Parts	66.73
Redeker's	Fire Dept Beds	2,599.56
Reserve Account	Postage Refill	1,500.00
Robert Jones	Reimbursement	60.00
Roosters Bar & Grill	Greenspace Kickoff Food	95.00
S & D Restaurants	Greenspace Kickoff Food	435.00
Salama Greenhouse	Flowers/Planters	368.00
Seth Janssen	Reimbursement	19.00
Short Elliott Hendrickson	Engineering	1,342.21
State Hygienic Laboratory	Lab Testing	708.00
State Of IA	Payroll	8,751.00
Sysco IA	Concession Supplies	2,200.03
Tim Hildreth Company	Repairs	5,154.00
Titan Machinery	Parts	328.00

Tom Walters Company	Waste Removal	96.00
Treasurer/State Of IA	Sales Tax	5,062.00
Treasurer/State Of IA	Water Excise Tax	11,411.00
United Services Restoration	Building Permit Refund	637.00
Trinity Regional Medical	CPR Cards	49.00
Van-Wall Equipment	Parts	135.08
Van-Wall Equipment	Parts	213.34
Cellco Partnership	Wireless Service	1,506.26
Vessco	Parts	255.64
Vision Bank	Payroll	44,085.58
VisionBank Of IA	Conference Expense/Planters	2,384.35
Visu-Sewer Clean & Seal	Sanitary Sewer Lining	59,492.75
Walters Sanitary Service	Waste Removal	494.14
Walters Sanitary Service	Waste Removal	361.75
Weinie Wonderland	Greenspace Kickoff Food	630.00
Xerox Corporation	Copier Lease	76.22
Ziegler	Generator Testing	4,581.41
Robert B Allen	Utility Deposit Refund	29.44
Ashely & Jeremy Beary	Utility Deposit Refund	75.00
Christopher Bennett	Utility Deposit Refund	75.00
Jeremy M Blankman	Utility Deposit Refund	86.48
Alexander Brant	Utility Deposit Refund	78.43
Joseph Britt	Utility Deposit Refund	104.88
Kathryn E Chance	Utility Deposit Refund	125.00
Michele L Creger	Utility Deposit Refund	83.03
Andrew J Crim	Utility Deposit Refund	125.00
Kelly L Curvin	Utility Deposit Refund	125.00
Olivia C Curvin	Utility Deposit Refund	125.00
Will A Dodd	Utility Deposit Refund	125.00
Joshua B Freeman	Utility Deposit Refund	125.00
Patrice M Galm	Utility Deposit Refund	86.33
Mark Howard	Utility Deposit Refund	43.21
Kelby R Johnson	Utility Deposit Refund	125.00
Heather Kaylor & Vincent Kay	Utility Deposit Refund	125.00
Connor J Lindahl	Utility Deposit Refund	104.88
Jeana M McFadden	Utility Deposit Refund	60.03
Rees A Nielsen	Utility Deposit Refund	125.00
Brandon J Pritchard	Utility Deposit Refund	81.88
Theron S Schroeder	Utility Deposit Refund	125.00
Genny K Shepley	Utility Deposit Refund	33.46
Miranda Squires-Blair	Utility Deposit Refund	125.00
Mark A Vancannon	Utility Deposit Refund	29.56
Paid Report Total		577,600.72

Fund	Receipts	Disbursements
General	298,447.91	131,652.06
Special	160,198.03	26,375.24
Hotel/Motel	27,461.49	30,000.00
Road Use Tax	129,010.77	27,673.02
Debt Service	13,544.28	0.00
Water Utility	243,465.22	87,655.96
Sewer Utility	6,316,266.38	136,323.62
Family Resource Center	6,378.23	538.63
Capital Project	7,198.23	17,175.92
Storm Water Utility	26,504.04	3,355.37
Expendable Trust	28,089.96	3,511.98
Agency Account	152,942.74	113,338.92

Mayor Slight thanked the Public Works Department for their work on the citywide cleanup.

Stines requested to put a resolution in the Consent Agenda for the July 5, 2021 Council meeting regarding support of the Lesbian, Gay, Bisexual, Transgender, Queer or Questioning (LGBTQ) Community.

There being no further business to come before the Council the meeting was adjourned at 6:56 p.m.

ATTEST:

Ondrea Elmquist Clerk/Finance Officer

John Slight, Mayor

RECORD OF COUNCIL APPROVED BILLS

Stines

July 5, 2021

<u>DATE</u>	<u>AMOUNT</u>
Airport Bills	30,090.03
Library Bills	59,994.44
Park Bills	
Manuale/Util Bills/Misc Total	188,249.01
Voided checks	
Council Bills Total	74,812.86
Payroll Wages 07/1/2021	120,047.72
Payroll Vendor Checks 07/1/2021	98,589.87
 TOTAL EXPENDITURES	 <u>\$ 571,783.93</u>

Signed By _____

Date _____

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
29552277	ACCESS SYSTEMS LEASING	PRINTING CONTRACT-PD		164.97		
07062021A	ALLIANT ENERGY	UTILITIES-PD		1,683.76		
1KJL-G7NN-1N7C	AMAZON CAPITAL SERVICES INC	CABLES-SECURITY CAMERAS	139.95			
1RNG-NM3K-LMJK	AMAZON CAPITAL SERVICES INC	BLUETOOTH DONGLE-BUILDING	20.98	160.93		
2899	BOEHM INSURANCE AGENCY INC	628 STORY INSURANCE		179.00		
85302151	BOMGAARS	PRAMOL/BULK BOLTS	114.97			
85303303	BOMGAARS	CORDS/STRAPS/TARPS-CLEANUP DAY	135.02			
85306138	BOMGAARS	HOSE/HOSE SHUT OFF	38.68			
85309356	BOMGAARS	WEED BURNING EQUIPMENT	114.98	403.65		
67559	BOONE ACE HARDWARE	GRASS SEED/WEED KILLER/PLUNGER	70.57			
67560	BOONE ACE HARDWARE	BROOM	19.99			
67596	BOONE ACE HARDWARE	PARTS/WEED SPRAY	15.37			
67608	BOONE ACE HARDWARE	FURNACE FILTERS	32.95			
67743	BOONE ACE HARDWARE	PLUMBING/HVAC SUPPLIES	52.87			
67761	BOONE ACE HARDWARE	PARTS-WATER PLANT REPAIRS	16.62			
67783	BOONE ACE HARDWARE	SCREWDRIVER SET	24.99			
67792	BOONE ACE HARDWARE	BOLTS/SCREWS-FD FANS	3.99	237.35		
07062021	BOONE COUNTY LANDFILL	FY 2022 ASSESSMENT-JULY		5,275.38		
16076	BOONE GLASS COMPANY	REPAIR-CITY HALL WINDOW LEAK		1,421.00		
111471	BROWN SUPPLY CO	REPAIR KIT-FIRE HYDRANTS		194.00		
091296	IOWA LEAGUE OF CITIES	FY 2022 DUES		5,343.00		
07786588	JOHN DEERE FINANCIAL	JD UTILITY TRACTOR/LOADER/MOW		27,315.30		
58835	K & R LAWN CARE	NUISANCE MOWING		295.00		
990136	LOWE'S HOME CENTER	FREEZER-CONCESSION STAND		426.55		
3185626	MCFARLAND CLINIC	NEW OFFICER PHYSICAL		182.00		
45449	MENARDS-AMES	BRICK/BLOCKS-INTAKE REPAIRS		548.67		
12805	PAUL & KELLEY MOLITOR	CONTRACTOR DIGGING-MAIN BREAK		1,515.00		
PSI398114	MOMAR INC	MOSQUITO CONTROL		11,749.15		
IN1573066	MUNICIPAL EMERGENCY SERVICES	CAN HARNESS-EXTINGUISHER		314.79		
1221922457	MUTUAL OF OMAHA	BASIC LIFE AD&D PREM-ADMIN		271.14		
266256	OPENCOM	INTERNET SERVICE-PARK	85.95			
266257	OPENCOM	INTERNET SERVICE-CEMETERY	85.95			
266260	OPENCOM	INTERNET SERVICE-WW	50.95	222.85		
8711	PREMIER FABRICATION	REPAIR TAILGATE-DUMP TRUCK		642.00		
21-812-0685	REFLECTIONS GLASS & MIRROR	BLDG DEPT COUNTER WINDOW		276.40		
07062021	RYAN ROBERT	UB OVERPAYMENT		20.12		
07062021	SHARON THOMPSON	SLUDGE BUNKER ANNUAL AGRMT		8,000.00		
406436	SHORT ELLIOTT HENDRICKSON INC	LIME SILO PAINTING PRJ		1,200.00		
07062021	STORY COUNTY TREASURER	DRUG TASK FORCE 4TH QT FY21		1,784.48		
529A	VALERIE KOEPPEN	CUSTODIAL SERVICES-JULY		800.00		
439042197	VAG USA LLC	PARTS-HIGH SERVICE PUMP		2,458.83		
16K00280	WALTERS SANITARY SERVICE INC	WASTE REMOVAL-FRC		205.54		
776	TYLER WISECUP	CLEAN UP DEBRIS 721 LINN ST		1,000.00		
20210856	WINNING SOLUTIONS INC	ON-LINE APP HOSTING		522.00		
Accounts Payable Total				74,812.86		

Open Bills

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
07062021A	1	001	7/06/2021	45 ALLIANT ENERGY UTILITIES-PD	1,683.76	001-110-6371	UTILITIES
				** VENDOR TOTAL **	1,683.76	.00	1,683.76
07062021	1	004	7/06/2021	169 BOONE COUNTY LANDFILL FY 2022 ASSESSMENT-JULY	5,275.38	004-290-6499	LANDFILL SERVICES
				** VENDOR TOTAL **	5,275.38	.00	5,275.38
2899	1	001	7/06/2021	184 BOEHM INSURANCE AGENCY IN 628 STORY INSURANCE	179.00	001-620-6408	INSURANCE/LIABILITY
				** VENDOR TOTAL **	179.00	.00	179.00
16076	1	001	7/06/2021	205 BOONE GLASS COMPANY REPAIR-CITY HALL WINDOW LEAK	1,421.00	001-650-6310	REPAIRS
				** VENDOR TOTAL **	1,421.00	.00	1,421.00
111471	1	600	7/06/2021	256 BROWN SUPPLY COMPANY REPAIR KIT-FIRE HYDRANTS	194.00	600-812-6351	HYDRANTS
				** VENDOR TOTAL **	194.00	.00	194.00
091296	1	600	7/06/2021	1086 IA LEAGUE OF CITIES FY 2022 DUES	1,335.75	600-810-6210	MEMBERSHIP DUES
091296	2	610	7/06/2021	FY 2022 DUES	1,335.75	610-815-6210	MEMBERSHIP DUES
091296	3	001	7/06/2021	FY 2022 DUES	1,335.75	001-620-6210	MEMBERSHIP DUES
091296	4	110	7/06/2021	FY 2022 DUES	1,335.75	110-211-6210	MEMBERSHIP DUES
				** TOTAL **	5,343.00	.00	5,343.00
				** VENDOR TOTAL **	5,343.00	.00	5,343.00
PSI398114	1	001	7/06/2021	1283 MOMAR MOSQUITO CONTROL	11,749.15	001-190-6599	MOSQUITO/PEST CONTROL
				** VENDOR TOTAL **	11,749.15	.00	11,749.15
16K00280	1	730	7/06/2021	1848 WALTERS SANITARY SERVICE WASTE REMOVAL-FRC	205.54	730-899-6371	UTILITIES/FAMILY RESOURCE
				** VENDOR TOTAL **	205.54	.00	205.54
990136	1	001	7/06/2021	1991 LOWES HOME CENTER FREEZER-CONCESSION STAND	426.55	001-435-6350	REPAIRS
				** VENDOR TOTAL **	426.55	.00	426.55
IN1573066	1	001	7/06/2021	2088 MUNICIPAL EMERGENCY SERV CAN HARNESS-EXTINGUISHER	314.79	001-150-6504	EQUIPMENT
				** VENDOR TOTAL **	314.79	.00	314.79

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
266256	1	001	7/06/2021	2160 OPENCOM INTERNET SERVICE-PARK	85.95	001-430-6373	TELEPHONE
266257	1	001	7/06/2021	INTERNET SERVICE-CEMETERY	85.95	001-450-6373	TELEPHONE
266260	1	610	7/06/2021	INTERNET SERVICE-WW	50.95	610-816-6373	TELEPHONE
				** VENDOR TOTAL **	222.85	.00	222.85
3185626	1	112	7/06/2021	2419 MCFARLAND CLINIC NEW OFFICER PHYSICAL	182.00	112-930-6150	GROUP INSURANCE PAYMENTS
				** VENDOR TOTAL **	182.00	.00	182.00
07062021	1	167	7/06/2021	2460 STORY COUNTY TREASURER DRUG TASK FORCE 4TH QT FY21 APRIL 2021-JUNE2021	1,784.48	167-110-6599	TRUST/DRUG PURCHASE
				** VENDOR TOTAL **	1,784.48	.00	1,784.48
8711	1	610	7/06/2021	2616 PREMIER FABRICATION REPAIR TAILGATE-DUMP TRUCK	642.00	610-816-6350	REPAIRS
				** VENDOR TOTAL **	642.00	.00	642.00
67559	1	600	7/06/2021	2706 BOONE ACE HARDWARE GRASS SEED/WEED KILLER/PLUNGER	70.57	600-811-6310	BUILDING & GROUNDS
67560	1	001	7/06/2021	BROOM	19.99	001-150-6332	REPAIRS
67596	1	730	7/06/2021	PARTS/WEED SPRAY	15.37	730-899-6371	UTILITIES/FAMILY RESOURCE
67608	1	600	7/06/2021	FURNACE FILTERS	32.95	600-811-6310	BUILDING & GROUNDS
67743	1	600	7/06/2021	PLUMBING/HVAC SUPPLIES	52.87	600-811-6599	SUPPLIES
67761	1	600	7/06/2021	PARTS-WATER PLANT REPAIRS	16.62	600-811-6350	REPAIRS
67783	1	001	7/06/2021	SCREWDRIVER SET	24.99	001-650-6310	REPAIRS
67792	1	001	7/06/2021	BOLTS/SCREWS-FD FANS	3.99	001-150-6310	BUILDING MAINTENANCE
				** VENDOR TOTAL **	237.35	.00	237.35
12805	1	600	7/06/2021	3132 MOLITOR CONSTRUCTION CONTRACTOR DIGGING-MAIN BREAK	1,515.00	600-812-6498	REPAIRS
				** VENDOR TOTAL **	1,515.00	.00	1,515.00
29552277	1	001	7/06/2021	3214 ACCESS SYSTEMS LEASING PRINTING CONTRACT-PD	164.97	001-110-6419	SERVICES & COMPUTER SUPPORT
				** VENDOR TOTAL **	164.97	.00	164.97

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
				3476 MUTUAL OF OMAHA			
1221922457	1	113	7/06/2021	BASIC LIFE AD&D PREM-ADMIN	28.91	113-620-6151	DENTAL PAYMENTS
1221922457	2	113	7/06/2021	BASIC LIFE AD&D PREM-BUILDING	12.39	113-170-6151	DENTAL INSURANCE/BLDG OFFL
1221922457	3	113	7/06/2021	BASIC LIFE AD&D PREM-RUT	49.56	113-210-6151	DENTAL INSURANCE/RUT
1221922457	4	113	7/06/2021	BASIC LIFE AD&D PREM-PD	78.47	113-110-6151	DENTAL INSURANCE/POLICE
1221922457	5	113	7/06/2021	BASIC LIFE AD&D PREM-FD	28.91	113-150-6151	DENTAL INSURANCE/FIRE
1221922457	6	113	7/06/2021	BASIC LIFE AD&D PREM-PARK	16.52	113-430-6151	DENTAL INSURANCE/PARKS
1221922457	7	113	7/06/2021	BASIC LIFE AD&D PREM-CEM	4.13	113-450-6151	DENTAL INSURANCE/CEMETERY
1221922457	8	600	7/06/2021	BASIC LIFE AD&D PREM-WATER	16.52	600-810-6151	DENTAL INSURANCE/WATER
1221922457	9	610	7/06/2021	BASIC LIFE AD&D PREM-SEWER	10.95	610-815-6151	DENTAL INSURANCE/SEWER
1221922457	10	113	7/06/2021	BASIC LIFE AD&D PREM-LIBRARY	24.78	113-410-6151	DENTAL INSURANCE/LIBRARY
				** TOTAL **	271.14	.00	271.14
				** VENDOR TOTAL **	271.14	.00	271.14
				3523 WISECUP TRUCKING			
776	1	001	7/06/2021	CLEAN UP DEBRIS 721 LINN ST	1,000.00	001-198-6497	NUISANCE ABATEMENT
				** VENDOR TOTAL **	1,000.00	.00	1,000.00
				3596 SHARON THOMPSON			
07062021	1	610	7/06/2021	SLUDGE BUNKER ANNUAL AGRMT	8,000.00	610-816-6379	LANDFILL/SLUDGE
				** VENDOR TOTAL **	8,000.00	.00	8,000.00
				3610 STUEHMER CONTRACTING			
529A	1	001	7/06/2021	CUSTODIAL SERVICES-JULY	800.00	001-650-6490	SERVICES/CITY HALL
				** VENDOR TOTAL **	800.00	.00	800.00
				3651 WSI			
20210856	1	600	7/06/2021	ON-LINE APP HOSTING	174.00	600-810-6419	COMPUTER UPDATE
20210856	2	610	7/06/2021	ON-LINE APP HOSTING	174.00	610-815-6419	COMPUTER UPDATE
20210856	3	001	7/06/2021	ON-LINE APP HOSTING	174.00	001-180-6499	CONTRACTUAL SERVICES
				** TOTAL **	522.00	.00	522.00
				** VENDOR TOTAL **	522.00	.00	522.00
				3738 REFLECTIONS GLASS & MIRRO			
21-812-0685	LN: 1						
	121		7/06/2021	BLDG DEPT COUNTER WINDOW	276.40	121-170-6499	BUILDING DEPT
				** VENDOR TOTAL **	276.40	.00	276.40
				3861 SHORT ELLIOTT HENDRICKSON			
406436	1	600	7/06/2021	LIME SILO PAINTING PRJ	1,200.00	600-811-6310	BUILDING & GROUNDS
				** VENDOR TOTAL **	1,200.00	.00	1,200.00
				4010 VAG USA LLC			
439042197	1	600	7/06/2021	PARTS-HIGH SERVICE PUMP	2,458.83	600-811-6350	REPAIRS
				** VENDOR TOTAL **	2,458.83	.00	2,458.83

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
85302151	1	110	7/06/2021	4040 BOMGAARS PRAMOIL/BULK BOLTS	114.97	110-210-6310	REPAIRS/CITY SHED
85303303	1	110	7/06/2021	CORDS/STRAPS/TARPS-CLEANUP DAY	135.02	110-210-6599	SUPPLIES
85306138	1	110	7/06/2021	HOSE/HOSE SHUT OFF	38.68	110-210-6350	REPAIRS-EQUIP/MECHANIC
85309356	1	600	7/06/2021	WEED BURNING EQUIPMENT	114.98	600-811-6504	EQUIPMENT
				** VENDOR TOTAL **	403.65	.00	403.65
1KJL-G7NN-1N7C	LN: 1			4073 AMAZON CAPITAL SERVICES			
	001		7/06/2021	CABLES-SECURITY CAMERAS	139.95	001-110-6399	BUILDING MAINT/REPAIR
1RNG-NM3K-LMJK	LN: 1						
	001		7/06/2021	BLUETOOTH DONGLE-BUILDING	20.98	001-170-6506	SUPPLIES/OFFICE
				** VENDOR TOTAL **	160.93	.00	160.93
45449	1	740	7/06/2021	4084 MENARDS-AMES BRICK/BLOCKS-INTAKE REPAIRS	548.67	740-865-6320	GROUNDS MAINT & REPAIRS
				** VENDOR TOTAL **	548.67	.00	548.67
58835	1	001	7/06/2021	4278 K & R LAWN CARE NUISANCE MOWING	295.00	001-198-6498	WEED/SNOW
				** VENDOR TOTAL **	295.00	.00	295.00
07786588	1	600	7/06/2021	4305 JOHN DEERE FINANCIAL JD UTILITY TRACTOR/LOADER/MOW	27,315.30	600-811-6504	EQUIPMENT
				** VENDOR TOTAL **	27,315.30	.00	27,315.30
07062021	1	600	7/06/2021	2538 RYAN ROBERT UB OVERPAYMENT	10.06	600-810-6599	MISCELLANEOUS
07062021	2	610	7/06/2021	UB OVERPAYMENT	10.06	610-815-6599	MISC REFUNDS/NSF FEE
				** TOTAL **	20.12	.00	20.12
				** VENDOR TOTAL **	20.12	.00	20.12
				** GRAND TOTAL **	74,812.86	.00	74,812.86

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
FY End Lib 1025	1 STOP ELECTRICAL & MECHANICAL	TEST BACKFLOW PREVENTERS QTY 4		195.00	208778	6/28/21
29466274	ACCESS SYSTEMS LEASING	PRINTING CONTRACT-LIBRARY		162.37	208730	6/23/21
0213037-IN	ACCO UNLIMITED CORP	CHEMICALS	863.30		208779	6/28/21
0213052-IN	ACCO UNLIMITED CORP	CHEMICALS	463.15		208779	6/28/21
0213196-IN	ACCO UNLIMITED CORP	WATER TESTING SUPPLIES	169.59		208779	6/28/21
0213445-IN	ACCO UNLIMITED CORP	CHEMICALS	210.00		208779	6/28/21
0213540-IN	ACCO UNLIMITED CORP	CHEMICALS	1,084.85		208779	6/28/21
0213548-IN	ACCO UNLIMITED CORP	ACID TANK/PARTS	925.11		208779	6/28/21
0213757-IN	ACCO UNLIMITED CORP	UNDERWATER LIGHTS	562.55	4,278.55	208779	6/28/21
4247	ALEX AIR APPARATUS INC	SERVICE-SCBA COMPRESSOR/		885.40	208780	6/28/21
06232021A	ALLIANT ENERGY	UTILITIES-LIBRARY	3,794.27		208731	6/23/21
06232021B	ALLIANT ENERGY	UTILITIES-LIBRARY	326.07		208731	6/23/21
06242021A	ALLIANT ENERGY	UTILITIES-RR1 MUNCI	191.41		208770	6/24/21
06242021B	ALLIANT ENERGY	UTILITIES-424 SNEDDEN HOUSE	34.25		208770	6/24/21
06242021C	ALLIANT ENERGY	UTILITIES-HIRTA	263.23		208770	6/24/21
06242021D	ALLIANT ENERGY	UTILITIES-424 SNEDDEN	544.61		208770	6/24/21
06242024E	ALLIANT ENERGY	UTILITIES-424 SNEDDEN LIGHTS	18.39		208770	6/24/21
06282021A	ALLIANT ENERGY	UTILITIES-SEWER	491.21		208782	6/28/21
06282021B	ALLIANT ENERGY	UTILITIES-WATER	36.19		208782	6/28/21
06282021C	ALLIANT ENERGY	UTILITIES-FRC	3,535.06	9,234.69	208782	6/28/21
14RY-XTWC-601R	AMAZON CAPITAL SERVICES INC	CONCESSION STAND SUPPLIES	345.27		208783	6/28/21
1LDK-LHKY-41LL	AMAZON CAPITAL SERVICES INC	OUTDOOR SPEAKERS-POOL	298.00		208783	6/28/21
1XFW-64N7-W9G1	AMAZON CAPITAL SERVICES INC	CONCESSION STAND SUPPLIES	92.28	735.55	208783	6/28/21
433677984684	SYNCB/AMAZON	LIBRARY MATERIALS	34.93		208733	6/23/21
435574788746	SYNCB/AMAZON	LIBRARY MATERIALS	14.19		208733	6/23/21
438697873733	SYNCB/AMAZON	LIBRARY MATERIALS	29.96		208909	6/29/21
446796663798	SYNCB/AMAZON	LIBRARY MATERIALS	51.89		208733	6/23/21
449978976793	SYNCB/AMAZON	LIBRARY MATERIALS	37.98		208909	6/29/21
453889973935	SYNCB/AMAZON	LIBRARY MATERIALS	10.99		208909	6/29/21
457454674545	SYNCB/AMAZON	LIBRARY MATERIALS	75.56		208909	6/29/21
459657697654	SYNCB/AMAZON	LIBRARY MATERIALS	58.19		208733	6/23/21
459946633673	SYNCB/AMAZON	LIBRARY MATERIALS	37.95		208909	6/29/21
464363478889	SYNCB/AMAZON	LIBRARY MATERIALS	16.98		208909	6/29/21
468843868345	SYNCB/AMAZON	LIBRARY MATERIALS	15.04		208909	6/29/21
473686473389	SYNCB/AMAZON	LIBRARY MATERIALS	17.96		208909	6/29/21
474789783343	SYNCB/AMAZON	LIBRARY MATERIALS	6.59		208733	6/23/21
475865967864	SYNCB/AMAZON	LIBRARY MATERIALS	14.99		208909	6/29/21
478643537933	SYNCB/AMAZON	LIBRARY MATERIALS	48.44		208909	6/29/21
487763775648	SYNCB/AMAZON	LIBRARY MATERIALS	49.99		208909	6/29/21
487964674974	SYNCB/AMAZON	LIBRARY MATERIALS	73.68		208909	6/29/21
489457943368	SYNCB/AMAZON	LIBRARY MATERIALS	14.99		208733	6/23/21
577559378787	SYNCB/AMAZON	LIBRARY MATERIALS	44.97		208909	6/29/21
637857798634	SYNCB/AMAZON	LIBRARY MATERIALS	11.00		208733	6/23/21
638784999483	SYNCB/AMAZON	LIBRARY MATERIALS	8.69		208909	6/29/21
783443756686	SYNCB/AMAZON	LIBRARY MATERIALS	42.41		208909	6/29/21
793835846933	SYNCB/AMAZON	LIBRARY MATERIALS	38.90		208733	6/23/21
836456796473	SYNCB/AMAZON	LIBRARY MATERIALS	223.68		208909	6/29/21
844356457473	SYNCB/AMAZON	LIBRARY MATERIALS	15.99		208909	6/29/21
848896988787	SYNCB/AMAZON	LIBRARY MATERIALS	10.45		208733	6/23/21
868778568993	SYNCB/AMAZON	LIBRARY MATERIALS	13.84		208733	6/23/21
869933734464	SYNCB/AMAZON	LIBRARY MATERIALS	19.72		208733	6/23/21
897533658746	SYNCB/AMAZON	LIBRARY MATERIALS	11.89		208733	6/23/21
934398899673	SYNCB/AMAZON	LIBRARY MATERIALS	9.98		208909	6/29/21
934969455687	SYNCB/AMAZON	LIBRARY MATERIALS	29.97		208733	6/23/21

	INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
	935746333938	SYNCB/AMAZON	LIBRARY MATERIALS	10.68		208733	6/23/21
	936583575639	SYNCB/AMAZON	LIBRARY MATERIALS	46.66		208733	6/23/21
	967648993378	SYNCB/AMAZON	LIBRARY MATERIALS	8.49		208733	6/23/21
	969985843544	SYNCB/AMAZON	LIBRARY MATERIALS	26.87		208733	6/23/21
Lib	973678984549	SYNCB/AMAZON	LIBRARY MATERIALS	17.96		208909	6/29/21
	975684369473	SYNCB/AMAZON	LIBRARY MATERIALS	59.96		208733	6/23/21
	993897695939	SYNCB/AMAZON	LIBRARY MATERIALS	9.96		208733	6/23/21
	995398569967	SYNCB/AMAZON	LIBRARY MATERIALS	33.97	1,306.34	208733	6/23/21
	ERICIA2021-1	AWE ACQUISITION INC	ANNUAL ONLINE SUBSCRIPTION		4,317.00	208910	6/29/21
Lib	07012021	BEN KAUTZA	CLOTHING ALLOWANCE		300.00	208924	7/01/21
	INV-US44628	BIBLIOTHECA LLC	RFID TAGS		2,164.00	208911	6/29/21
Lib	106963	BLACKHAWK AUTOMATIC SPRINKLERS	ANNUAL SPRINKLER INSPECTION		425.00	208734	6/23/21
	107096	BOCK FLOORING	TILE INSTALLATION		3,720.00	208912	6/29/21
Air	0270048	BOLTON & MENK INC	HANGAR STRUCTURE REVIEW		5,920.00	208771	6/24/21
	06282021	BOONE DAY BREAKERS KIWANIS	APRIL-JUNE 2021 DUES-ADAMS	85.00		208784	6/28/21
FY End	06282021A	BOONE DAY BREAKERS KIWANIS	APRIL-JUNE 2021 DUES-SKARE	85.00	170.00	208784	6/28/21
	922191579	BORDER STATES INDUSTRIES	REPLACEMENT STREET LIGHTS		1,778.10	208785	6/28/21
Lib	ARU0321262	BROAD REACH	CHILDRENS BOOKS		229.47	208735	6/23/21
	581104	BRODART CO	LIBRARY BOOK CART		1,218.00	208736	6/23/21
Air	16906	BROWN ELECTRIC	INSTALL LIGHT POLES QTY 6		12,014.40	208772	6/24/21
FY End	111470	BROWN SUPPLY CO	MATERIALS-STORM SEWER INTAKES		1,500.00	208786	6/28/21
Lib	13758	CARSON ELECTRIC INC	BULBS/BUCKET TRUCK CHARGE		381.28	208787	6/28/21
	07012021	CASEY PETERSON	CLOTHING ALLOWANCE		300.00	208925	7/01/21
	30451480	CAPITAL COMMUNICATIONS IND INC	AUDIOBOOK/CD CASES		259.17	208737	6/23/21
Lib	1853210	CENTER POINT PUBLISHING	LARGE PRINT BOOKS		582.42	208738	6/23/21
	10090493	CENTRAL IOWA BUILDING SUPPLY	PIPING QTY 2		324.54	208788	6/28/21
	06282021	CENTRAL IOWA EXPO	TOURISM SERVICES		10,000.00	208789	6/28/21
	631616	CENTRAL IA READY MIX	MATERIALS-FIRE HYDRANT REPAIRS	1,720.00		208790	6/28/21
	632138	CENTRAL IA READY MIX	MATERIALS-STREET REPAIR	847.00		208790	6/28/21
	633494	CENTRAL IA READY MIX	MATERIALS-STORM SEWER REPAIRS	1,494.00		208790	6/28/21
	633683	CENTRAL IA READY MIX	MATERIALS-STORM SEWER REPAIRS	2,158.00		208790	6/28/21
	634025	CENTRAL IA READY MIX	MATERIALS-STORM SEWER REPAIR	152.00		208790	6/28/21
	634147	CENTRAL IA READY MIX	MATERIALS-STORM SEWER REPAIR	1,577.00		208790	6/28/21
	634971	CENTRAL IA READY MIX	MATERIALS-INTAKE & STORM SEWER	1,328.00		208790	6/28/21
	635547	CENTRAL IA READY MIX	MATERIALS-INTAKE & STORM SEWER	1,660.00		208790	6/28/21
	636053	CENTRAL IA READY MIX	MATERIALS-INTAKE & STORM SEWER	971.50	11,907.50	208790	6/28/21
	2191821-2	CHANGE	LIBRARY POSTAGE	4.15		208739	6/23/21
	2197982-2	CHANGE	LIBRARY POSTAGE	13.65		208739	6/23/21
	2216486-1	CHANGE	LIBRARY POSTAGE	4.70		208739	6/23/21
	2216638-2	CHANGE	LIBRARY POSTAGE	6.56		208739	6/23/21
	2374913-2	CHANGE	LIBRARY POSTAGE	25.52		208739	6/23/21
	5088558-2	CHANGE	LIBRARY POSTAGE	4.70		208739	6/23/21
	5089485	CHANGE	LIBRARY POSTAGE	18.09		208739	6/23/21
	5118761-2	CHANGE	LIBRARY POSTAGE	17.03	94.40	208739	6/23/21
	00022-2021	CHASE	ONLINE MARKETING RESOURCE	78.00		208740	6/23/21
	06232021	CHASE	SUMMER READING SUPPLIES	72.76		208740	6/23/21
Lib	06232021A	CHASE	MARKETING PROGRAM	24.00		208740	6/23/21
	1089521	CHASE	GAMING PROGRAM	64.99		208740	6/23/21
	235282	CHASE	SRP YOUTH EDUCATION	75.00		208740	6/23/21
	25898	CHASE	VIRTUAL TUTORIAL-TEEN SRP	41.40		208740	6/23/21
	57851334	CHASE	ONLINE MARKETING TOOL	51.36		208740	6/23/21
	57995692	CHASE		51.36		208740	6/23/21
	INV89136141	CHASE	ZOOM SUBSCRIPTION	148.45		208740	6/23/21
	INV89136370	CHASE	ZOOM FEE UPGRADE	299.80	804.40	208740	6/23/21

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
Lib-23228	CHASE DECALS	DECALS-LIB STAIRWELL		3,470.96	208741	6/23/21
FY End 11749	CHEM-SULT INC	POLYMER		6,693.00	208791	6/28/21
06282021	CHUCK BEHM	PIANO DONATION		1,000.00	208792	6/28/21
Lib-062421	CITY OF BOONE	UTILITIES-HIRTA		30.20	208773	6/24/21
07012021	CLAY CORNELIS	CLOTHING ALLOWANCE		127.50	208926	7/01/21
07012021	CODY BUNNING	CLOTHING ALLOWANCE		300.00	208927	7/01/21
07012021	COLE HILSABECK	CLOTHING ALLOWANCE		800.00	208928	7/01/21
07012021	CORY ROSE	CLOTHING ALLOWANCE		800.00	208929	7/01/21
07012021	CORY STONEBURNER	CLOTHING/BOOT ALLOWANCE		312.50	208960	7/01/21
Lib-07012021	COSTUMES SPECIALISTS	SLP CURIOUS GEORGE COSTUME		140.00	208913	6/29/21
FY End 08594EAE	MULTI SERVICE TECHNOLOGY	ROADHOG MIC/DYNAMIC MIC-POOL	73.99		208793	6/28/21
F25780CO	MULTI SERVICE TECHNOLOGY	AMPLIFIER-POOL	778.00	851.99	208793	6/28/21
1st-07012021	CURTIS MORAN	CLOTHING/BOOT ALLOWANCE		312.50	208961	7/01/21
FY End 06282021	DANIEL & LINDSEY LYNCH	1121 SOUTHVIEW CT HOUSING		5,000.00	208794	6/28/21
07012021	DANIEL LYNCH	CLOTHING ALLOWANCE		800.00	208930	7/01/21
07012021	DAVID MOORE	CLOTHING/BOOT ALLOWANCE		312.50	208931	7/01/21
07012021	DAVID MOZENA	CLOTHING/BOOT ALLOWANCE		312.50	208932	7/01/21
07012021	DEAN TAYLOR	CLOTHING/BOOT ALLOWANCE		312.50	208962	7/01/21
6954433	DEMCO	DRAWSTRING BAGS	54.65		208742	6/23/21
6966820	DEMCO	AIR PURIFIER/AIR FILTER	5,373.56	5,428.21	208914	6/29/21
Lib-06232021	DES MOINES REGISTER	NEWSPAPER SUBSCRIPTION		597.49	208743	6/23/21
06232021	DIANA HELMER	DVD		20.00	208744	6/23/21
23661	DICK'S FIRE EXTINGUISHER SVC	FIRE EXTINGUISHER INSPECTION	156.60		208745	6/23/21
FY End 23763	DICK'S FIRE EXTINGUISHER SVC	FIRE EXTINGUISHER INSPECT-WW	762.10	918.70	208795	6/28/21
1st-07012021	DONALD ZEHNER	CLOTHING ALLOWANCE		300.00	208933	7/01/21
FY End 301589	THE DOOR & FENCE STORE	FENCE-FRC		8,059.00	208796	6/28/21
1st-07012021	EDWARD HIGGINS	CAR ALLOWANCE-JULY		250.00	208934	7/01/21
FY End 572692	ELECTRIC WHOLESALE CO	SECURITY LIGHTS-POOL		218.39	208797	6/28/21
1st-07012021	ETHAN BAILEY	CLOTHING ALLOWANCE		800.00	208935	7/01/21
06242021	FARNHAM AVIATION SERVICES LLC	CONTRACT SERVICES-JUNE	4,315.00		208774	6/24/21
62421	FARNHAM AVIATION SERVICES LLC	REIMB PHONE/INTERNET-APRIL	72.77		208774	6/24/21
62421B	FARNHAM AVIATION SERVICES LLC	REIMB PHONE/INTERNET-MAY	72.77		208774	6/24/21
Lib-7527	FARNHAM AVIATION SERVICES LLC	FUEL-BLACK TUG	36.00	4,496.54	208774	6/24/21
71371	FOTH INFRASTRUCTURE	IND PARK RD		610.08	208798	6/28/21
018475591	GALLS PARENT HOLDING LLC	HAT-PACENKA		39.10	208799	6/28/21
40126	MELYX INC/XYLEM LTD	MULCH-PARKS PLAY STRUCTURES		1,995.00	208800	6/28/21
9927535113	WW GRAINGER INC	BLOWER DUCTING	159.36		208801	6/28/21
9927535121	WW GRAINGER INC	SAFETY EQUIPMENT	8,948.55	9,107.91	208801	6/28/21
169135	GRAYMONT WESTERN LIME INC	LIME		4,497.24	208802	6/28/21
12496852	HACH COMPANY	CALIBRATION SET		451.00	208803	6/28/21
Lib-10508	HALL & MARTIN LANDSCAPING	LANDSCAPING-LIBRARY		5,570.00	208746	6/23/21
4956014	HAWKINS WATER TREATMENT GROUP	CHEMICALS		5,372.96	208804	6/28/21
114973	HIWAY TRUCK EQUIPMENT INC	GREASE SPRAY		24.76	208805	6/28/21
041484	IA EMERGENCY VEHICLE INSTALLS	NEW PATROL CAR EQUIPMENT		4,587.64	208806	6/28/21
318316	IA LAW ENFORCEMENT ACADEMY	TRAINING-FRAZIER/HIKIJI/LYNCH/		300.00	208807	6/28/21
231795	IOWA ONE CALL	LOCATES		208.20	208808	6/28/21
52775147	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.10		208751	6/23/21
52775148	INGRAM BOOK COMPANY	LIBRARY MATERIALS	36.18		208751	6/23/21
52775149	INGRAM BOOK COMPANY	LIBRARY MATERIALS	17.25		208751	6/23/21
52775150	INGRAM BOOK COMPANY	LIBRARY MATERIALS	126.31		208751	6/23/21
52775151	INGRAM BOOK COMPANY	LIBRARY MATERIALS	14.38		208751	6/23/21
52775152	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.92		208751	6/23/21
52775153	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.34		208751	6/23/21
52775154	INGRAM BOOK COMPANY	LIBRARY MATERIALS	20.66		208751	6/23/21

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
52905751	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.65		208751	6/23/21
52905752	INGRAM BOOK COMPANY	LIBRARY MATERIALS	265.59		208751	6/23/21
52905753	INGRAM BOOK COMPANY	LIBRARY MATERIALS	138.56		208751	6/23/21
52905754	INGRAM BOOK COMPANY	LIBRARY MATERIALS	4.59		208751	6/23/21
52905755	INGRAM BOOK COMPANY	LIBRARY MATERIALS	7.79		208751	6/23/21
52905756	INGRAM BOOK COMPANY	LIBRARY MATERIALS	18.39		208751	6/23/21
52952204	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.68		208751	6/23/21
52952205	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.67		208751	6/23/21
52952206	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.67		208751	6/23/21
52952207	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.92		208751	6/23/21
52952208	INGRAM BOOK COMPANY	LIBRARY MATERIALS	79.90		208751	6/23/21
52952209	INGRAM BOOK COMPANY	LIBRARY MATERIALS	48.79		208751	6/23/21
52952210	INGRAM BOOK COMPANY	LIBRARY MATERIALS	82.46		208751	6/23/21
52952211	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.34		208751	6/23/21
52952212	INGRAM BOOK COMPANY	LIBRARY MATERIALS	33.75		208751	6/23/21
52995376	INGRAM BOOK COMPANY	LIBRARY MATERIALS	8.61		208751	6/23/21
52995377	INGRAM BOOK COMPANY	LIBRARY MATERIALS	47.91		208751	6/23/21
52995378	INGRAM BOOK COMPANY	LIBRARY MATERIALS	225.12		208751	6/23/21
52995379	INGRAM BOOK COMPANY	LIBRARY MATERIALS	156.82		208751	6/23/21
52995380	INGRAM BOOK COMPANY	LIBRARY MATERIALS	21.58		208751	6/23/21
53014662	INGRAM BOOK COMPANY	LIBRARY MATERIALS	15.53		208751	6/23/21
53014663	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.34		208751	6/23/21
53014664	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.19		208751	6/23/21
53014665	INGRAM BOOK COMPANY	LIBRARY MATERIALS	7.47		208751	6/23/21
53034864	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.09		208751	6/23/21
53034865	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.67		208751	6/23/21
53034866	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.10		208751	6/23/21
53034867	INGRAM BOOK COMPANY	LIBRARY MATERIALS	17.82		208751	6/23/21
53034868	INGRAM BOOK COMPANY	LIBRARY MATERIALS	21.99		208751	6/23/21
53034869	INGRAM BOOK COMPANY	LIBRARY MATERIALS	19.20		208751	6/23/21
53034870	INGRAM BOOK COMPANY	LIBRARY MATERIALS	90.15		208751	6/23/21
53034871	INGRAM BOOK COMPANY	LIBRARY MATERIALS	31.63		208751	6/23/21
53034872	INGRAM BOOK COMPANY	LIBRARY MATERIALS	42.50		208751	6/23/21
53061775	INGRAM BOOK COMPANY	LIBRARY MATERIALS	384.37		208751	6/23/21
53192563	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.68		208751	6/23/21
53192564	INGRAM BOOK COMPANY	LIBRARY MATERIALS	50.60		208751	6/23/21
53192565	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.67		208751	6/23/21
53192566	INGRAM BOOK COMPANY	LIBRARY MATERIALS	9.77		208751	6/23/21
53192567	INGRAM BOOK COMPANY	LIBRARY MATERIALS	37.31		208751	6/23/21
53192568	INGRAM BOOK COMPANY	LIBRARY MATERIALS	32.16		208751	6/23/21
53192569	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.92		208751	6/23/21
53192570	INGRAM BOOK COMPANY	LIBRARY MATERIALS	151.59		208751	6/23/21
53192571	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.67		208751	6/23/21
53192572	INGRAM BOOK COMPANY	LIBRARY MATERIALS	855.36		208751	6/23/21
53192573	INGRAM BOOK COMPANY	LIBRARY MATERIALS	50.00		208751	6/23/21
53243880	INGRAM BOOK COMPANY	LIBRARY MATERIALS	230.97		208917	6/29/21
53243881	INGRAM BOOK COMPANY	LIBRARY MATERIALS	15.52		208917	6/29/21
53243882	INGRAM BOOK COMPANY	LIBRARY MATERIALS	47.71		208917	6/29/21
53243884	INGRAM BOOK COMPANY	LIBRARY MATERIALS	28.15		208917	6/29/21
53300987	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.09		208917	6/29/21
53300988	INGRAM BOOK COMPANY	LIBRARY MATERIALS	21.99		208917	6/29/21
53300989	INGRAM BOOK COMPANY	LIBRARY MATERIALS	29.86		208917	6/29/21
53300990	INGRAM BOOK COMPANY	LIBRARY MATERIALS	25.64		208917	6/29/21
53300991	INGRAM BOOK COMPANY	LIBRARY MATERIALS	5.74		208917	6/29/21

Utility Dep Refunds: 6/23/2021- 7/06/2021

Vendor Checks: 6/23/2021- 7/06/2021

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
53300992	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.68		208917	6/29/21
53300993	INGRAM BOOK COMPANY	LIBRARY MATERIALS	11.97		208917	6/29/21
53300994	INGRAM BOOK COMPANY	LIBRARY MATERIALS	31.61		208917	6/29/21
53300995	INGRAM BOOK COMPANY	LIBRARY MATERIALS	38.48		208917	6/29/21
53300996	INGRAM BOOK COMPANY	LIBRARY MATERIALS	12.34		208917	6/29/21
53300997	INGRAM BOOK COMPANY	LIBRARY MATERIALS	29.99		208917	6/29/21
53311323	INGRAM BOOK COMPANY	LIBRARY MATERIALS	5.99		208917	6/29/21
53311324	INGRAM BOOK COMPANY	LIBRARY MATERIALS	31.60		208917	6/29/21
53311325	INGRAM BOOK COMPANY	LIBRARY MATERIALS	5.17		208917	6/29/21
53311326	INGRAM BOOK COMPANY	LIBRARY MATERIALS	21.99		208917	6/29/21
53311327	INGRAM BOOK COMPANY	LIBRARY MATERIALS	5.99		208917	6/29/21
53329231	INGRAM BOOK COMPANY	LIBRARY MATERIALS	20.68		208917	6/29/21
53374040	INGRAM BOOK COMPANY	LIBRARY MATERIALS	16.07		208917	6/29/21
53374041	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.19		208917	6/29/21
53374042	INGRAM BOOK COMPANY	LIBRARY MATERIALS	19.54		208917	6/29/21
53374043	INGRAM BOOK COMPANY	LIBRARY MATERIALS	32.20		208917	6/29/21
53374044	INGRAM BOOK COMPANY	LIBRARY MATERIALS	46.53		208917	6/29/21
53374045	INGRAM BOOK COMPANY	LIBRARY MATERIALS	10.34	4,216.74	208917	6/29/21
Air 17225	THE CHILDS GROUP INC	LIABILITY INS-AIRPORT		2,057.00	208775	6/24/21
Lib 1009422	INVENGO AMERICAN CORP	RETURN CHUTE		4,755.50	208752	6/23/21
196975	ILLINOIS LIBRARY ASSOC	IREAD PROGRAM SRP		201.54	208753	6/23/21
01270166	ITSAVVY LLC	COMPUTER	846.00		208754	6/23/21
01271673	ITSAVVY LLC	SURVEILLANCE CAMERAS	240.00		208809	6/28/21
01274303	ITSAVVY LLC	SURVEILLANCE CAMERAS	1,025.00		208809	6/28/21
34524278	ITSAVVY LLC	SURVEILLANCE CAMERA QTY 4	4,380.00	6,491.00	208810	6/28/21
06292021	JAMIE WILLIAMS	MILEAGE REIMBURSEMENT		41.62	208918	6/29/21
07012021	JASON VAZQUEZ	CLOTHING/BOOT ALLOWANCE		312.50	208963	7/01/21
07012021	JAYME CROOK	CLOTHING ALLOWANCE		300.00	208936	7/01/21
07012021	JIM ROBBINS PC	LEGAL SERVICES-JUNE		6,450.48	208937	7/01/21
07012021	JOE SLIGHT	CLOTHING ALLOWANCE		800.00	208938	7/01/21
07012021	JOHN FRANK JR	CLOTHING/BOOT ALLOWANCE		312.50	208964	7/01/21
07012021	JOHN MAYSE	CLOTHING ALLOWANCE		800.00	208939	7/01/21
07012021	JOHN ROUSE	CAR ALLOWANCE-JULY	250.00		208940	7/01/21
FYEnd 47812	JOHN ROUSE	CLOTHING ALLOWANCE	400.00	650.00	208811	6/28/21
07012021	JOHN SLIGHT	CAR ALLOWANCE-JULY		150.00	208941	7/01/21
07012021	JOHN SLOTER	CLOTHING ALLOWANCE		800.00	208942	7/01/21
07012021	JOHN WIEBOLD	CLOTHING ALLOWANCE		800.00	208943	7/01/21
07012021	JOSH EATOCK	CLOTHING/BOOT ALLOWANCE		312.50	208944	7/01/21
07012021	JOSH OLSEN	CLOTHING ALLOWANCE		800.00	208945	7/01/21
Lib 570224	JUNIOR LIBRARY GUILD	LIBRARY MATERIALS	52.65		208755	6/23/21
572390	JUNIOR LIBRARY GUILD	CHILDRENS NONFICTION MATERIALS	52.65	105.30	208919	6/29/21
07012021	JUSTIN ADAMS	CLOTHING ALLOWANCE		300.00	208946	7/01/21
07012021	KARI FROST	CLOTHING ALLOWANCE		75.00	208947	7/01/21
FYEnd 06282021	KENNETH & BETTY SUNNISON	1121 SOUTHVIEW CT HOUSING		6,495.00	208812	6/28/21
1st 07012021	KENT PETERSON	CLOTHING ALLOWANCE		300.00	208948	7/01/21
FYEnd 1E04907	KEYSTONE LABORATORIES INC	LAB TESTING		235.60	208813	6/28/21
687	KRUCK PLUMBING & HEATING	A/C ANNUAL MAINTENANCE	1,100.00		208814	6/28/21
Lib 732	KRUCK PLUMBING & HEATING	GLYCOL TANK REPAIR-LIBRARY	1,407.38		208920	6/29/21
733	KRUCK PLUMBING & HEATING	BOILER PUMP REPAIR-LIBRARY	787.57	3,294.95	208920	6/29/21
06232021	LAURA F KEYES	ADULT PROGRAM		200.00	208756	6/23/21
1st 07012021	LOGAN STURTZ	CLOTHING ALLOWANCE		800.00	208949	7/01/21
FYEnd 06282021	MAJORS CONSTRUCTION	REPAIRS-CURB SOUTH CLINTON ST		350.00	208815	6/28/21
1st 07012021	MARK ELLSBURY	CLOTHING/BOOT ALLOWANCE		312.50	208950	7/01/21
07012021	MARSHALL MOORE	CLOTHING ALLOWANCE		800.00	208951	7/01/21

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
2021-050	ANDREW LYNN MCGILL	COMPUTER SERVICE CONTRACT	1,000.00		208816	6/28/21
2021-051	ANDREW LYNN MCGILL	COMPUTER SERVICE CONTRACT-PD	350.00	1,350.00	208816	6/28/21
44853	MENARDS-AMES	TILE-LIBRARY FLOORING	881.88		208757	6/23/21
45451	MENARDS-AMES	WALL BASE/ADHESIVE	80.98		208921	6/29/21
45451A	MENARDS-AMES		6.58		208921	6/29/21
45530	MENARDS-AMES	VINYL WALLBASE/ADHESIVE	89.62	1,045.90	208921	6/29/21
25201	MID-WEST 3D SOLUTIONS	3D PRINTED MODELS-PRARIE PRJ		300.00	208922	6/29/21
528819	MIDAMERICA BOOKS	CHILDRENS BOOKS		146.65	208758	6/23/21
FYEnd-000235969	MIDWEST QUALITY WHOLESALE	PAPER TOWELS/TRASH CAN LINERS		106.06	208817	6/28/21
1st-07012021	MIKE FRAZIER	CLOTHING ALLOWANCE		800.00	208952	7/01/21
Lib-210012	MOLLY WILKINSON	VIRTUAL COOKING CLASS		335.00	208759	6/23/21
FYEnd-R08464014.0-3	MSA PROFESSIONAL SERVICES	ELEMENTARY SITE STUDY PMT 3		645.00	208818	6/28/21
1st-07012021	NATHAN KESTER	CLOTHING ALLOWANCE		800.00	208953	7/01/21
07012021	NATHAN MACDOUGALL	CLOTHING ALLOWANCE		800.00	208954	7/01/21
FYEnd-IN81773	NEC CLOUD COMMUNICATIONS AMERI	SIP LINE		24.79	208819	6/28/21
Lib-5317	NICHE ACADEMY	ANNUAL SUBSCRIPTION		4,320.00	208760	6/23/21
FYEnd-4393	NORTH RISK PARTNERS LLC	411 MEDICAL CLAIMS	16,421.51		208820	6/28/21
4398	NORTH RISK PARTNERS LLC	411 MEDICAL CLAIMS	70.76	16,492.27	208820	6/28/21
Lib-1000124055	OCLC ONLINE COMPUTER LIBRARY	MONTHLY CATALOGING SUBSCRIPT		685.30	208761	6/23/21
1st-07012021	ONDREA ELMQUIST	CAR ALLOWANCE-JULY		250.00	208955	7/01/21
Lib-0000368	ONE UP GAMES	ONLINE GAME TOURNAMENT		240.00	208762	6/23/21
Man-06242021	OPTUM-UHC FLEX	FLEX CLAIMS		68.99	2064744	6/24/21
FYEnd-12391	LG PLAYGROUND LLC	PARTS-SWINGS		203.80	208821	6/28/21
0572421-IN	THE PENWORTHY COMPANY	LIBRARY MATERIALS		520.99	208763	6/23/21
Lib-14720	QUALITY ONE	CUSTODIAL SERVICES-LIBRARY		1,825.00	208764	6/23/21
16765473	STAPLES INC	LIBRARY SUPPLIES	62.81		208765	6/23/21
16765537	STAPLES INC	LIBRARY SUPPLIES	83.54	146.35	208765	6/23/21
10441	R & W POWER	TRIMMER HEAD-WEED EATER	32.99		208822	6/28/21
10483	R & W POWER	MIX OIL-WEED EATERS	24.30		208822	6/28/21
12163	R & W POWER	REPAIR-WEEDEATER	25.00		208822	6/28/21
12175	R & W POWER	VENT SAWS QTY 2 & 6 CHAINS	3,733.98	3,816.27	208822	6/28/21
2121226-IN	RAY O'HERRON CO INC	SIMULATION GUNS	941.73		208823	6/28/21
2121717-IN	RAY O'HERRON CO INC	SIMULATION TRAINING AMMO	303.73	1,245.46	208823	6/28/21
421369	REDEKER'S	DISPOSAL OF FD BEDS		40.00	208824	6/28/21
21-812-0602	REFLECTIONS GLASS & MIRROR			1,991.82	208766	6/23/21
Lib-06232021	REZMAN GARDENS	ADULT PROGRAM ON PLANTS		50.00	208767	6/23/21
FYEnd-3CI001030	RELIANT FIRE APPARATUS INC	SHOVEL HOLDER	134.22		208825	6/28/21
3CI001039	RELIANT FIRE APPARATUS INC	SEAL HOUSINGS/SLIP TUBE	866.62	1,000.84	208825	6/28/21
1st-07012021	ROBERT JONES	CLOTHING/BOOT ALLOWANCE		312.50	208956	7/01/21
07012021	ROBERT ROBINSON	CLOTHING/BOOT ALLOWANCE		312.50	208965	7/01/21
07012021	RYAN PALMER	CLOTHING ALLOWANCE		800.00	208957	7/01/21
FYEnd-INV-016766	SANDRY FIRE SUPPLY LLC	TURNOUT GEAR		3,543.00	208826	6/28/21
Air-528	SCENIC VALLEY MOWING LLC	MOWING-JUNE		4,500.00	208776	6/24/21
1st-07012021	SCOTT HULL	CLOTHING/BOOT ALLOWANCE		312.50	208966	7/01/21
07012021	SHANE LOVIG	CLOTHING ALLOWANCE		300.00	208958	7/01/21
3479195219	STAPLES INC	PD OFFICE SUPPLY	82.78		208827	6/28/21
3479448952	STAPLES INC	PARK OFFICE SUPPLIES	59.79	142.57	208827	6/28/21
PINV909997	STOREY KENWORTHY	PD OFFICE SUPPLIES	22.19		208828	6/28/21
PINV910003	STOREY KENWORTHY	PD OFFICE SUPPLIES	31.14	53.33	208828	6/28/21
Lib-06292021	TOBY SMITH	PEST CONTROL-LIBRARY		85.00	208923	6/29/21
Air-508829	TOM WALTERS COMPANY	WASTE REMOVAL-HIRTA		20.00	208777	6/24/21
1st-07012021	TRAVIS BAKER	CLOTHING/BOOT ALLOWANCE		312.50	208967	7/01/21
FYEnd-150619	VAN DIEST SUPPLY COMPANY	BUCCANEER-WEED CONTROL-PARKS	380.00		208829	6/28/21
150620	VAN DIEST SUPPLY COMPANY	HERBICIDE-PARKS	230.00	610.00	208829	6/28/21

INVOICE#	VENDOR NAME	INVOICE DESCRIPTION	INVOICE AMT	VENDOR TOTAL	CHECK#	CHECK DATE
5223981	VAN-WALL EQUIPMENT INC	PARTS-DEERE MOWER		152.41	208830	6/28/21
9881950744	CELLCO PARTNERSHIP	WIRELESS SERVICE-FIRE		207.66	208831	6/28/21
00203	CAPITAL ONE	FD CLEANING SUPPLIES	28.94		208833	6/28/21
00752	CAPITAL ONE	PRINTER INK-PARK	20.89		208833	6/28/21
00815	CAPITAL ONE	CONCESSION SUPPLIES	19.96		208833	6/28/21
01292	CAPITAL ONE	ADULT MOVIES-LIBRARY	19.96		208833	6/28/21
01681	CAPITAL ONE	CONCESSION SUPPLIES	69.64		208833	6/28/21
04643	CAPITAL ONE	PRINTER INK-METER VAN	35.89		208833	6/28/21
06782	CAPITAL ONE	CLEANING SUPPLIES-PW	12.26		208833	6/28/21
09410	CAPITAL ONE	SUNSCREEN	28.89		208833	6/28/21
09453	CAPITAL ONE	POOL SUPPLIES	85.67		208833	6/28/21
09564	CAPITAL ONE	POOL PHONE	24.48		208833	6/28/21
1796	CAPITAL ONE	CONCESSION SUPPLIES	232.54		208833	6/28/21
2709	CAPITAL ONE	CONCESSION SUPPLIES	254.94		208833	6/28/21
2771	CAPITAL ONE	CONCESSION SUPPLIES	596.29		208833	6/28/21
2777	CAPITAL ONE	CONCESSION SUPPLIES	166.88	1,597.23	208833	6/28/21
Lib -15K83064	WALTERS SANITARY SERVICE INC	WASTE REMOVAL-LIB	59.61		208768	6/23/21
FYEnd -16K00143	WALTERS SANITARY SERVICE INC	WASTE REMOVAL-CITY HALL	61.08	120.69	208834	6/28/21
1st 07012021	WARREN EHLERT	CLOTHING/BOOT ALLOWANCE		312.50	208968	7/01/21
07012021	WAYLON ANDREWS	CLOTHING/BOOT ALLOWANCE		312.50	208969	7/01/21
FYEnd -43425	WHKS & CO	BRIDGE EVALUATION		2,464.51	208835	6/28/21
1st 07012021	WILLIAM SKARE	CAR ALLOWANCE-JULY		300.00	208959	7/01/21
06282021	WINDSTREAM	PHONE SERVICE-PD		2,029.90	208837	6/28/21
FYEnd 766	TYLER WISECUP	DEMOLITION 422 MARION ST		9,500.00	208838	6/28/21
20210628	WINNING SOLUTIONS INC	NEW SERVER CHANGE OVER		765.00	208839	6/28/21
1st 07012021	ZACKARY MILLER	CLOTHING/BOOT ALLOWANCE		312.50	208970	7/01/21
Lib -16253A	ZOOBEAN INC	4/2021-4/2022 ONLINE RESOURCE		895.00	208769	6/23/21
Accounts Payable Total				263,679.97		

Utility Refund Checks

Refund Checks Total

Report Total

263,679.97

Vision Bank
Iowa Workforce
Development
Optum-UHC Flex

NSF-D Fishback
2nd Qtr. 2021
Flex Claims

70.00
8963.75
5619.76
278,333.48

Paid Bills

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	PAID AMT	CHECK NO		
06182021	1	365 VISION BANK 001	6/28/21	NSF-D. FISHBACK	70.00	2064747E		
				** VENDOR TOTAL **	70.00	70.00	.00	70.00
		891 IOWA WORKFORCE DEVELOPMENT						
06212021	1	113	6/28/21	2ND QTR 2021	986.01	2064746E		
06212021	2	113	6/28/21	2ND QTR 2021	986.01	2064746E		
06212021	3	113	6/28/21	2ND QTR 2021	89.64	2064746E		
06212021	4	113	6/28/21	2ND QTR 2021	1792.75	2064746E		
06212021	5	113	6/28/21	2ND QTR 2021	448.19	2064746E		
06212021	6	113	6/28/21	2ND QTR 2021	1792.75	2064746E		
06212021	7	113	6/28/21	2ND QTR 2021	448.19	2064746E		
06212021	8	113	6/28/21	2ND QTR 2021	268.91	2064746E		
06212021	9	113	6/28/21	2ND QTR 2021	448.19	2064746E		
06212021	10	113	6/28/21	2ND QTR 2021	896.38	2064746E		
06212021	11	610	6/28/21	2ND QTR 2021	358.55	2064746E		
06212021	12	600	6/28/21	2ND QTR 2021	448.18	2064746E		
				** TOTAL **	8963.75	8963.75	.00	8963.75
				** VENDOR TOTAL **	8963.75	8963.75	.00	8963.75
		4106 OPTUM-UHC FLEX						
06242021	1	0149	6/28/21	FLEX CLAIMS	68.99	2064744E		
06172021	1	0149	6/28/21	FLEX CLAIMS	5619.76	2064745E		
				** VENDOR TOTAL **	5688.75	5688.75	.00	5688.75
				** E-PAYMENT TOTAL **				14722.50
				** GRAND TOTAL **	14722.50	14722.50	.00	14722.50

manual checks

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
				18 ACCO UNLIMITED CORP			
0213037-IN	1	001	6/28/2021	CHEMICALS	863.30	001-435-6501	CHEMICALS
0213052-IN	1	001	6/28/2021	CHEMICALS	463.15	001-435-6501	CHEMICALS
0213196-IN	1	001	6/28/2021	WATER TESTING SUPPLIES	169.59	001-435-6599	SUPPLIES
0213445-IN	1	001	6/28/2021	CHEMICALS	210.00	001-435-6501	CHEMICALS
0213540-IN	1	001	6/28/2021	CHEMICALS	1,084.85	001-435-6501	CHEMICALS
0213548-IN	1	001	6/28/2021	ACID TANK/PARTS	925.11	001-435-6350	REPAIRS
0213757-IN	1	001	6/28/2021	UNDERWATER LIGHTS	562.55	001-435-6350	REPAIRS
				** VENDOR TOTAL **	4,278.55	.00	4,278.55
				45 ALLIANT ENERGY			
06282021A	1	110	6/28/2021	UTILITIES-TRAFFIC LIGHTS	37.62	110-240-6371	TRAFFIC UTILITIES
				STORY ST & 6TH ST			
06282021A	2	110	6/28/2021	UTILITIES-STREET LIGHTS	103.07	110-230-6371	STREET LIGHTING
				8TH ST ALLEY			
06282021A	3	110	6/28/2021	UTILITIES-STREET LIGHTS	8.74	110-230-6371	STREET LIGHTING
				1918 LINN ST			
06282021A	4	110	6/28/2021	UTILITIES-STREET LIGHTS	94.86	110-230-6371	STREET LIGHTING
				1930 S STORY			
06282021A	5	001	6/28/2021	UTILITIES-SIRENS	19.07	001-620-6371	UTILITIES/SIRENS/CIVIL DF
				211 MAIN ST			
06282021A	6	610	6/28/2021	UTILITIES-SEWER	227.85	610-816-6371	UTILITIES
				1494 220TH ST LIFT STATION			
				** TOTAL **	491.21	.00	491.21
06282021B	1	001	6/28/2021	UTILITIES-SIRENS	19.34	001-620-6371	UTILITIES/SIRENS/CIVIL DF
06282021B	2	600	6/28/2021	UTILITIES-WATER	33.24	600-811-6371	UTILITIES
06282021B	3	610	6/28/2021	UTILITIES-SEWER	22.29	610-816-6371	UTILITIES
				** TOTAL **	36.19	.00	36.19
06282021C	1	110	6/28/2021	UTILITIES-TRAFFIC LIGHTS	95.29	110-240-6371	TRAFFIC UTILITIES
06282021C	2	110	6/28/2021	UTILITIES-STREET LIGHTS	11.29	110-230-6371	STREET LIGHTING
06282021C	3	001	6/28/2021	UTILITIES-SIRENS	56.47	001-620-6371	UTILITIES/SIRENS/CIVIL DF
06282021C	4	600	6/28/2021	UTILITIES-WATER	257.14	600-811-6371	UTILITIES
06282021C	5	610	6/28/2021	UTILITIES-SEWER	766.67	610-816-6371	UTILITIES
06282021C	6	730	6/28/2021	UTILITIES-FRC	2,348.20	730-899-6371	UTILITIES/FAMILY RESOURCE
				** TOTAL **	3,535.06	.00	3,535.06
				** VENDOR TOTAL **	4,062.46	.00	4,062.46
				90 TA ONE CALL			
231795	1	600	6/28/2021	LOCATES	104.10	600-810-6599	MISCELLANEOUS
231795	2	610	6/28/2021	LOCATES	104.10	610-815-6599	MISC REFUNDS/NSF FEE
				** TOTAL **	208.20	.00	208.20
				** VENDOR TOTAL **	208.20	.00	208.20

FY End
Council Bills

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
111470	1	740	6/28/2021	256 BROWN SUPPLY COMPANY MATERIALS-STORM SEWER INTAKES	1,500.00	740-865-6324	DRAINAGE IMPROVEMENTS
				** VENDOR TOTAL **	1,500.00	.00	1,500.00
301589	1	305	6/28/2021	513 DOOR & FENCE STORE INC FENCE-FRC	8,059.00	305-899-6310	FRC BUILDING REPAIR
				** VENDOR TOTAL **	8,059.00	.00	8,059.00
572692	1	001	6/28/2021	562 ELECTRIC WHOLESALE COMPAN SECURITY LIGHTS-POOL	218.39	001-435-6350	REPAIRS
				** VENDOR TOTAL **	218.39	.00	218.39
4956014	1	600	6/28/2021	595 HAWKINS WATER TREATMENT G CHEMICALS	5,372.96	600-811-6501	CHEMICALS
				** VENDOR TOTAL **	5,372.96	.00	5,372.96
018475591	1	001	6/28/2021	645 GALLS INC HAT-PACENKA	39.10	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	39.10	.00	39.10
9927535113	1	600	6/28/2021	679 GRAINGER BLOWER DUCTING	159.36	600-811-6310	BUILDING & GROUNDS
9927535121	1	600	6/28/2021	SAFETY EQUIPMENT	8,948.55	600-811-6504	EQUIPMENT
				** VENDOR TOTAL **	9,107.91	.00	9,107.91
12496852	1	610	6/28/2021	702 HACH COMPANY CALIBRATION SET	451.00	610-816-6505	EQUIPMENT
				** VENDOR TOTAL **	451.00	.00	451.00
318316	1	001	6/28/2021	853 IA LAW ENFORCEMENT ACADEM TRAINING-FRAZIER/HIKIJI/LYNCH/ MACDOUGALL/NAEVE/ROSE	300.00	001-110-6240	TRAVEL/CONF/TRAINING EXP
				** VENDOR TOTAL **	300.00	.00	300.00
1E04907	1	610	6/28/2021	1022 KEYSTONE LABORATORIES INC LAB TESTING	235.60	610-816-6490	LAB TESTS
				** VENDOR TOTAL **	235.60	.00	235.60
687	1	610	6/28/2021	1049 KRUCK PLUMBING & HEATING A/C ANNUAL MAINTENANCE	1,100.00	610-816-6310	BUILDING & GROUNDS
				** VENDOR TOTAL **	1,100.00	.00	1,100.00
				1144 MAJORS CONSTRUCTION			

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
06282021	1	110	6/28/2021	1144 MAJORS CONSTRUCTION REPAIRS-CURB SOUTH CLINTON ST	350.00	110-210-6399	REPAIRS-STREET
				** VENDOR TOTAL **	350.00	.00	350.00
2021-050	1	001	6/28/2021	1194 MCGILL COMPUTER SERVICES COMPUTER SERVICE CONTRACT	250.00	001-620-6419	COMPUTER UPDATE/TRAINING
2021-050	2	600	6/28/2021	COMPUTER SERVICE CONTRACT	250.00	600-810-6419	COMPUTER UPDATE
2021-050	3	610	6/28/2021	COMPUTER SERVICE CONTRACT	250.00	610-815-6419	COMPUTER UPDATE
2021-050	4	110	6/28/2021	COMPUTER SERVICE CONTRACT	250.00	110-211-6599	COMPUTER UPDATES
				** TOTAL **	1,000.00	.00	1,000.00
2021-051	1	001	6/28/2021	COMPUTER SERVICE CONTRACT-PD	350.00	001-110-6419	SERVICES & COMPUTER SUPPORT
				** VENDOR TOTAL **	1,350.00	.00	1,350.00
2121226-IN	1	001	6/28/2021	1357 RAY O'HERRON COMPANY INC SIMULATION GUNS	941.73	001-110-6599	POLICE EQUIP/SUPPLIES
2121717-IN	1	001	6/28/2021	SIMULATION TRAINING AMMO	303.73	001-110-6599	POLICE EQUIP/SUPPLIES
				** VENDOR TOTAL **	1,245.46	.00	1,245.46
12391	1	001	6/28/2021	1371 OUTDOOR RECREATION PRODUC PARTS-SWINGS	203.80	001-430-6321	BUILDINGS & GROUNDS
				** VENDOR TOTAL **	203.80	.00	203.80
421369	1	001	6/28/2021	1482 REDEKERS DISPOSAL OF FD BEDS	40.00	001-150-6310	BUILDING MAINTENANCE
				** VENDOR TOTAL **	40.00	.00	40.00
10441	1	110	6/28/2021	1552 R & W POWER TRIMMER HEAD-WEED EATER	32.99	110-210-6350	REPAIRS-EQUIP/MECHANIC
10483	1	110	6/28/2021	MIX OIL-WEED EATERS	24.30	110-210-6599	SUPPLIES
12163	1	110	6/28/2021	REPAIR-WEEDEATER	25.00	110-210-6350	REPAIRS-EQUIP/MECHANIC
12175	1	001	6/28/2021	VENT SAWS QTY 2 & 6 CHAINS	2,739.94	001-150-6504	EQUIPMENT
12175	2	121	6/28/2021	VENT SAWS QTY 2 & 6 CHAINS	994.04	121-150-6504	FIRE/MISC
				** TOTAL **	3,733.98	.00	3,733.98
				** VENDOR TOTAL **	3,816.27	.00	3,816.27
150619	1	001	6/28/2021	1813 VAN DIEST SUPPLY COMPANY BUCCANEER-WEED CONTROL-PARKS	380.00	001-430-6321	BUILDINGS & GROUNDS
150620	1	001	6/28/2021	HERBICIDE-PARKS	230.00	001-430-6321	BUILDINGS & GROUNDS
				** VENDOR TOTAL **	610.00	.00	610.00
				1817 VAN WALL EQUIPMENT INC			

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
5223981	1	001	6/28/2021	1817 VAN WALL EQUIPMENT INC PARTS-DEERE MOWER	152.41	001-430-6350	REPAIRS/EQUIPMENT MAINT
				** VENDOR TOTAL **	152.41	.00	152.41
9881950744	1	001	6/28/2021	1822 VERIZON WIRELESS WIRELESS SERVICE-FIRE	187.10	001-150-6373	TELEPHONE,RADIO REPAIR
9881950744	2	001	6/28/2021	WIRELESS SERVICE-RENTAL	20.56	001-180-6373	TELEPHONE,RADIO,PAGERS
				** TOTAL **	207.66	.00	207.66
				** VENDOR TOTAL **	207.66	.00	207.66
16K00143	1	001	6/28/2021	1848 WALTERS SANITARY SERVICE WASTE REMOVAL-CITY HALL	61.08	001-650-6371	UTILITIES
				** VENDOR TOTAL **	61.08	.00	61.08
10090493	1	740	6/28/2021	1955 CENTRAL IA BUILDING SUPPL PIPING QTY 2	324.54	740-865-6324	DRAINAGE IMPROVEMENTS
				** VENDOR TOTAL **	324.54	.00	324.54
PINV909997	1	001	6/28/2021	2712 STOREY KENWORTHY PD OFFICE SUPPLIES	22.19	001-110-6506	SUPPLIES/OFFICE
PINV910003	1	001	6/28/2021	PD OFFICE SUPPLIES	31.14	001-110-6506	SUPPLIES/OFFICE
				** VENDOR TOTAL **	53.33	.00	53.33
11749	1	610	6/28/2021	2771 CHEM-SULT INC POLYMER	6,693.00	610-816-6501	CHEMICALS
				** VENDOR TOTAL **	6,693.00	.00	6,693.00
06282021	1	001	6/28/2021	2788 CENTRAL IA EXPO TOURISM SERVICES	10,000.00	001-520-6651	ECONOMIC DEVELOPMENT
				** VENDOR TOTAL **	10,000.00	.00	10,000.00
71371	1	368	6/28/2021	2867 FOTH ENGINEERING ALLIANCE IND PARK RD	610.08	368-750-6406	IND PARK 2018 ENGINEERING
				** VENDOR TOTAL **	610.08	.00	610.08
06282021	1	001	6/28/2021	2887 BOONE DAY BREAKERS KIWANI APRIL-JUNE 2021 DUES-ADAMS	85.00	001-150-6240	TRAVEL/CONF/TRAINING EXP
06282021A	1	001	6/28/2021	APRIL-JUNE 2021 DUES-SKARE	85.00	001-520-6240	CONF/CAR ALLOW
				** VENDOR TOTAL **	170.00	.00	170.00
				2910 JOHN ROUSE			

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
47812	1	001	2910 JOHN ROUSE 6/28/2021	CLOTHING ALLOWANCE	400.00	001-450-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	400.00	.00	400.00
40126	1	001	2943 GOLDEN VALLEY HARDSCAPES 6/28/2021	MULCH-PARKS PLAY STRUCTURES	1,995.00	001-430-6321	BUILDINGS & GROUNDS
				** VENDOR TOTAL **	1,995.00	.00	1,995.00
43425	1	388	3051 WHKS & CO 6/28/2021	BRIDGE EVALUATION	2,464.51	388-750-6490	UV DISINFECTION-CONST ENGINEER
				** VENDOR TOTAL **	2,464.51	.00	2,464.51
06282021	1	001	3283 WINDSTREAM 6/28/2021	PHONE SERVICE-ADMIN	150.31	001-620-6373	TELEPHONE
06282021	2	600	6/28/2021	PHONE SERVICE-ADMIN	150.31	600-811-6373	TELEPHONE
06282021	3	610	6/28/2021	PHONE SERVICE-ADMIN	150.31	610-816-6373	TELEPHONE
06282021	4	110	6/28/2021	PHONE SERVICE-ADMIN	150.31	110-211-6373	TELEPHONE
06282021	5	001	6/28/2021	PHONE SERVICE-BLDG OFFICIAL	48.33	001-170-6373	TELEPHONE
06282021	6	001	6/28/2021	PHONE SERVICE-CEMETERY	55.02	001-450-6373	TELEPHONE
06282021	7	001	6/28/2021	PHONE SERVICE-FIRE	90.13	001-150-6373	TELEPHONE,RADIO REPAIR
06282021	8	001	6/28/2021	PHONE SERVICE-LIBRARY	198.57	001-410-6373	TELEPHONE
06282021	9	001	6/28/2021	PHONE SERVICE-PARK	99.10	001-430-6373	TELEPHONE
06282021	10	001	6/28/2021	PHONE SERVICE-PD	316.20	001-110-6373	TELEPHONE
06282021	11	001	6/28/2021	PHONE SERVICE-POOL	48.33	001-435-6373	TELEPHONE
06282021	12	110	6/28/2021	PHONE SERVICE-PW	182.27	110-211-6373	TELEPHONE
06282021	13	610	6/28/2021	PHONE SERVICE-SEWER	177.47	610-816-6373	TELEPHONE
06282021	14	600	6/28/2021	PHONE SERVICE-WATER	164.92	600-811-6373	TELEPHONE
06282021	15	001	6/28/2021	PHONE SERVICE-ENGINEERING	12.08	001-620-6373	TELEPHONE
06282021	16	600	6/28/2021	PHONE SERVICE-ENGINEERING	12.08	600-811-6373	TELEPHONE
06282021	17	610	6/28/2021	PHONE SERVICE-ENGINEERING	12.08	610-816-6373	TELEPHONE
06282021	18	110	6/28/2021	PHONE SERVICE-ENGINEERING	12.08	110-211-6373	TELEPHONE
				** TOTAL **	2,029.90	.00	2,029.90
				** VENDOR TOTAL **	2,029.90	.00	2,029.90
3CI001030	1	001	3304 RELIANT FIRE APPARATUS 6/28/2021	SHOVEL HOLDER	134.22	001-150-6504	EQUIPMENT
3CI001039	1	001	6/28/2021	SEAL HOUSINGS/SLIP TUBE	866.62	001-150-6332	REPAIRS
				** VENDOR TOTAL **	1,000.84	.00	1,000.84
4247	1	001	3319 ALEX AIR APPARATUS INC 6/28/2021	SERVICE-SCBA COMPRESSOR/ AIR QUALITY TEST	885.40	001-150-6332	REPAIRS
				** VENDOR TOTAL **	885.40	.00	885.40
			3523 WISECUP TRUCKING				

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
766	1	307	6/28/2021	3523 WISECUP TRUCKING DEMOLITION 422 MARION ST	9,500.00	307-750-6751	LOST DEMOLITION
				** VENDOR TOTAL **	9,500.00	.00	9,500.00
000235969	1	001	6/28/2021	3661 MIDWEST QUALITY WHOLSALE PAPER TOWELS/TRASH CAN LINERS	106.06	001-150-6599	MISC/SUPPLIES
				** VENDOR TOTAL **	106.06	.00	106.06
H14973	1	110	6/28/2021	3750 HIWAY TRUCK EQUIPMENT INC GREASE SPRAY	24.76	110-210-6599	SUPPLIES
				** VENDOR TOTAL **	24.76	.00	24.76
3479195219	1	001	6/28/2021	3779 STAPLES ADVANTAGE PD OFFICE SUPPLY	82.78	001-110-6506	SUPPLIES/OFFICE
3479448952	1	001	6/28/2021	PARK OFFICE SUPPLIES	59.79	001-430-6599	SUPPLIES
				** VENDOR TOTAL **	142.57	.00	142.57
23763	1	610	6/28/2021	3841 DICK'S FIRE EXTINGUISHERS FIRE EXTINGUISHER INSPECT-WW	762.10	610-816-6310	BUILDING & GROUNDS
				** VENDOR TOTAL **	762.10	.00	762.10
631616	1	600	6/28/2021	3871 CENTRAL IA READY MIX MATERIALS-FIRE HYDRANT REPAIRS 10TH & GREENE ST	1,720.00	600-812-6350	MAIN & VALVE WORK
632138	1	110	6/28/2021	MATERIALS-STREET REPAIR 7TH & CEDAR	847.00	110-210-6399	REPAIRS-STREET
633494	1	740	6/28/2021	MATERIALS-STORM SEWER REPAIRS 18TH & GREENE ST	1,494.00	740-865-6324	DRAINAGE IMPROVEMENTS
633683	1	740	6/28/2021	MATERIALS-STORM SEWER REPAIRS 18TH & GREENE ST	2,158.00	740-865-6324	DRAINAGE IMPROVEMENTS
634025	1	740	6/28/2021	MATERIALS-STORM SEWER REPAIR 18TH & GREENE ST	152.00	740-865-6324	DRAINAGE IMPROVEMENTS
634147	1	740	6/28/2021	MATERIALS-STORM SEWER REPAIR 18TH & GREENE ST	1,577.00	740-865-6324	DRAINAGE IMPROVEMENTS
634971	1	740	6/28/2021	MATERIALS-INTAKE & STORM SEWER IMPROVEMENTS 18TH & GREENE ST	1,328.00	740-865-6324	DRAINAGE IMPROVEMENTS
635547	1	740	6/28/2021	MATERIALS-INTAKE & STORM SEWER IMPROVEMENTS 18TH & GREENE ST	1,660.00	740-865-6324	DRAINAGE IMPROVEMENTS

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE

				3871 CENTRAL IA READY MIX			
636053	1	740	6/28/2021	MATERIALS-INTAKE & STORM SEWER IMPROVEMENTS	971.50	740-865-6324	DRAINAGE IMPROVEMENTS
				** VENDOR TOTAL **	11,907.50	.00	11,907.50
				3996 ITSAVVY LLC			
01271673	1	167	6/28/2021	SURVEILLANCE CAMERAS MOUNTING EQUIPMENT	240.00	167-110-6499	MISC CONTRACTS
01274303	1	167	6/28/2021	SURVEILLANCE CAMERAS MOUNTING EQUIPMENT	1,025.00	167-110-6499	MISC CONTRACTS
3452427B	1	121	6/28/2021	SURVEILLANCE CAMERA QTY 4	4,263.00	121-110-6504	POLICE/MISC
3452427B	2	167	6/28/2021	SURVEILLANCE CAMERA QTY 4	117.00	167-110-6499	MISC CONTRACTS
				** TOTAL **	4,380.00	.00	4,380.00
				** VENDOR TOTAL **	5,645.00	.00	5,645.00
				4002 BORDER STATES INDUSTRIES			
922191579	1	110	6/28/2021	REPLACEMENT STREET LIGHTS	1,778.10	110-240-6350	TRAFFIC REPAIRS
				** VENDOR TOTAL **	1,778.10	.00	1,778.10
				4073 AMAZON CAPITAL SERVICES			
14RY-XTWC-6Q1R	LN: 1						
	001		6/28/2021	CONCESSION STAND SUPPLIES	345.27	001-435-6503	POOL CONCESSION SUPPLIES
1LDK-LHKY-41LL	LN: 1						
	001		6/28/2021	OUTDOOR SPEAKERS-POOL	298.00	001-435-6350	REPAIRS
1XFW-64N7-W9G1	LN: 1						
	001		6/28/2021	CONCESSION STAND SUPPLIES	92.28	001-435-6503	POOL CONCESSION SUPPLIES
				** VENDOR TOTAL **	735.55	.00	735.55
				4147 GRAYMONT WESTERN LIME INC			
169135	1	600	6/28/2021	LIME	4,497.24	600-811-6501	CHEMICALS
				** VENDOR TOTAL **	4,497.24	.00	4,497.24
				4212 IA EMERGENCY VEHICLE INST			
041484	1	121	6/28/2021	NEW PATROL CAR EQUIPMENT	4,587.64	121-110-6710	POLICE CARS
				** VENDOR TOTAL **	4,587.64	.00	4,587.64
				4214 SANDRY FIRE SUPPLY LLC			
INV-016766	1	001	6/28/2021	TURNOUT GEAR	3,543.00	001-150-6504	EQUIPMENT
				** VENDOR TOTAL **	3,543.00	.00	3,543.00
				4262 NEC CLOUD COMMUNICATIONS			

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
IN81773	1	001	6/28/2021	4262 NEC CLOUD COMMUNICATIONS SIP LINE	24.79	001-620-6373	TELEPHONE
				** VENDOR TOTAL **	24.79	.00	24.79
4393	1	112	6/28/2021	4264 NORTH RISK PARTNERS LLC 411 MEDICAL CLAIMS	16,421.51	112-930-6150	GROUP INSURANCE PAYMENTS
4398	1	112	6/28/2021	411 MEDICAL CLAIMS	70.76	112-930-6150	GROUP INSURANCE PAYMENTS
				** VENDOR TOTAL **	16,492.27	.00	16,492.27
R08464014.0-3	LN: 1			4272 MSA PROFESSIONAL SERVICES			
	335		6/28/2021	ELEMENTARY SITE STUDY PMT 3	645.00	335-750-6407	ENGINEERING FEES
				** VENDOR TOTAL **	645.00	.00	645.00
00203	1	001	6/28/2021	4284 WALMART FD CLEANING SUPPLIES	28.94	001-150-6599	MISC/SUPPLIES
00752	1	001	6/28/2021	PRINTER INK-PARK	20.89	001-430-6506	OFFICE SUPPLIES
00815	1	001	6/28/2021	CONCESSION SUPPLIES	19.96	001-435-6503	POOL CONCESSION SUPPLIES
01292	1	001	6/28/2021	ADULT MOVIES-LIBRARY	19.96	001-410-6502	BOOKS/LIBRARY MATERIALS
01681	1	001	6/28/2021	CONCESSION SUPPLIES	69.64	001-435-6503	POOL CONCESSION SUPPLIES
04643	1	600	6/28/2021	PRINTER INK-METER VAN	35.89	600-812-6599	SUPPLIES
06782	1	110	6/28/2021	CLEANING SUPPLIES-PW	12.26	110-210-6310	REPAIRS/CITY SHED
09410	1	001	6/28/2021	SUNSCREEN	28.89	001-435-6599	SUPPLIES
09453	1	001	6/28/2021	POOL SUPPLIES	85.67	001-435-6599	SUPPLIES
09564	1	001	6/28/2021	POOL PHONE	24.48	001-435-6599	SUPPLIES
1796	1	001	6/28/2021	CONCESSION SUPPLIES	232.54	001-435-6503	POOL CONCESSION SUPPLIES
2709	1	001	6/28/2021	CONCESSION SUPPLIES	254.94	001-435-6503	POOL CONCESSION SUPPLIES
2771	1	001	6/28/2021	POOL SUPPLIES	103.70	001-435-6599	SUPPLIES
2771	2	001	6/28/2021	CONCESSION SUPPLIES	455.58	001-435-6503	POOL CONCESSION SUPPLIES
2771	3	001	6/28/2021	SAMS CLUBS DUES	100.00	001-620-6210	MEMBERSHIP DUES
2771	4	001	6/28/2021	REWARDS CREDIT	62.99	001-620-6210	MEMBERSHIP DUES
				** TOTAL **	596.29	.00	596.29
2777	1	001	6/28/2021	CONCESSION SUPPLIES	166.88	001-435-6503	POOL CONCESSION SUPPLIES
				** VENDOR TOTAL **	1,597.23	.00	1,597.23

4300 CRUTCHFIELD

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
D8594EAE	1	001	6/28/2021	4300 CRUTCHFIELD ROADHOG MIC/DYNAMIC MIC-POOL	73.99	001-435-6350	REPAIRS
F25780C0	1	001	6/28/2021	AMPLIFIER-POOL	778.00	001-435-6350	REPAIRS
				** VENDOR TOTAL **	851.99	.00	851.99
13758	1	001	6/28/2021	4301 CARSON ELECTRIC INC BULBS/BUCKET TRUCK CHARGE	381.28	001-435-6350	REPAIRS
				** VENDOR TOTAL **	381.28	.00	381.28
1025	1	600	6/28/2021	4302 1 STOP ELECTRICAL & MECHA TEST BACKFLOW PREVENTERS QTY 4	195.00	600-811-6310	BUILDING & GROUNDS
				** VENDOR TOTAL **	195.00	.00	195.00
06282021	1	001	6/28/2021	4303 CHUCK BEHM PIANO DONATION	1,000.00	001-520-6651	ECONOMIC DEVELOPMENT
				** VENDOR TOTAL **	1,000.00	.00	1,000.00
06282021	1	386	6/28/2021	2536 DANIEL & LINDSEY LYNCH 1121 SOUTHVIEW CT HOUSING INCENTIVE	5,000.00	386-750-6440	HOUSING INCENTIVE PROGRAM
				** VENDOR TOTAL **	5,000.00	.00	5,000.00
06282021	1	386	6/28/2021	2537 KENNETH & BETTY SUNNISON 1121 SOUTHVIEW CT HOUSING INCENTIVE	5,000.00	386-750-6440	HOUSING INCENTIVE PROGRAM
06282021	2	001	6/28/2021	1121 SOUTHVIEW CT PERMIT REFUND	1,495.00	001-170-6496	REFUNDS
				** TOTAL **	6,495.00	.00	6,495.00
				** VENDOR TOTAL **	6,495.00	.00	6,495.00
				** GRAND TOTAL **	145,508.53	.00	145,508.53

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE

07012021	1	001	24	JUSTIN ADAMS 7/01/2021 CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	001	511	DONALD ZEHNER 7/01/2021 CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	001	752	EDWARD HIGGINS 7/01/2021 CAR ALLOWANCE-JULY	250.00	001-170-6332	CAR ALLOWANCE
				** VENDOR TOTAL **	250.00	.00	250.00
07012021	1	600	1285	DAVID MOORE 7/01/2021 CLOTHING/BOOT ALLOWANCE	312.50	600-811-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	610	1295	DAVID MOZENA 7/01/2021 CLOTHING/BOOT ALLOWANCE	312.50	610-816-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	001	1407	KENT PETERSON 7/01/2021 CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	001	1631	JOHN SLOTER 7/01/2021 CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001	1940	JOHN MAYSE 7/01/2021 CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001	1988	ONDREA ELMQUIST 7/01/2021 CAR ALLOWANCE-JULY	250.00	001-620-6240	TRAVEL/CONFERENCE EXPENSE
				** VENDOR TOTAL **	250.00	.00	250.00
07012021	1	600	2236	JOSH EATOCK 7/01/2021 CLOTHING/BOOT ALLOWANCE	312.50	600-811-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	610	2295	ROBERT JONES 7/01/2021 CLOTHING/BOOT ALLOWANCE	312.50	610-816-6181	CLOTHING ALLOWANCE

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INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE

				2295 ROBERT JONES			
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	001	7/01/2021	2327 JOHN SLIGHT CAR ALLOWANCE-JULY	150.00	001-620-6240	TRAVEL/CONFERENCE EXPENSE
				** VENDOR TOTAL **	150.00	.00	150.00
07012021	1	001	7/01/2021	2388 NATHAN KESTER CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001	7/01/2021	2399 JOSH OLSEN CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001	7/01/2021	2482 WILLIAM SKARE CAR ALLOWANCE-JULY	100.00	001-620-6240	TRAVEL/CONFERENCE EXPENSE
07012021	2	600	7/01/2021	CAR ALLOWANCE-JULY	50.00	600-810-6240	TRAVEL/CONFERENCE EXPENSE
07012021	3	610	7/01/2021	CAR ALLOWANCE-JULY	50.00	610-815-6240	TRAVEL/CONF ADMIN
07012021	4	110	7/01/2021	CAR ALLOWANCE-JULY	100.00	110-211-6240	TRAVEL/CONFERENCE EXPENSE
				** TOTAL **	300.00	.00	300.00
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	610	7/01/2021	2491 MARK ELLSBURY CLOTHING/BOOT ALLOWANCE	312.50	610-816-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	001	7/01/2021	2696 CORY ROSE CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	110	7/01/2021	2910 JOHN ROUSE CAR ALLOWANCE-JULY	83.33	110-211-6240	TRAVEL/CONFERENCE EXPENSE
07012021	2	600	7/01/2021	CAR ALLOWANCE-JULY	83.33	600-812-6240	TRAVEL/CONFERENCE EXPENSE
07012021	3	610	7/01/2021	CAR ALLOWANCE-JULY	83.34	610-817-6240	TRAVEL/CONFERENCE EXPENSE
				** TOTAL **	250.00	.00	250.00
				** VENDOR TOTAL **	250.00	.00	250.00
07012021	1	001	7/01/2021	3071 MIKE FRAZIER CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
				3149 JOHN WIEBOLD			

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE

07012021	1	001	3149 JOHN WIEBOLD 7/01/2021	CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		800.00	.00	800.00
07012021	1	001	3153 JAYME CROOK 7/01/2021	CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		300.00	.00	300.00
07012021	1	001	3306 RYAN PALMER 7/01/2021	CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		800.00	.00	800.00
07012021	1	001	3478 JIM ROBBINS PC 7/01/2021	LEGAL SERVICES-JUNE	774.06	001-110-6411	LEGAL FEES/POLICE
07012021	2	001	7/01/2021	LEGAL SERVICES-JUNE	64.50	001-150-6411	FIRE/LEGAL FEES
07012021	3	001	7/01/2021	LEGAL SERVICES-JUNE	64.50	001-430-6411	LEGAL FEES-PARKS
07012021	4	001	7/01/2021	LEGAL SERVICES-JUNE	129.01	001-280-6411	AIRPORT/LEGAL FEES
07012021	5	001	7/01/2021	LEGAL SERVICES-JUNE	4,515.34	001-620-6411	LEGAL FEES/ATTORNEY
07012021	6	110	7/01/2021	LEGAL SERVICES-JUNE	645.05	110-211-6411	LEGAL FEES
07012021	7	600	7/01/2021	LEGAL SERVICES-JUNE	129.01	600-810-6411	LEGAL FEES
07012021	8	610	7/01/2021	LEGAL SERVICES-JUNE	129.01	610-815-6411	LEGAL FEES
			** TOTAL **		6,450.48	.00	6,450.48
			** VENDOR TOTAL **		6,450.48	.00	6,450.48
07012021	1	001	3488 BEN KAUTZA 7/01/2021	CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		300.00	.00	300.00
07012021	1	001	3521 ETHAN BAILEY 7/01/2021	CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		800.00	.00	800.00
07012021	1	001	3646 DANIEL LYNCH 7/01/2021	CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		800.00	.00	800.00
07012021	1	001	3804 KARI FROST 7/01/2021	CLOTHING ALLOWANCE	75.00	001-170-6181	CLOTHING ALLOWANCE/SHOES
			** VENDOR TOTAL **		75.00	.00	75.00
07012021	1	001	3880 JOE SLIGHT 7/01/2021	CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
			** VENDOR TOTAL **		800.00	.00	800.00
			3926 SHANE LOVIC				

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE

07012021	1	001		3926 SHANE LOVIG 7/01/2021 CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	001		3997 CODY BUNNING 7/01/2021 CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	001		4021 COLE HILSABECK 7/01/2021 CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001		4103 LOGAN STURTZ 7/01/2021 CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001		4143 NATHAN MACDOUGALL 7/01/2021 CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
07012021	1	001		4187 CASEY PETERSEN 7/01/2021 CLOTHING ALLOWANCE	300.00	001-150-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	300.00	.00	300.00
07012021	1	600		4246 CLAY CORNELIS 7/01/2021 CLOTHING ALLOWANCE	127.50	600-811-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	127.50	.00	127.50
07012021	1	001		4304 MARSHALL MOORE 7/01/2021 CLOTHING ALLOWANCE	800.00	001-110-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	800.00	.00	800.00
				** GRAND TOTAL **	23,815.48	.00	23,815.48

INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE
07012021	1	600	7/01/2021	77 WAYLON ANDREWS CLOTHING/BOOT ALLOWANCE	312.50	600-812-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	110	7/01/2021	628 JOHN FRANK JR CLOTHING/BOOT ALLOWANCE	312.50	110-211-6181	CLOTHING/BOOT ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	110	7/01/2021	1287 CURTIS MORAN CLOTHING/BOOT ALLOWANCE	312.50	110-211-6181	CLOTHING/BOOT ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	610	7/01/2021	1526 ROBERT ROBINSON CLOTHING/BOOT ALLOWANCE	312.50	610-817-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	110	7/01/2021	1678 CORY STONEBURNER CLOTHING/BOOT ALLOWANCE	312.50	110-211-6181	CLOTHING/BOOT ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	110	7/01/2021	1719 DEAN TAYLOR CLOTHING/BOOT ALLOWANCE	312.50	110-211-6181	CLOTHING/BOOT ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	600	7/01/2021	1998 SCOTT HULL CLOTHING/BOOT ALLOWANCE	312.50	600-812-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	110	7/01/2021	2059 WARREN EHLERT CLOTHING/BOOT ALLOWANCE	312.50	110-211-6181	CLOTHING/BOOT ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	610	7/01/2021	2592 TRAVIS BAKER CLOTHING/BOOT ALLOWANCE	312.50	610-817-6181	CLOTHING ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	110	7/01/2021	4007 ZACKARY MILLER CLOTHING/BOOT ALLOWANCE	312.50	110-211-6181	CLOTHING/BOOT ALLOWANCE
				** VENDOR TOTAL **	312.50	.00	312.50
07012021	1	600	7/01/2021	4162 JASON VAZQUEZ CLOTHING/BOOT ALLOWANCE	312.50	600-812-6181	CLOTHING ALLOWANCE

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INVOICE	LN	DIST ID	DUE DATE	REFERENCE	AMOUNT	GL ACCT NO	GL TITLE

			4162	JASON VAZQUEZ			
				** VENDOR TOTAL **	312.50	.00	312.50
				** GRAND TOTAL **	3,437.50	.00	3,437.50

CITY COUNCIL
CITY OF BOONE, IOWA

RESOLUTION NO. 2894
RESOLUTION APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT
AND ESTIMATE OF COST FOR THE SOUTH MARSHALL STREET
RESURFACING PROJECT

WHEREAS, Short Elliott Hendrickson, Inc. has prepared and filed plans, specifications, form of contract, and estimate of cost for the resurfacing of approximately five (5) blocks of South Marshall Street from the intersection of Hancock Drive on the south, northerly to the intersection of Prairie Avenue on the north. In addition the improvements include improvements to one block of Park Avenue from the intersection of South Marshall Street and South Story Street; and

WHEREAS, said plans and specifications are consistent and in compliance with the final grades hereto established by ordinance for all streets to be improved; and

WHEREAS, notice of hearing on plans, specifications, form of contract, and estimate of cost was published as required by law; and

WHEREAS, The City Council of Boone, Iowa held a public hearing on the proposed plans, specifications, form of contract, and estimate of cost for the construction of said improvements on July 5, 2021 at 6:00 p.m. in the Council Chambers, located at 923 8th Street, Boone, Iowa.

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

Section 1: That the detailed plans, specifications, form of contract and an estimate of cost set at \$270,400.00 as prepared by Short Elliott Hendrickson, Inc. for the South Marshall Street Resurfacing Project, are hereby approved.

Section 2: That said plans, specifications, form of contract and estimate of costs for the South Marshall Street Resurfacing Project have been placed on file with the City of Boone, Iowa.

PASSED THIS 5th day of July, 2021.

AYES (A), NAYES (N), ABSENT (X) ABSTAIN (/):

BJ McGinn	☐	David Byrd	☐	Elijah Stines	☐
Steven Ray	☐	Holly Stecker	☐	Greg Piklapp	☐
Terry Moorman	☐				

Mayor
City of Boone

Clerk
City of Boone

Project Manual

S Marshall Street Mill & Overlay Project

City of Boone, Iowa

SEH No. BOONE 160642

June, 2021



Building a Better World
for All of Us®

Engineers | Architects | Planners | Scientists

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**S Marshal Street Mill & Overlay Project
City of Boone, Iowa**

SEH No. BOONE 160642

June, 2021

Civil:

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.	
		June 25, 2021
	ROBERT E ALLEN, P.E Iowa Reg. No. 24525 My license renewal date is 12/31/2021 Pages covered by this seal: All	

END OF DOCUMENT

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DOCUMENT 00 01 08

PROJECT DIRECTORY

Project Name: S Marshall Street Mill & Overlay Project

Location: Boone, Iowa

Owner

Name: City of Boone, Iowa

Address: 923 – 8th Street
Boone, IA 50036

Contact: John Rouse, Director of Public Works

Phone: 515-432-4211

E-mail: jrouse@city.boone.ia.us

Engineer

Name: Short Elliott Hendrickson, Inc. (SEH®)

Address: 5414 NW 88th St, Ste 140
Johnston, IA 50131

Contact: Robert (Rob) Allen, P.E. (IA), Project Engineer

Phone: 515-608-6009 (direct)

E-mail: rallen@sehinc.com

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DOCUMENT 00 01 10

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DIVISIONS 02 THROUGH 11 – TECHNICAL SPECIFICATIONS

IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS)

Construction shall be in strict conformance with Divisions 2 through 11 of the latest Edition of the Statewide Urban Design and Specifications (SUDAS) (not bound herein), except as modified or supplemented by the additional Technical Specifications listed below, or the Drawings. Contractor shall be responsible for obtaining SUDAS specifications and for becoming familiar with them. On-line electronic copies of SUDAS can be found at <http://www.iowasudas.org>. When conflicts occur between the Drawings and Specifications (Project Manual), the Drawings shall govern. Unless otherwise stipulated, SUDAS Specifications Division 1 – General Provisions and Covenants do not apply to this project.

DRAWINGS – UNDER SEPARATE COVER

Drawings bearing the general title “S Marshall Street Mill & Overlay Project, Boone, Iowa” are bound separately.

END OF DOCUMENT

SECTION 00 11 12
NOTICE TO BIDDERS

Sealed bids will be received by the City Clerk of the City of Boone, Iowa at the Boone City Hall at 923 – 8th Street, Boone, IA 50036, until 2:30 p.m., local time, on July 28, 2021, for the following described public improvement:

S Marshall Street Mill & Overlay Project
Boone, Iowa

At the above time and place all bids received by the City will be opened and publicly read with the results being reported to the Boone City Council at their meeting at 6:00 p.m., local time, on August 2, 2021, at which time the Council may take action on the proposals submitted or at such time as may then be fixed.

The extent of work on this project is the furnishing of all labor, equipment, and materials for the construction of improvements in Boone, Iowa under one contract generally described as follows:

Resurfacing of existing roadways within the City of Boone including but not limited to pavement removals, milling of existing pavement, HMA overlay, new curb and gutter, new sidewalk ramps, traffic control, surface restoration and associated appurtenances as specified and indicated on the drawings.

The kinds of materials, estimated quantities, and work to be done for the project on which bids will be received are as shown on the bid proposal for said project.

All work is to be done in strict compliance with the Plans and Specifications prepared by Short Elliott Hendrickson Inc. which have been heretofore approved by the City Council and which are now on file for public examination in the office of the City Clerk.

A Pre-Bid Conference will not be held for this project.

All bids shall be made on the forms included in the project specifications and shall be filed on or before the time specified above, in a sealed envelope addressed to the City Clerk of Boone, Iowa, clearly stating that the envelope contains a bid on this project.

Each Bid shall be accompanied by a Bid Bond, certified check, cashier's check, or certified credit union share draft in a separate sealed envelope in an amount equal to five (5) percent of the total amount of the Bid. If Bid Bond is submitted, it must be on the form provided with the Contract Documents. The certified check, cashier's check, or certified credit union share draft shall be drawn on a bank in Iowa, a bank chartered under the laws of the United States of America, or said certified share draft shall be drawn on a credit union in Iowa or chartered under the laws of the United States and payable to the Treasurer of the Owner as security that if awarded a contract, the Bidder will enter into a contract at the prices Bid and furnish the required Performance, Payment and Warranty Bond(s) each in the amount of one hundred percent of the Work, and provide a Certificate of Insurance. The certified check, cashier's check, or certified share draft may be cashed, or the Bid Bond forfeited, and the proceeds retained as liquidated damages if the Bidder fails to execute a contract or file acceptable Performance, Payment and Warranty Bond(s) or provide an acceptable Certificate of Insurance within fifteen (15) days after the acceptance of said Bid by resolution of the Owner.

No Bidder may withdraw a Bid within sixty (60) days after the date set for opening Bids.

By virtue of statutory authority preference will be given to products and provisions grown and coal produced within the State of Iowa and to Iowa domestic labor.

In accordance with Iowa statutes, a resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident. Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

If it is determined that adherence to these Iowa statutory requirements may cause denial of federal funds which would otherwise be available for a public improvement or would otherwise be inconsistent with requirements of any federal law or regulation, the application of Iowa Code Chapters 73 and 73A shall be suspended to the extent necessary to prevent denial of the funds or to eliminate the inconsistency with federal requirements.

The Bidder shall not include sales tax in the Bid. The City of Boone is exempt from paying sales tax and will issue a sales tax exemption certificate to the Contractor for all material purchased for incorporation into the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued.

Work on said project shall commence within ten (10) days of a written notice to proceed. The Work shall be substantially completed as follows:

Work on said project shall commence within ten (10) days of a written notice to proceed. The Work will be substantially completed on or before October 29, 2021, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before November 12, 2021.

Liquidated damages in the amount of Five Hundred Dollars (\$500.00) consecutive per day will be assessed for each day that the work remains uncompleted after the dates specified above for substantial completion and readiness for final payment.

Payment for the work will be made by the City in cash from such funds as may be legally available including cash on hand, proceeds from the sale and issuance of General Obligation Bonds and such other funds including the proceeds from the sale and issuance of such other bonds as may lawfully be issued as the City Council may at its sole discretion determine and provide.

Payment will be made to the contractor based on monthly estimates in amounts equal to ninety-five percent of the contract value of the work completed during the preceding calendar month and will be based upon an estimate prepared by the Contractor on the first day of the month, subject to the approval of the Engineer. Any such payment by the City shall in no way be construed as an act of acceptance for any part of the work partially or totally completed. Final payment by the City will be made in accordance with Iowa statutes and the contract documents.

Copies of the contract documents are on file with the City of Boone for examination by bidders. Paper copies of Bidding Forms and copies of Plans and Specifications and contract documents may be obtained from the Engineer's Office at Short Elliott Hendrickson Inc. (SEH), 5414 NW 88th Street, Suite 140, Johnston, Iowa 50131 (515-608-6000) for \$100 per set, all of which will be refunded if returned in reusable condition within 14 days of the Award of Contract. If all documents are not returned in reusable condition and within 14 days, the deposit shall be forfeited.

Complete digital image (.pdf) copies of the Bidding Documents, Contract Documents, and Plans and Specifications are available for download at no cost at <https://www.questcdn.com>. These documents may be viewed or downloaded by entering eBidDoc™ Number 7905823 on the QuestCDN Search Projects page. For assistance and free membership registration, contact QuestCDN at 952.233.1632 or info@questcdn.com. Website registration is necessary to ensure that prospective bidders remain informed of addendum and other essential communications prior to the bid date.

The City reserves the right to reject any and/or all bids and to waive any and/or all technicalities and/or all irregularities. This notice is given by authority of the City of Boone, Iowa.

By John Slight
(Mayor)

ATTEST: Ondrea Elmquist
(City Clerk)

Posted to the Iowa League of Cities and the Master Builders of Iowa websites on July 6, 2021,

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.
 - 1. **The Issuing Office for paper copies of the Bidding Documents for this project is Short Elliott Hendrickson Inc. 5414 NW 88th Street, Suite 140, Johnston, IA 50131; telephone 515-608-6000. The charge to obtain paper copies of Bidding Documents from this Issuing Office is as noted in the Notice to Bidders (Advertisement for Bids).**
 - 2. **The Issuing Office for electronic copies of the Bidding Documents that are available to download free of charge for this project is the QuestCDN Construction Data Network, whose website address is www.questcdn.com.**
 - a. **Bidders are encouraged to obtain Bidding Documents from QuestCDN.**
 - b. **QuestCDN will maintain the official Planholders List for the project.**
 - B. **Owner – The Owner of this Project is the City of Boone, Iowa, whose address is 923 – 8th Street, Boone, IA 50036.**

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid and further described below. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- A. **Complete digital image (.pdf) copies of the Bidding Documents, Contract Documents, and Plans and Specifications are available for download at no cost at <https://www.questcdn.com>. These documents may be viewed or downloaded by entering eBidDocTM Number 7905823 on the QuestCDN Search Projects page. For assistance and free membership registration, contact QuestCDN at 952.233.1632 or info@questcdn.com. Website registration is necessary to ensure that prospective bidders remain informed of addendum and other essential communications prior to the bid date.**
- 2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely

that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

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

2.06 *Electronic Documents*

- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.05.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.
- C. After the Contract is awarded, the Owner will provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.
1. Electronic Documents that are available in native file format include:
 - a. **None**
 2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.
 3. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.
 4. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract Documents and any related document in native file format.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **five (5)** days of Owner's request, Bidder must submit the following information:
- A. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - B. Bidder's state or other contractor license number, if applicable.
 - C. Other required information regarding qualifications.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A pre-bid conference will not be conducted for this Project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:
 - 1. **None.**Owner will make copies of these other Site-related documents available to any Bidder on request.
- B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
- C. The other Site-related documents are not part of the Contract Documents.
- D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.
- E. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

- A. It is highly recommended that the Bidder visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. Bidders visiting the Site are required to arrange their own transportation to the Site.
- C. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner or Engineer contact for visiting the Site. Bidder must conduct the required Site visit during normal working hours.
 - 1. **John Rouse, Boone Director of Public Works, 515-432-4211**
- D. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- E. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.
- F. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- G. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. All questions to the Engineer shall be submitted in writing via email to the following:
 - 1. **Engineer: Short Elliott Hendrickson Inc.**
 - a. **Robert (Rob) Allen, P.E. (IA), Project Engineer**
 - b. **Email: rallen@sehinc.com**
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **five (5)** percent of Bidder's maximum Bid price (determined by adding the base bid and all add alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be

released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work **within five days after Bid opening**:
 - A. **All work.**
- 11.02 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes

no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 Unit Price

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity”, which Owner or its representative has set forth in the Bid Form, for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
 - C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.
 - D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance, payment and warranty bonds, other required bonds

(if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

- 21.01 Owner is exempt from **Iowa** state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes must not be included in the Bid. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

ARTICLE 22—PREFERENCE

- 22.01 The State of Iowa, its agencies, and its political subdivisions, including cities, school districts and public utilities are required by Iowa Code Section 73A.21 to require a reciprocal resident bidder and resident labor force preference.
- A. "Resident Bidder" means a person or entity authorized to transact business in the State of Iowa and having a place of business for transacting business within the state at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. If another state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.
 - B. A resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country other than Iowa if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident.
 - C. A completed Bidder Status Form included in the Bid Documents must be submitted with the Bid.

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

City of Boone
923 8th Street
PO Box 550
Boone, IA 50036-0550

1.02 This Bid is submitted by:

Bidder Name: _____
(Printed name of Organization)

1.03 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
- C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- D. Bidder Status Form

ARTICLE 3—BASIS OF BID

3.01 *Unit Price Bids*

- A. Bidder will perform the following Work at the indicated unit prices.

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
2.01	Topsoil, Off-Site	CY	50	\$	\$
2.02	Excavation, Class 13	CY	145	\$	\$
2.03	Subbase, Modified	SY	410	\$	\$
6.01	Manhole, SW-401, 48 in.	EA	1	\$	\$
6.02	Manhole Adjustment, Minor	EA	5	\$	\$
6.03	Intake Adjustment, Minor	EA	1	\$	\$

6.04	Remove Manhole	EA	1	\$	\$
7.01	Pavement, PCC, 8 in.	SY	136	\$	\$
7.02	Curb and Gutter, 2.5' Width, 6 in. Thickness	LF	315	\$	\$
7.03	Curb and Gutter, 2.5' Width, 7 in. Thickness	LF	81	\$	\$
7.04	Valley Gutter, 2' Width, 8 in. Thickness	LF	68	\$	\$
7.05	HMA Overlay, Intermediate Course, ½ in. Mix, PG 58-28S	TON	215	\$	\$
7.06	HMA Overlay, Surface Course, ½ in. Mix, PG 58-28S	TON	540	\$	\$
7.07	Removal of Sidewalk	SY	82	\$	\$
7.08	Removal of Driveway	SY	37	\$	\$
7.09	Sidewalk, PCC, 6 in.	SY	78	\$	\$
7.10	Sidewalk, PCC, 4 in.	SY	46	\$	\$
7.11	Detectable Warning	SF	120	\$	\$
7.12	Driveway, Paved, PCC, 6 in.	SY	37	\$	\$
7.13	Full Depth Patches, PCC, 6 in.	SY	50	\$	\$
7.14	Milling	SY	6730	\$	\$
7.15	Pavement Removal	SY	136	\$	\$
7.16	Curb and Gutter Removal	LF	396	\$	\$
8.01	Traffic Signal Loop	EA	2	\$	\$
8.02	Remove and Reinstall Sign	EA	4	\$	\$
8.03	Sign Posts, Perforated Square Steel Tube	EA	4	\$	\$
8.04	Type A Sign, Sheet Aluminum	SF	24	\$	\$
8.05	Painted Pavement Marking, Waterborne	STA	33.4	\$	\$
8.06	Temporary Traffic Control	LS	1	\$	\$
9.01	Hydraulic Seeding, Fertilizing and Mulching	AC	0.1	\$	\$
9.02	Inlet Protection Device, Grate Intake Sediment Filter Bag	EA	2	\$	\$
9.03	Inlet Protection Maintenance	EA	2	\$	\$
11.01	Construction Survey	LS	1	\$	\$
11.02	Mobilization	LS	1	\$	\$
11.03	Maintenance of Postal Service	LS	1	\$	\$

11.04	Maintenance of Solid Waste Collection	LS	1	\$	\$
Total of All Unit Price Bid Items					\$

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—TIME OF COMPLETION

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 Bid Acceptance Period

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 Instructions to Bidders

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 Receipt of Addenda

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 Bidder's Representations

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

- d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable)

BID BOND (PENAL SUM FORM)

Bidder Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: City of Boone, Iowa Address <i>(principal place of business)</i> : 923 – 8th Street Boone, IA 50036	Bid Project <i>(name and location)</i> : S Marshall Street Mill & Overlay Project Boone, Iowa Bid Due Date: July 28, 2021
Bond Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
By: _____ <i>(Full formal name of Bidder)</i> _____ <i>(Signature)</i>	By: _____ <i>(Full formal name of Surety) (corporate seal)</i> _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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.

309-6001 (09-15)

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.

309-6001 (09-15)

NOTICE OF AWARD

Date of Issuance:

Owner: City of Boone, Iowa

Owner's Project No.: NA

Engineer: Short Elliott Hendrickson, Inc.

Engineer's Project No.: BOONE 160642

Project: S Marshall Street Mill & Overlay Project

Contract Name: General

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

All work included in the S Marshall Street Mill & Overlay Project, Boone, Iowa, as specified and indicated on the Drawings.

The Contract Price of the awarded Contract is **\$(Contract Price)**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Three (3) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☒ Project Manual and Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner Three (3) counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): Deliver required insurance certificate(s).

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: City of Boone, Iowa

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

This Page Left Blank Intentionally

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **the City of Boone, Iowa** ("Owner") and _____ ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Resurfacing of existing roadways within the City of Boone including but not limited to pavement removals, milling of existing pavement, HMA overlay, new curb and gutter, new sidewalk ramps, traffic control, surface restoration and associated appurtenances as specified and indicated on the drawings.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

S Marshall Street Mill & Overlay Project

ARTICLE 3—ENGINEER

3.01 The Owner has retained Short Elliott Hendrickson Inc. ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by Engineer.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before October 29, 2021, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before November 12, 2021.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner \$500.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the

Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500.00 for each day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

4.06 *Special Damages*

- A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.
- C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make monthly progress payments on the basis of Contractor's Applications for Payment each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. **95** percent of the value of the Work completed (with the balance being retainage).
 1. Deleted
 - b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

- B. Upon Substantial Completion **of the entire construction to be provided under the construction Contract Documents** Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the maximum rate allowed by law.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
1. This Agreement.
 2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 3. General Conditions (not attached but incorporated by reference).
 4. Supplementary Conditions (not attached but incorporated by reference).
 5. Specifications as listed in the table of contents of the project manual (not attached but incorporated by reference).
 6. Drawings (not attached but incorporated by reference) with each sheet bearing the following general title: Sanitary Sewer Improvements, Lewis, Iowa.
 7. Addenda (numbers **[number]** to **[number]**, inclusive) (not attached but incorporated by reference).
 9. Exhibits to this Agreement (enumerated as follows):
 - a. **Bid Form and Attachments**
 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
 - e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
 11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:

City of Boone, Iowa

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name: John Slight

(typed or printed)

Title: Mayor

(typed or printed)

Attest:

(individual's signature)

Title: City Clerk

(typed or printed)

Address for giving notices:

Designated Representative:

Name: William Skare

(typed or printed)

Title: City Administrator

(typed or printed)

Address:

923 – 8th Street

Boone, IA 50036

Phone: 515-432-4211

Email: bskare@city.boone.ia.us

Contractor:

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

(If **Contractor** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

Email:

License No.:

(where applicable)

State:

NOTICE TO PROCEED

Owner: City of Boone, Iowa Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc. Engineer's Project No.: 160642
Contractor: _____ Contractor's Project No.: NA
Project: S Marshall Street Mill & Overlay Project, Boone, IA
Contract Name: General
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **October 29, 2021**, and the date by which readiness for final payment must be achieved is **November 12, 2021**.

Before starting any Work at the Site, Contractor must comply with the following:

None

Owner: **City of Boone, Iowa**
By (signature): _____
Name (printed): William Skare
Title: City Administrator
Date Issued: _____
Copy: Engineer

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PERFORMANCE BOND

Contractor Name: Address (<i>principal place of business</i>):	Surety Name: Address (<i>principal place of business</i>):
Owner Name: City of Boone, Iowa Mailing address (<i>principal place of business</i>): 923 – 8th Street Boone, IA 50036	Contract Description (<i>name and location</i>): S Marshall Street Mill & Overlay Project Boone, Iowa Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☒ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the

commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

- 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
 14. Definitions
 - 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
 15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
 16. Modifications to this Bond are as follows: **None**

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WARRANTY BOND

Contractor Name: _____ Address (principal place of business): _____ 	Surety Name: _____ Address (principal place of business): _____
Owner Name: City of [City], Iowa Address (principal place of business): _____ [Address] [City, State, Zip]	Construction Contract Description (name and location): [Project Name] [City], Iowa Contract Price: _____ Effective Date of Contract: _____ Contract's Date of Substantial Completion: _____
Bond Bond Amount: _____ Date of Bond: _____ Modifications to this Bond form: ☐ None ☐ See Paragraph 9 Bond Period: Commencing 364 days after Substantial Completion of the Work under the Construction Contract, and continuing until [insert number of years, typically either two or three] years after such Substantial Completion.	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth herein, do each cause this Warranty Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
_____ <i>(Full formal name of Contractor)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract's Correction Period Obligations. The Construction Contract is incorporated herein by reference.
2. If the Contractor performs the Correction Period Obligations, the Surety and the Contractor shall have no obligation under this Warranty Bond.
3. If Owner gives written notice to Contractor and Surety during the Bond Period of Contractor's obligation under the Correction Period Obligations, and Contractor does not fulfill such obligation, then Surety shall be responsible for fulfillment of such Correction Period Obligations. Surety shall either fulfill the Correction Period Obligations itself, through its agents or contractors, or, in the alternative, Surety may waive the right to fulfill the Correction Period Obligations itself, and reimburse the Owner for all resulting costs incurred by Owner in performing Contractor's Correction Period Obligations, including but not limited to correction, removal, replacement, and repair costs.
4. The Surety's liability is limited to the amount of this Warranty Bond. Renewal or continuation of the Warranty Bond will not modify such amount, unless expressly agreed to by Surety in writing.
5. The Surety shall have no liability under this Warranty Bond for obligations of the Contractor that are unrelated to the Construction Contract. No right of action will accrue on this Warranty Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
6. Any proceeding, legal or equitable, under this Warranty Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and must be instituted within two years after the Surety refuses or fails to perform its obligations under this Warranty Bond.
7. Written notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown in this Warranty Bond.
8. Definitions
 - 8.1. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page of this Warranty Bond, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 8.2. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
 - 8.3. *Correction Period Obligations*—The duties, responsibilities, commitments, and obligations of the Contractor with respect to correction or replacement of defective Work, as set forth in the Construction Contract's Correction Period clause, EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), Paragraph 15.08, as duly modified.
 - 8.4. *Substantial Completion*—As defined in the Construction Contract.
 - 8.5. *Work*—As defined in the Construction Contract.
9. Modifications to this Bond are as follows: **None**

PAYMENT BOND

Contractor Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: City of Boone, Iowa Mailing address <i>(principal place of business)</i> : 923 – 8th Street Boone, IA 50036	Contract Description <i>(name and location)</i> : S Marshall Street Mill & Overlay Project Boone, Iowa Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☒ None ☐ See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;
 - 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
 - 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **None**

Contractor's Application for Payment

Owner: _____ Engineer: _____ Contractor: _____ Project: _____ Contract: _____	Owner's Project No.: _____ Engineer's Project No.: _____ Contractor's Project No.: _____
Application No.: _____ Application Date: _____	
Application Period: From _____ to _____	

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ _____ Work Completed	\$	-
b. _____ X \$ _____ Stored Materials	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	-
6. Amount eligible to date (Line 4 - Line 5.c)	\$	-
7. Less previous payments (Line 6 from prior application)		
8. Amount due this application	\$	-
9. Balance to finish, including retainage (Line 3 - Line 4)	\$	-

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____	
Signature: _____	Date: _____

Recommended by Engineer By: _____ Title: _____ Date: _____	Approved by Owner By: _____ Title: _____ Date: _____
Approved by Funding Agency By: _____ Title: _____ Date: _____	By: _____ Title: _____ Date: _____

Contractor's Application for Payment

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Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

[illegible]

Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

Application No.:	Application Period:	From	to	Application Date:

A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information				Work Completed		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
Change Order Totals					\$ -		\$ -	\$ -	\$ -		\$ -
Original Contract and Change Orders											
Project Totals					\$ -		\$ -	\$ -	\$ -		\$ -

Contractor's Application for Payment

Owner:		Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract:			

Application No.:	Application Period:	From	to	Application Date:

[illegible]

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson Inc.	Engineer's Project No.: BOONE 160642
Contractor:	Contractor's Project No.: NA
Project: S Marshall Street Mill & Overlay Project	
Contract Name: General	

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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NOTICE OF ACCEPTABILITY OF WORK

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson Inc.	Engineer's Project No.: BOONE 160642
Contractor:	Contractor's Project No.: NA
Project: S Marshall Street Mill & Overlay Project	
Contract Name: General	
Notice Date: [Date]	
Effective Date of the Construction Contract: [Date]	

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated May 3, 2021, ("Agreement for Professional Services"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By (*signature*): _____

Name (*printed*): _____

Title: _____

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*
- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
 - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Definitions and Terminology*

SC-1.01.A.8 – Add the following at the end of the Paragraph:

The Change Order form to be used on this Project is EJCDC C-941 (2018).

SC-1.01.A.50 – Add the following at the end of the Paragraph:

The Work Change Directive form to be used on this Project is EJCDC C-940 (2018).

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **five (5)** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

SC-3.01 Add the following language at the end of Paragraph 3.01B:

Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result shall be provided whether or not specifically called for, at no additional cost to Owner.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A – Delete the last sentence of paragraph.

4.05 *Delays in Contractor's Progress*

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work

as scheduled. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered abnormal weather conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information listed in SC 4.05.C.5.b

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03.C - Add the following new paragraphs immediately after Paragraph 5.03.B:

C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:

1. None.

5.06 *Hazardous Environmental Conditions*

SC-5.06.A - Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers Compensation: A standard Workers Compensation policy approved for use in the State of Iowa shall be issued with the following coverages:
 - a. Statutory Benefits covering all employees injured on the job by accident or disease as prescribed by Iowa Code Chapter 85.
 - b. Employers Liability insurance with the following limits:

Bodily injury by accident	\$1,000,000 each accident
Bodily injury by disease	\$1,000,000 each accident
Bodily injury by disease	\$1,000,000 policy limit

2. Commercial General Liability Insurance: No less comprehensive and no more restrictive than the coverage provided by a standard form Commercial General Liability Policy (ISO CG

0001 or its equivalent) with all standard exclusions with minimum limits shown below covering claims for damages because of bodily injury, personal injury, or damage to property that occur on the premises under contract or arise out of the operations in performance of the contract. Any additional exclusions shall be identified on the Certificate of Insurance and shall be subject to the review and approval of the Owner.

General Aggregate Limit	\$2,000,000
Products' Completed Operations Aggregate Limit	\$2,000,000
Personal and Advertising Injury Limit	\$1,000,000
Each Occurrence Limit	\$1,000,000
Fire Damage Limit (any one fire)	\$100,000
Medical Damage Limit (any one person)	\$5,000

3. Automobile Liability Insurance: Covers all owned, non-owned, hired, and leased vehicles with a minimum combined single limit of \$1,000,000 per accident covering claims for damages because of bodily injury, personal injury, or damage to property that arise out of operations in performance of the contract. The insurance must include contractual liability coverage. Any fellow employee exclusion shall be deleted. The policy shall provide Auto Cargo Pollution Endorsement (ISO CA 99 48 or its equivalent), if required in the special provisions.
4. Railroad Protective Liability: If required by the Owner by special provision, or by an affected railroad, the Contractor shall procure and maintain Railroad Protective Liability Insurance naming the railroad as the insured with minimum limit for bodily injury and property damage liability of \$2,000,000 per occurrence, \$6,000,000 aggregate, or with such other limits as the railroad shall require. The original of said policy shall be furnished to the railroad and a certified copy of said policy shall be furnished to the Owner prior to any construction or entry upon the railroad easement premises by the Contractor.
5. Umbrella/Excess Insurance: At the Contractor's option, the limits specified in Section 1070, 3.02, C, 1, 2, 3 may be satisfied with a combination of primary and Umbrella/Excess Insurance. At the Owner's option, the minimum insurance limits specified above may be increased by special provision. This increase may be satisfied with a combination of primary and Umbrella/Excess Insurance.
6. Additional Insured Endorsements: Except for Workers Compensation, the insurance specified shall:
 - a. Include the Owner as an additional insured, per Section 1070, 3.06, B; and
 - b. Be primary to and not in excess of or contributory with any other insurance available to the Owner.
7. Reference to ISO: Wherever the term "ISO" appears in these specifications, any subsequent equivalent ISO form or non-ISO equivalent form may be used.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 Labor; Working Hours

- SC-7.03 Amend the first and second sentences of Paragraph 7.03.C to state "...all Work at the Site must be performed during regular working hours, 7:00 a.m. to 7:00 p.m., Monday through

Saturday. Contractor will not perform Work on a Sunday, or any legal holiday, unless authorized by Owner in writing.”

7.04 *Services, Materials, and Equipment*

SC-7.04.A.1 Add the following paragraph under Paragraph 7.04.A:

1. Where the Work requires equipment be furnished, due to the lack of standardization of equipment as produced by the various manufacturers, it may become necessary to make minor modifications in the structures, buildings, piping, mechanical work, electrical work, accessories, controls, or other work, to accommodate the particular equipment offered. All such modifications shall be subject to approval by Engineer and shall be made by Contractor at no additional cost to Owner.

SC-7.07.H - Delete Paragraph 7.07.H in its entirety and substitute the following in its place:

Upon Owner's request, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of request.

7.09 *Permits*

SC-7.09.B - Add new paragraphs immediately after Paragraph 7.09.A to read as follows:

- B. Contractor shall be responsible for obtaining and paying for any necessary building, plumbing and electrical permits from the applicable jurisdiction for the Project.
- C. Contractor shall be responsible for coordinating inspections by the local building inspector related to building, electrical and plumbing construction.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- B. Owner is exempt from Iowa state sales taxes and local option sales taxes on all materials and equipment to be incorporated in the work. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.
- C. The Contractor shall provide a listing to the City identifying all appropriate subcontractors qualified for use of the tax exemption certificate. The listing shall include the Federal Employer Identification Number (FEIN) for the Contractor and each Subcontractor.
- D. The Owner will complete an on-line application to register this Contract with the Iowa Department of Revenue and Finance and will furnish the Contractor and all listed subcontractors with an authorization letter and Tax Exemption Certificate for use in the purchase of supplies and materials to be incorporated into the Work. The Contractor and subcontractors may make copies of the tax exemption certificates and authorization letters and provide a copy to each supplier providing construction materials to be incorporated into this project.
- E. The Contractor shall be responsible for complying with all applicable provisions of Iowa Code Section 422.7.12

7.12 *Record Documents*

SC-7.12.A Amend paragraph by adding the following after “written interpretations and clarifications,”:
Manufacturers' Certifications,

SC-7.12.B Add a new paragraph immediately after Paragraph 7.12.A:

- B. The Engineer may refuse to recommend the whole or any part of a progress payment when the requirements of General Conditions 7.12 are not being satisfied.

7.13 *Safety and Protection*

SC-7.13.K Add the following paragraph immediately after Paragraph 7.13.J:

- K. The Contractor shall note that hydrogen sulfide, methane, or other hazardous gases may be present at several areas of the work site, including but not limited to manholes, control structures, pipelines and sewers, treatment structures, pumping stations, and process or control buildings. Contractor shall maintain safe working conditions at all times.

ARTICLE 8—OTHER WORK AT THE SITE

No Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 - 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 - 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
 - 3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
 - 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
 - 5. *Inspections and Tests*
 - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 6. *Payment Requests: Review Applications for Payment with Contractor.*
- 7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.03 Unit Price Work

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. *Adjustments in Unit Price*
 - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to **15** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **50** percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
 - 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work,

such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

No Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 Progress Payments

SC-15.01.B.4 – Add the following language at the end of paragraph:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage or invest the retainage for the benefit of the Contractor.

SC-15.01.B.5 – Add new paragraph immediately after Paragraph 15.01.B.4:

5. The Application for Payment form to be used on this Project is EJCDC® C-620.

15.02 Contractor's Warranty of Title

SC-15.02.A – Amend paragraph by striking out the following text: “7 days after”.

SC-15.03.A.1 - Add the following two new subparagraphs under paragraph 15.03.A:

1. For this Work, Substantial Completion is further defined as follows:
 - a. “Substantial Completion” means that the facilities are completed to the point that all facilities, treatment systems, and appurtenances, affected by the construction are fully functional and ready for Owner’s continuous use as intended, to the satisfaction of the Engineer. All process equipment shall be installed and operational or temporary arrangements satisfactory to Owner shall have been made. All performance testing and O&M manuals shall be completed prior to the date of Substantial Completion.
2. Portions of the Work not essential to facility operation, which can be completed without interruption of facility operation, may be completed after the Work is accepted as substantially complete, and may include the following items: site grading, surface restoration, landscaping and cleanup.

SC-15.03.B - Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.05 Final Inspection

SC-15.05.A - Add the following language after the second sentence of Paragraph 15.05.A:

If, after such measures are taken, subsequent inspections by Engineer reveal that any of the previously identified particulars remain incomplete or defective, Engineer will again notify Contractor in writing of the remaining particulars. All costs associated with any subsequent inspections in which said remaining particulars are revealed, will be documented by Engineer and paid by Contractor to Owner.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

No Supplementary Conditions in this Article.

ARTICLE 18—MISCELLANEOUS

No Supplementary Conditions in this Article.

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc.	Engineer's Project No.: BOONE 160642
Contractor:	Contractor's Project No.: NA
Project: S Marshall Street Mill & Overlay Project	
Contract Name: General	
Date Issued:	Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price:	\$	[increase] [decrease] [not yet estimated].
Contract Time:	days	[increase] [decrease] [not yet estimated].

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

Authorized by Owner

By: _____

Title: _____

Date: _____

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CHANGE ORDER NO.: [Number of Change Order]

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc.	Engineer's Project No.: BOONE 160642
Contractor:	Contractor's Project No.: NA
Project: S Marshall Street Mill & Overlay Project	
Contract Name: General	
Date Issued:	Effective Date of Change Order:

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

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	Change in Contract Times
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] : \$ _____	[Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] : Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: \$ _____	[Increase] [Decrease] this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)

By: _____

Title: _____

Date: _____

Authorized by Owner

By: _____

Title: _____

Date: _____

FIELD ORDER NO.: [Number of Field Order]

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc.	Engineer's Project No.: BOONE 160642
Contractor:	Contractor's Project No.: NA
Project: S Marshall Street Mill & Overlay Project	
Contract Name: General	
Date Issued:	Effective Date of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

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SECTION 01 11 00
SUMMARY OF WORK

PART 1 GENERAL

1.01 REFERENCES

A. Definitions

1. Basic Contract definitions and terminology are included in the General Conditions of the Contract.
2. The term "approved," when used to convey Engineer's action on Contractor's submittals, applications, and requests, is limited to Engineer's duties and responsibilities as stated in the General Conditions of the Contract.
3. The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

B. Industry Standards

1. 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.
2. Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
3. 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.
4. 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.
5. Each entity engaged in construction on the Project shall be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

1.02 SPECIFICATION FORMATS AND CONVENTIONS

- A. The Specifications are organized into Divisions and Sections using the 49-division format and The Construction Specifications Institute "Master Format" 2004 Edition Numbering and Titles.
- B. The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
- C. General and Supplementary Conditions of the Contract apply to all Specification Sections.
- D. Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

1.03 SUDAS SPECIFICATIONS

- A. Construction shall be in strict conformance with Divisions 2 through 11 of the latest Edition of the Statewide Urban Design and Specifications (SUDAS) (not bound herein), except as modified or supplemented by additional Technical Specifications listed in the Table of Contents, or the Drawings. Contractor shall be responsible for obtaining SUDAS specifications and for becoming familiar with them. On-line electronic copies of SUDAS can be found at <http://www.iowasudas.org>. When conflicts occur between the Drawings and Specifications (Project Manual), the Drawings shall govern. Unless otherwise stipulated, SUDAS Specifications Division 1 – General Provisions and Covenants do not apply to this project.

1.04 WORK INCLUDED IN THE CONTRACT DOCUMENTS

- A. Project Identification
 - 1. Project Name: S Marshall Street Mill & Overlay Project
 - 2. Project Location: Boone, Iowa
 - 3. Owner: City of Boone, 923 – 8th Street, Boone, IA 50036
 - 4. Engineer: Short Elliott Hendrickson Inc. (SEH), 5414 NW 88th Street, Suite 140, Johnston, IA 50131
- B. The Work includes:
 - 1. Work shall be completed under one contract as stipulated below:
 - a. Resurfacing of existing roadways within the City of Boone including but not limited to pavement removals, milling of existing pavement, HMA overlay, new curb and gutter, new sidewalk ramps, traffic control, surface restoration and associated appurtenances as specified and indicated on the drawings.

1.05 CONTRACT INFORMATION

- A. Type of Contract: Owner will award one Prime Contract.
- B. Scope of Contract:
 - 1. This Contractor is solely responsible for the Work.
 - 2. The Contract will include:
 - a. Contract Forms:
 - 1) Agreement
 - 2) Performance Bond
 - 3) Payment Bond
 - 4) Warranty Bond
 - 5) Certificates
 - b. Conditions of the Contract:
 - 1) General Conditions
 - 2) Supplementary Conditions
 - 3) Specifications:
 - a) Latest Edition of the Statewide Urban Design and Specifications (SUDAS)
 - b) Applicable Technical Sections
 - b. Addenda
 - c. Contract Modifications

1.06 WORK UNDER OTHER CONTRACTS

- A. Other Work at Site:
 - 1. Owner reserves the right to let other separate contracts for Work of the Project, or to pursue other Work at the Site with its own personnel.
 - 2. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.
 - 3. Coordinate the Work of this Contract with work performed under separate contracts.

B. Work Not Included:

1. Work not included is either marked "NIC," or "by others," on Drawings or is noted in each section of Specifications.
2. Provide all labor and materials required unless so specifically noted or marked.
3. Install Work indicated to be furnished by others or Owner unless specifically stipulated to be furnished and installed by others or Owner.

1.07 WORK PHASES

- A. See Drawings for staging or phasing requirements, if any.

1.08 CONTRACTOR USE OF PREMISES

- A. Confine operations at Site to areas permitted under contract or as directed by Owner.
- B. Conform to site rules and regulations affecting Work while engaged in Project construction.
- C. Existing Structures:
1. Keep existing driveways, playgrounds, playing fields, and adjacent streets clear and available to public in accordance with Owner's or local authority's requirements.
 2. Maintain buildings in weathertight condition throughout the construction period.
 3. Protect building and occupants during construction period.
 4. Repair damages caused to existing public and private property and structures due to operations of Contractor to the satisfaction of, and at no additional cost to Owner.
 5. Take complete field measurements affecting all existing construction, wiring, piping, and equipment in this Contract, and assume responsibility for proper fit between Work and existing structures and other equipment.
- D. Construction personnel may park only in areas designated by the Owner.
- E. Damaged Property:
1. Patch and/or clean existing improvements and restore damage of property on, or adjacent to Site occasioned by this Work, including, but not limited to, lawns, walks, curbs, pavements, roadways, structures, and utilities which are cut or damaged by operations and are not designated for removal, relocation, or replacement in the course of construction.
 2. Public Property or Utilities: Comply with laws, ordinances, rules, regulations, standards, orders of utility owner or any public authority having jurisdiction.
 3. Provide written acceptance of restoration work by authority or Owner.

1.09 OCCUPANCY REQUIREMENTS

- A. General Requirements:
1. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
 2. Schedule the Work to accommodate this requirement.
 3. Coordinate activities which could cause interruption to Owner's activities.
 4. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner Occupation During Construction:
1. Owner will occupy the premises during entire construction period, with the exception of areas under construction.
 - a. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities, unless receiving written permission from Owner and authorities having jurisdiction.
 - b. Maintain existing exits, unless otherwise indicated.

C. Owner Occupancy of Completed Areas of Construction:

1. Owner reserves the right to place and install equipment as necessary in completed areas and to occupy such completed areas prior to Substantial Completion in accordance with the Supplementary Conditions. Such use shall not constitute acceptance of such portions of the Work or relieve the Contractor of any obligations except for improper use or damage caused by employees or agents of Owner.

1.10 PRODUCTS ORDERED IN ADVANCE

A. Storage:

1. Products will be allowed to be stored at the Site prior to commencement of construction activities.
2. Contractor shall store such items as directed by Owner.

1.11 OWNER FURNISHED PRODUCTS

A. Items furnished by Owner will be identified in the Specification sections.

B. Owner's Responsibilities:

1. Arrange for, and deliver Owner reviewed Shop Drawings, Product Data and samples to Contractor.
2. Arrange and pay for product delivery to Site.
3. At time of delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective or deficient items.
5. Arrange for manufacturer's warranties, inspections and service.

C. Contractor's Responsibilities:

1. Review Owner reviewed Shop Drawings, Product Data and samples.
2. Receive and unload products at Site; inspect for completeness or damage, jointly with Owner.
3. Provide support systems to receive Owner's equipment.
4. Protect Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.
5. Install and otherwise incorporate Owner-furnished items into the Work.
6. Repair or replace items damaged after receipt, except that damage caused by Owner's employees or agents.

1.12 WORK RESTRICTIONS

A. On-Site Work Hours:

1. Normal business working hours of 7:00 a.m. to 7:00 p.m. Monday through Friday.
2. Weekend Hours: Saturdays only from 7:00 a.m. to 7:00 p.m. No work shall be allowed on Sundays unless otherwise authorized by Owner.
3. Legal Holidays: No work allowed unless authorized by Owner.

B. Existing Utility Interruption:

1. Do not interrupt utilities serving facilities occupied by Owner or others without written permission by Owner.
2. Notify Owner not less than 2 days in advance of proposed utility interruptions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 11 10
SPECIAL PROVISIONS

PART 1 GENERAL

1.01 TECHNICAL SPECIFICATIONS

- A. Construction shall be in strict conformance with Divisions 2 through 11 of the latest Edition of the Statewide Urban Design and Specifications (SUDAS) (not bound herein), except as modified or supplemented by these construction documents in the Technical Specifications listed in the Table of Contents, or the Drawings. Contractor shall be responsible for obtaining SUDAS specifications and for becoming familiar with them. On-line electronic copies of SUDAS can be found at <http://www.iowasudas.org>. When conflicts occur between the Drawings and Specifications (Project Manual), the Drawings shall govern. SUDAS Specifications Division 1 – General Provisions and Covenants do not apply to this project.

1.02 SPECIFICATION EXPLANATION

- A. These Special Provision items shall supplement or supersede the specifications contained in the Project Manual.

1.03 PERMITS

- A. The Contractor shall obtain and comply with all required local building and construction permits, where applicable. The Contractor shall also obtain required permits for the disposal of soil and groundwater where applicable. The cost of obtaining said permits shall be incidental to the contract and no extra payment will be allowed.

1.04 SURVEY MONUMENTS

- A. All survey monuments, property stakes, etc., which are encountered during the construction are to be preserved and remain undisturbed. The Engineer is to be made aware of all such items immediately upon discovery. Failure to preserve such monuments shall not be allowed and replacement shall be at the Contractor's expense. Replacement of survey monuments disturbed by the Contractor shall be made by a Land Surveyor licensed in the State of Iowa.

1.05 CONSTRUCTION SURVEY (STAKING)

- A. All Work shall be done to the lines, grades and elevations indicated on the Drawings.
- B. At least two basic horizontal and two vertical control points will be established or designated by the Engineer. These points shall be used as datum for the Work. All additional survey, layout, and measurement Work shall be performed by the Contractor as part of the Work.
- C. The Contractor shall arrange and pay for construction survey (staking) for this project. Costs for arranging for and paying for construction survey shall be paid under a separate Bid Item or shall be incidental to construction if no separate Bid Item is specified.
- D. Contractor shall protect survey control and reference points. Promptly notify Engineer of any discrepancies discovered.
- E. Control datum for survey is that shown on Drawings.
- F. Verify set-backs and easements; confirm drawing dimensions and elevations.
- G. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- H. Promptly report to Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- I. Furnish information to the Engineer and the appropriate utility regarding conflicts that are necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.

1.06 UTILITIES – CHARTED AND UNCHARTED

- A. Drawings and Specifications show condition of the site based on field surveys and available utility records.
- B. Prior to beginning construction, Contractor shall contact utility companies (electric, telephone, sewer, water, cable TV) to determine the existence of utilities. Final location of the proposed improvements will be made after location of existing utilities. This may involve excavation by the Contractor to determine elevation of existing utilities.
- C. Utility companies shall have access to the project during construction to make repairs or extensions of service. No claims for additional compensation will be allowed for delays caused by such work.
- D. All Work to maintain utilities shown in the Drawings shall be considered incidental to construction regardless of the work required to maintain them.
- E. In the event uncharted utilities exist, Contractor will be compensated on a per conflict basis. An uncharted utility crossing is defined as an uncharted utility intersecting the proposed improvement at right angles or within 30 degrees of a right angle. A parallel utility conflict is defined as a utility existing parallel to the proposed improvement or crossing the proposed improvement at more than 30 degrees to a right angle.
- F. To qualify for extra compensation, the construction must require the use of shoring or other means to protect the existing uncharted utility. Contractor shall be compensated for uncharted utilities encountered, based on the number of uncharted utilities crossed or the linear feet of parallel conflicting utility. Any uncharted utility 3-inches in diameter or smaller shall be considered incidental and no compensation will be awarded (i.e., water service lines, gas services, etc.).

1.07 TESTING

- A. The Contractor shall employ and pay for specified services of an independent firm to perform specified testing. Contractor shall be responsible for coordination of testing during the progress of the work on this project.
- B. The cost for testing shall be incidental to construction and no separate payment will be made, unless included as a specific bid item.
- C. All testing shall be completed as specified in SUDAS, or as otherwise specified in these specifications. The Contractor shall provide reports of all testing results to Engineer immediately after they are made available to Contractor by testing firm.
- D. If test results do not meet those specified, make necessary corrections and repeat tests to demonstrate that test requirements are satisfied. Field tests performed due to test failure shall be completed at Contractor's expense.
- E. MATERIALS TESTS:
 - 1. Material testing is incidental to construction and shall be completed by an independent testing laboratory retained by the Contractor and approved by the Engineer. Testing shall not be completed by an employee of the Contractor. Testing shall meet the requirements of the Urban Standard Specifications.
 - 2. Coordinate all material testing with the Engineer.
 - 3. Provide transportation of all samples to the laboratory.
 - 4. Do not ship materials to the project site until laboratory tests have been furnished showing compliance of materials with specifications.
 - 5. Provide gradation and materials certifications for all granular materials. Certify that sources of Portland Cement and aggregates are Iowa DOT approved.
 - 6. Certify that materials and equipment are manufactured with applicable specifications.
- F. FIELD TESTS:

1. Field testing is incidental to construction and shall be completed by an independent testing laboratory retained by the Contractor and approved by the Engineer. Testing shall not be completed by an employee of the Contractor. Testing shall meet the requirements of the Urban Standard Specifications.
2. Contractor shall be responsible for arranging for and coordination of all field testing. Coordinate Field Testing with the Engineer to allow Engineer opportunity to witness field testing.

1.08 EXPLOSIVES

- A. Use: The Contractor shall not blast any rock or other materials or allow the same to be done in prosecution of the work, unless it secures the Engineer's approval, proper insurance coverages, and a blasting permit when required.
- B. Safety: The Contractor is solely responsible for all damage resulting from blasting operations performed by the Contractor or its agents. The Contractor shall use the utmost care to not endanger life or damage property; and whenever ordered by the Engineer, the number and size of the charges shall be reduced. Suitable coverages or mats shall be provided to confine all materials lifted by blasting within the limits of the excavation or trench. All explosives shall be stored in a secure manner and clearly marked according to all applicable laws and regulations.
- C. Regulations: The Contractor shall abide by all existing Federal, State, and Local regulations regarding the use of explosives, including, but not limited to, Uniform Fire Code, Article 77, and National Fire Protection Association 495, Explosive Materials Code of the National Fire Codes.

1.09 PROTECTION OF ABOVE GROUND AND UNDERGROUND FACILITIES

- A. The Engineer has attempted to show on the plans all aboveground and underground facilities, including public and private utilities, which may be affected by the work. The location, depth, and size of each such facility shown on the plans is approximate only and is not guaranteed. Other underground facilities may exist and their location may not be presently known or identified. It is the Contractor's responsibility to determine the existence and exact location of all such facilities located within the construction area to avoid damage.
- B. Where existing facilities are shown in the contract documents or encountered within the construction area, it shall be the responsibility of the Contractor to notify the operators of those facilities prior to beginning any construction activities. The Contractor shall allow access to those facilities for necessary modification of services. The Contractor shall support, sustain, and protect existing pipes, conduits, poles, wires, and other apparatus located under, over, along, across, or adjacent to the work site. If such utilities are damaged through Contractor's negligence, they will be repaired by the agencies having control of same, but the cost of such repairs shall be paid by the Contractor.
- C. The Contractor shall, prior to commencing any excavation or other operation that may affect underground facilities, notify the "Iowa One Call" underground facility locate system, established pursuant to Iowa Code Chapter 480. The Contractor shall, if requested by the operator of an underground facility, assist in the location of its facilities; provided, however, the Owner shall not be responsible to the Contractor or to any operator of an underground facility for the cost of locating such facility, or for any damage to such facility that occurs in attempting to locate it, or for any damage to the facility occasioned by the Contractor's performance of work under the contract.
- D. Claims for additional compensation will not be allowed to the Contractor for any interference, delay, or additional work occasioned by the location or adjustment of aboveground or underground facilities, or connections thereto.

1.10 CONNECTIONS TO EXISTING FACILITIES

- A. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines and utilities such as water, sewer, gas, telecommunications and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.

- B. Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously if necessary to complete connections in the minimum time. Operation of valves, hydrants, or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

1.11 DISPOSAL

- A. Remove from project site and dispose of trees, shrubs, vegetation, excess soil excavation, rubbish, concrete, granular materials and other materials encountered as shown on plans and as specified.
- B. Dispose of materials in accordance with applicable laws and ordinances. Disposal sites are subject to the review and approval of the Engineer.
 - 1. Burning of brush and other debris is not permitted. Contractor responsible for selecting disposal site.
 - 2. Dispose of broken concrete, asphalt, granular material, rubble, excess or unsuitable excavated material. Contractor is responsible for selecting disposal site.
 - 3. Cooperate with all applicable City, State and Federal agencies concerning disposal of materials.
 - 4. The Owner has the first right to any excess materials from construction.

1.12 EROSION/POLLUTION PREVENTION PLAN

- A. Comply with soil erosion control requirements of Iowa Code and local ordinances. Protect against erosion and dust pollution on this project site and any off-site deposit area used for this project.
- B. The Contractor is responsible for maintaining the storm water pollution prevention plan (SWPPP). Owner will publish the required notice and submit the notice of intent to the Iowa Department of Natural Resources. The prime contractor and any subcontractors will be required to sign the SWPPP as co-permittees.
- C. The project area may be subject to surface water drainage of non-project related operations. These other operations have storm water runoff, the regulation of which is beyond the control of this project. Potentially this runoff could contain various pollutants related to site specific land uses. Examples are rural agricultural activities, the runoff from which can potentially contain chemicals including herbicides, pesticides and fungicides. In addition, fertilizers may contain nitrogen, phosphate, potash and various other trace elements.
- D. Erosion Control
 - 1. Install erosion control measures prior to beginning soil disturbing activities.
 - 2. Maintain, remove and replace, and modify erosion control measures as necessary to meet requirements.
 - 3. Protect against erosion and dust pollution on this project site and any off-site deposit area used for this project.
 - 4. Protect adjoining property including public sanitary and storm drainage systems and streets from any damage resulting from movement of earth or other debris from project site. Repair any damage immediately.
 - 5. Protect all newly constructed permeable pavers with erosion control features from soil and debris that may clog the permeable pavers.
 - 6. Prevent accumulation of earth or debris on adjoining public or private property from project site. Remove any accumulation of earth or debris immediately.
 - a. Conduct cleaning of paved surfaces during construction on a routine schedule.
 - 7. Use silt fences or other means at all drainage courses and swales to protect against siltation and erosion. Furnish, install, maintain, clean, repair, and remove silt barriers at all intakes and inlets and as shown on construction drawings, as directed by Engineer, Owner, or inspector, or as necessary.

8. Remove all temporary erosion control measures upon final stabilization of disturbed areas.
Remove in a timely manner after temporary measures are no longer necessary.

1.13 DEWATERING

- A. Perform all construction work in dry conditions.
- B. Submit dewatering methods to the Engineer for review. Obtain the Engineer's approval on methods prior to construction.
- C. Groundwater levels are subject to variation. No additional compensation will be permitted due to high groundwater conditions.
- D. If excavation encounters only cohesive soils with no wet sand seams or layers, it may be possible to control water seepage by draining groundwater to temporary construction sumps and pumping it outside the perimeter of the excavation.
- E. Do not pump water from open excavation in sand and gravel below the natural ground water level.
- F. Maintain water levels 2 feet or more below the bottom of excavations in saturated cohesionless (sand and/or gravel) soils to prevent upward seepage, which could reduce subgrade support.
 - 1. Install dewatering system (well points or shallow wells) when working in cohesionless soils.
 - 2. Costs of installing and operating dewatering system are incidental.
- G. Provide for handling surface water encountered during construction.
 - 1. Prevent surface water from flowing into excavation, remove water as it accumulates.
 - 2. Divert storm sewer flow around areas of construction.
 - 3. Do not use sanitary sewers for the disposal of trench water.
- H. Backfill pipe and structures prior to stopping dewatering operations. Do not lay pipe or construct concrete structures on excessively wet soils.
- I. The costs of handling both surface water and groundwater are incidental.

1.14 PROTECTION OF PROPERTY

- A. The Contractor shall continuously maintain adequate protection of all its work from damage and shall protect the Owner's property and adjacent private property from injury or loss arising in connection with the work. The Contractor shall repair or restore any such damage, injury, or loss to Owner property or adjacent private property.
- B. Protect existing facilities, trees, and shrubs to remain in place. Any damage to existing trees or shrubs, branches, and root systems to remain and to be protected shall be repaired and/or pruned by an experienced tree surgeon or arborist. Do not disturb soil within 10 feet of the drip line of trees without notifying the Engineer. The Contractor shall mark the 10 foot limit from the drip line.

1.15 DUST CONTROL

- A. During construction operations, the Contractor shall be responsible for the control of dust to a degree compatible with the area in which the construction is being performed and with existing environmental regulations. In the event the Contractor does not control dust as specified, the Owner reserves the right to order dust control to be performed by other forces and withhold the cost thereof from any monies due or may become due to the Contractor under the contract.

1.16 RAILROAD CROSSINGS

- A. The authority for performing work beneath, at grade, or over railroad tracks will have been previously secured by the Owner. It shall be the Contractor's responsibility to contact the railroad company officials prior to beginning the work on railroad property or easements. The Contractor shall perform the work without damage to the facilities and property of the railroad or its lessees, and in strict observance of requirements for the safety of the railroad property and operations. All such work will be subject to

the inspection of the railroad's representative. The Contractor shall protect, indemnify, and hold the Owner harmless from any and all damages resulting from its operations on railroad property or easements or in the construction of railroad crossings.

1.17 BORROW AND WASTE SITES

- A. Unless borrow or waste sites are designated on the plans or specified in the special provisions, the Contractor shall secure and operate such sites at its own expense.
- B. In all cases, borrow and waste sites shall be operated in such a manner as to meet Federal, State, and local safety, environmental, and health requirements. Site operations, or the result of such operation, that create a definite nuisance or result in damage to public or private property will not be permitted. In all cases, sites shall be approved by the Engineer before use.

1.18 MAINTAINING POSTAL SERVICE

- A. It shall be the Contractor's responsibility to contact the U.S. Postal Service to ascertain its requirements for the maintenance of postal service to residents or businesses in the vicinity of the work site according to the instructions of the Postal Service. The Contractor shall be responsible for mailboxes at temporary locations designated by the Postal Service, and at the completion of the work, the Contractor shall replace all mailboxes in locations and conditions satisfactory to the Postal Service.
- B. Not less than 24 hours prior to removing any mailbox, the Contractor shall notify each affected resident or business addressee in writing advising them of the move and the location of their temporary mailbox during construction.
- C. For each residential or business address affected by the work, the Contractor shall place a temporary mailbox at a location approved by the Postal Service. Temporary mailboxes shall be in place so postal service is maintained at all times. Any permanent mailbox that must be removed shall be stored on the property from which it is removed and at a sufficient distance from the work area to ensure it will not be damaged by construction activities.

1.19 PROJECT SITE SAFETY

- A. Until work is accepted by the Owner, the work shall be in the custody of and under the charge, care and control of the Contractor. The Contractor is also responsible for the project area or work site. The Contractor is solely responsible for the safety of everyone on its work site.
- B. To protect workers and the public, the Contractor shall erect and maintain good and sufficient guards, barricades, and signals at or near the work according to the latest edition of MUTCD and all applicable laws, regulations, and specifications. The Contractor shall, in all cases, maintain safe passageways at all road crossings, crosswalks, and street intersections and shall do all other things necessary to prevent an accident or loss of any kind.
- C. All personnel shall wear ANSI 107 Class 2 apparel at all times when exposed to traffic or construction equipment in the right-of-way or work site, or otherwise required by local, state and federal safety regulations.
- D. The Engineer may appoint an authorized representative on the work site to monitor the materials used and the work done by the Contractor. The Engineer's authorized representative is not a safety inspector and is not responsible for monitoring, directing, or otherwise ensuring the safety of the Contractor, its subcontractors, its suppliers, or any others that may be on the work site.

1.20 TRAFFIC CONTROL

- A. Contractor shall provide temporary traffic control as indicated on the Drawings and specified herein.
- B. The cost for Traffic Control shall be incidental to construction and no separate payment will be made, unless included as a specific bid item.

1.21 UNFAVORABLE CONSTRUCTION CONDITIONS

- A. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to work which will not be affected adversely by such conditions.

- B. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof unless special means or precautions are taken by the Contractor to perform the work in a proper and satisfactory manner.

1.22 CLEAN-UP

- A. Contractor shall keep the premises occupied by the Contractor free from accumulations of waste materials, debris, and rubbish at all times. Contractor shall provide adequate trash receptacles about the work site, promptly empty containers when filled, and properly dispose of waste materials at his expense. Wastes shall not be buried, burned on the site, or disposed of in storm drains, sewers, streams or waterways. Contractor shall dispose of all materials according to local and state jurisdictional regulations and/or requirements.
- B. Construction materials such as forms and scaffolding shall be neatly stacked by Contractor when not in use. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.

1.23 HISTORICAL AND ARCHEOLOGICAL

- A. If, during the course of construction, evidence of deposits of historical or archeological interest is found, the contractor shall cease operations affecting the find and shall notify the Owner who shall notify the Director of Historic Preservation Office, State Historical Department, East 12th and Grand, Des Moines, Iowa 50319. No further disturbance of the deposits shall ensue until the contractor has been notified by the owner that he may proceed. The owner will issue a notice to proceed only after the state official has surveyed the find and made a determination to the Department of Natural Resources and the owner. Compensation to the contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the specifications.
- B. Authority for this provision derives from the National Historic Preservation Act and 36 CFR Part 800.11. If human remains are discovered then state law also applies.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Methods of Measurements and Basis for Payments
 - 2. Measurement
 - 3. Unit Prices
 - 4. Schedule of Values
 - 5. Incidental Contract Items
 - 6. Applications for Payment
 - 7. Change Procedures
 - 8. Defect Assessment
 - 9. Allowances
 - 10. Alternates
 - 11. Additional Requirements

1.02 METHODS OF MEASUREMENTS AND BASIS FOR PAYMENTS

- A. All work to be performed under this contract shall be paid for at the price(s) stated in the Bid Form. Unit price payments will be based upon the measurement of actual quantities furnished and installed in accordance with the Contract Documents and accepted by Engineer, except for bid items to be paid for using plan quantities. Lump sum payments will be based upon completed and accepted items in accordance with the work specified and as shown on the Drawings.
- B. Payment for the items set forth herein, as further specified herein, shall include full compensation to be received by Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, mobilization and demobilization, utilities, coordination, taxes, materials, commissions, transportation and handling, traffic control, barricades, signs, lights, and other traffic control devices, bonds, permit fees, insurance, overhead and profit, incidentals appurtenant to the items of work being described and performing all operations as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). Such compensation shall also include payment for any loss or damages arising directly or indirectly from the work, or from any discrepancies between the actual quantities of work and those shown in the Contract Documents, or from any unforeseen difficulties, which may be encountered during the prosecution of the work until the final acceptance by Owner. Any material, equipment or operation not specifically mentioned shall be considered to be incidental to the lump sum or unit prices. Final payment will only be made for completed and accepted work.
- C. Contractor's attention is called to the fact that the contract prices set forth in the bid form establish the total price for completing the work in its entirety. Should Contractor feel that the cost of any item of work has not been established in a bid item, Contractor shall include the cost for that work in a bid item, so that Contractor's proposal for the project reflects the total price for completing the work in its entirety as specified and indicated on the drawings.

1.03 MEASUREMENT

- A. The quantities for unit price payment under this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by Engineer, unless otherwise stated in

the Bid Item Descriptions herein or on the Drawings that payment will be by plan quantity or limited to the payment limits specified or indicated. Lump sum item payment under this Contract shall be in accordance with the Schedule of Value Items as described in the Submittals Section, unless otherwise specified.

1. Clean up of the construction area is an integral part of every bid item and shall be accomplished prior to submission for payment.
- B. The following abbreviations shall apply to quantities measured:
 1. AC: acre
 2. CF: cubic foot
 3. CY: cubic yard
 4. EA: each
 5. LF: lineal foot
 6. LS: lump sum
 7. SF: square foot
 8. SY: square yard
 9. TON: ton
 10. VF: vertical foot

1.04 UNIT PRICES

- A. Authority: Measurement methods are delineated in the individual specification sections or as indicated on the Drawings.
- B. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- C. Take measurements and compute quantities. The Engineer will verify measurements and quantities.
- D. Unit Quantities: Quantities and measurements indicated in the Bid Form are for contract purposes only. Quantities and measurements supplied or placed in the Work shall determine payment.
 1. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.
- E. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.
- F. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit sum/price for Work which is incorporated in or made necessary by the Work.
- G. Measurement of Quantities:
 1. Weigh Scales: Inspected, tested and certified by the applicable state or federal Weights and Measures department within the past year.
 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
 3. Metering Devices: Inspected, tested and certified by the applicable state or federal department within the past year.
 4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
 5. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

6. Measurement by Area: Measured by square dimension using mean length and width or radius.
7. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.05 SCHEDULE OF VALUES

- A. Unit price work will be the Schedule of Values used as the basis for reviewing Applications for Payment.
- B. For lump sum contracts, furnish a statement allocating portions of the Contract Sum to various portions of the Work which will be used as the basis for reviewing Applications for Payment.
 1. Submit preliminary Schedule of Values within 10 days after the effective date of the Agreement and before the Preconstruction Conference.
 2. At the Preconstruction Conference, the preliminary Schedule of Values will be reviewed for acceptability by Engineer.
 3. Within 10 days after the Preconstruction Conference, and before submittal of progress payments, make corrections and adjustments as necessary to obtain an acceptable Schedule of Values and resubmit to Engineer.
- C. Format and Content:
 1. Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each specification section.
 2. Include the following project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Engineer.
 - c. Engineer's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 3. Arrange the Schedule of Values per specification section with the following subdivisions, description of work and dollar values for each:
 - a. Subcontractor work.
 - b. Manufacturer or fabricator.
 - c. Supplier.
 - d. Contractor work.
 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 6. 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.
 7. 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.
 8. Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit cost allowances as a product of the unit cost multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

9. 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.

1.06 INCIDENTAL CONTRACT ITEMS

- A. The following list includes, but is not limited to, major items that are incidental to the project and will not be paid for as separate bid items. Other items may be designated as incidental under certain bid items.

1. Dewatering and handling storm water flow during construction
2. Temporary sheeting and shoring
3. Excavation, verification and protection of existing utilities
4. Construction fencing
5. Coordination and cooperation with utility companies
6. Coordination and cooperation with affected property owners
7. Coordination and cooperation with the Owner
8. Coordination and cooperation with railroad access, personnel and scheduling
9. Protection of existing utilities and light poles
10. Site cleanup
11. Locating of existing utilities, potholing if necessary
12. Monitoring weather conditions
13. Finish grading
14. Watering of seeded and sodded areas
15. Repair of field tiles, if encountered
16. Dust control measures
17. Construction staging & phasing
18. Working backfill to reduce moisture content
19. Curb and pavement backfill

1.07 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as recommended by Engineer and approved by Owner.
- B. The date for each progress payment is the last day of each month, or as may be established by Owner. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 5 business days before the date for each progress payment.
- C. Requests for progress payments shall be at least 5 business days before the date established for each progress payment, but not more often than once a month. Use forms provided by Engineer for applications for payment.
- D. Application for Payment Form: EJCDC C-620 Contractor's Application for Payment.
- E. Application Preparation Procedures
 1. Contractor shall determine actual quantities and classifications of Work performed, for review and approval by Engineer.
 - a. Preliminary determinations will be reviewed with Contractor before completing Application for Payment.

- b. Contractor shall prepare the Application for Payment based on Engineer's decision on actual quantities and classifications.
 - c. Contractor shall submit 3 original copies of Application for Payment to Engineer for certification of all 3 original copies.
 - 1) If approved by Engineer, Contractor may submit one signed Application for Payment electronically in pdf file format.
 - d. ENGINEER will submit the Application for Payment with recommendation to Owner.
 - 2. For a lump sum price contract, Contractor shall prepare a preliminary determination for payment based on the approved Schedule of Values and review with Engineer before completing Application for Payment.
 - a. Submit all 3 original signed copies of Application for Payment to Engineer with signed certification within time frame agreed to at the Preconstruction Conference.
 - 1) If approved by Engineer, Contractor may submit one signed Application for Payment electronically in pdf file format.
 - b. Engineer will submit the Application for Payment with recommendation to Owner.
 - 3. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
 - a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.
 - b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.
 - c. Evidence that the materials and equipment are covered by property insurance.
 - 4. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- F. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
- 1. Schedule of Values.
 - 2. Contractor's construction schedule.
 - 3. Copies of building and other permits.
 - 4. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- G. 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.
 - a. Submittal of Record Drawings.
 - b. Completion of items specified for completion after Substantial Completion.
 - c. Assurance that unsettled claims will be settled.
 - d. Assurance that Work not complete and accepted will be completed without undue delay.
 - e. Removal of temporary facilities and services.
 - f. Removal of surplus materials, rubbish, similar elements.
 - g. Final cleaning.
 - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees and similar obligations were paid.
 - 3. Product warranties.
 - 4. Updated final statement, accounting for final changes to the Contract Sum.

5. Consent of Surety to Final Payment.
6. Final lien waivers as evidence that claims have been settled.
7. Final liquidated damages settlement statement.

1.08 CHANGE PROCEDURES

- A. Submittals: Submit name of the individual authorized to receive change documents and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on EJCDC® C942 "Field Order."
- C. Engineer may issue a Notice of Change or request for Work Change Proposal which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within 7 days.
 1. Proposal Requests are for information only. Do not consider them instructions either to stop Work in progress or to execute the proposed change.
 2. After receipt of Proposal Request, submit a quotation estimating cost adjustments to Contract Sum and Contract Time necessary to execute change.
 3. Submit response within time specified in Proposal Request.
 - 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 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 Contract Time.
- D. Contractor may propose changes by submitting a request for change to Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01 25 13.
- E. Stipulated Sum/Price Change Order: Based on Notice of Change and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Engineer.
 1. Change Order Form: EJCDC® C 941, Change Order form.
- F. Unit Price Change Order: For contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
 1. Change Order Form: EJCDC® C 941, Change Order form.
- G. Work Change Directive: Engineer may issue a Work Change Directive on EJCDC® C 940 instructing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.
 1. Documentation: Maintain detailed records on a time and material basis of work required by Work Change Directive.
 2. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to Contract.

- H. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
 - 1. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
 - 2. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
 - 3. Change Order Form: EJCDC® C 941, Change Order form.
- I. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- J. Correlation of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.

1.09 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer, it is not practical to remove and replace the Work, Engineer will direct an appropriate remedy or adjust payment.
- C. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of Engineer.
- D. The defective Work will be partially repaired to the instructions of Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of Engineer.
- E. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- F. The authority of Engineer to assess the defect and identify payment adjustment is final.
- G. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

1.10 ALLOWANCES

- A. Measurement and Payment for Allowances, if any, shall be in accordance with Section 01 21 00.

1.11 ALTERNATES

- A. Measurement and Payment for Alternates, if any, shall be in accordance with Section 01 23 00.

1.12 ADDITIONAL REQUIREMENTS

- A. Initial Application for Payment:
 - 1. Coordinate submittals as required by Section 01 33 00.

2. Applications for Payment will not be considered if copies of required submittals have not been received by Engineer.
- B. Substantial Completion:
1. Coordinate submittals as required by Sections 01 33 00 and 01 70 00.
 2. Administrative actions which must precede or coincide with submittal of Substantial Completion Application for Payment include:
 - a. Provide keys to all locks for Owner's access.
 - b. Submittal of Operation and Maintenance Manual(s)
 - c. Submittal of Contractor's Record Drawings.
 3. Following issuance of Certificate of Substantial Completion, submit Application for Payment.
 4. Applications for Payment will not be considered if copies of required submittals have not been received by Engineer.
- C. Final Payment Application:
1. Coordinate submittals as required by Sections 01 33 00 and 01 70 00.
 2. Administrative actions which must precede or coincide with submittal of final Application for Payment include:
 - a. Completion of Project requirements.
 - b. Completion of items specified for completion after Substantial Completion.
 - c. Assurance that unsettled claims will be settled.
 - d. Assurance that Work not complete and accepted will be completed without undue delay.
 - e. Removal of temporary facilities and services.
 - f. Removal of surplus materials, rubbish, similar elements.
 - g. Final cleaning.
 3. Applications for Payment will not be considered if copies of required submittals have not been received by Engineer.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 25 13
PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Administrative and procedural requirements for handling requests for substitutions.
- B. The following is not included in this Section:
 - 1. Procedural requirements governing Contractor's selection of product options (Section 01 60 00).

1.02 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment and methods of construction required by Contract Documents proposed by Contractor.
- C. The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by Owner or Engineer.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.03 SUBMITTALS

- A. Substitution Request Prior to Bid: For a Product Substitution to be considered, the following conditions must be met:
 - 1. All requests must be submitted in writing no later than 10 calendar days prior to the date for receipt of the bids.
 - 2. Submit each request for substitution (one material or product per form) on the attached "Substitution Request Form" attached at the end of this section (either duplicated from the Project Manual or available from Engineer's office). Submittals not accompanied by this form properly filled in and endorsed will be discarded without review. NO EXCEPTIONS.
 - 3. Identify any impact of the substituted product on related items.
 - 4. Approved items will be listed in addenda. Requests for substitution will be responded to at Engineer's earliest convenience.
- B. All substitutions permitted on addenda must meet or exceed requirements of the specifications including, but not limited to:
 - 1. Warranty.
 - 2. Products designated to meet LEED requirements.
- C. Substitution Request After Bid: Requests for substitution will be considered if received within 60 days after commencement of the work. Requests received more than 60 days after commencement of the work may be considered or rejected at the discretion of Engineer.
 - 1. Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for change order proposals.
 - 2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related specification section and Drawing numbers.

3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Product data, including drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d. 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 become necessary to accommodate the proposed substitution.
 - e. A statement indicating the substitution's effect on Contractor's construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall contract time.
 - f. Cost information, including a proposal of the net change, if any in the contract sum.
 - g. Certification by Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated.
 - h. Include Contractor's waiver of rights to additional payment or time, which may subsequently become necessary because of the failure of the substitution to perform adequately.

D. Substitution Conditions:

1. Contractor's substitution request will be received and considered by Engineer when one or more of the following conditions are satisfied, as determined by Engineer, otherwise requests will be returned without action except to record noncompliance with these requirements:
 - a. Extensive revisions to Contract Documents are not required.
 - b. Proposed changes are in keeping with the general intent of Contract Documents.
 - c. The request is timely, fully documented and properly submitted.
 - d. Contractors and suppliers will be expected to provide the specified product unless prior approval is received from Engineer's office in sufficient time so that all bidders can be notified through an addendum.
 - e. The specified product or method of construction cannot be provided within the contract time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
 - f. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - g. A substantial advantage is offered to Owner, in terms of cost, time, energy conservation, or other considerations of merit, after deducting offsetting responsibilities Owner may be required to bear. Additional responsibilities for Owner may include additional compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, or separate contractors, and similar considerations.
 - h. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where Contractor certifies that the substitution will overcome the incompatibility.
 - i. The specified product or method of construction cannot be coordinated with other materials, and where Contractor certifies that the proposed substitution can be coordinated.

- j. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where Contractor certifies that the proposed substitution provides the required warranty.
 - k. Where a proposed substitution involves more than one prime contractor, each contractor shall cooperate with the other contractors involved to coordinate the work, provide uniformity and consistency, and to assure compatibility of products.
- E. Limitations: Contractor's submittal and Engineer's acceptance of Shop Drawings, Product Data, or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- F. Substitution Causing Redesign: Engineer time for redesign as a result of substitution, will be charged to Owner, then deducted by Construction Change Directive from Contract Amount.
- G. Engineer's Action:
 - 1. Request Prior to Bid: If approved, substitution will be included in an addendum.
 - 2. Request After Bid:
 - a. If necessary, within one week of receipt of the request for substitution, Engineer will request additional information or documentation necessary for evaluation of the request.
 - b. Within two weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, Engineer will notify Contractor of acceptance or rejection of the proposed substitution.
 - c. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name.
 - d. Acceptance will be in the form of a change order.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: Attn: Rob Allen, P.E.
rallen@sehinc.com
Short Elliott Hendrickson Inc.
5414 NW 88th Street, Ste 140
Johnston, IA 50131

PROJECT: S Marshall Street Mill & Overlay Project, Boone, Iowa

SECTION NO.	ARTICLE NO.	SPECIFIED PRODUCT	PROPOSED SUBSTITUTION
A.		Does the substitution affect dimensions shown on Drawings?	Yes ☐ No ☐
B.		Does the substitution affect other trades?	Yes ☐ No ☐
C.		Does the manufacturer's guarantee differ from that specified?	Yes ☐ No ☐
D.		If you indicated "Yes" to Items A, B, or C above, attach a thorough explanation on your company letterhead.	
E.		If there are other differences between proposed substitution and specified product, attach a thorough explanation on your company letterhead. If differences are not noted and acknowledged in writing by Engineer, product must comply with specification requirements.	
F.		The proposed substitution was used within the last 24 months on the following project: Project Name _____ Location _____ Engineer _____ Telephone No. _____	
G.		Has the proposed substitution been used on an SEH project within the last 12 months? Yes ☐ No ☐ If yes, which project? _____	

All questions must be answered. Incomplete forms will not be reviewed.

Submitted By: _____

Signature _____

Firm _____

Address _____

Date _____

Phone _____

E-mail _____

For Use by Design Consultant

- ☐ Not Accepted, Not Enough Information

☐ Not Accepted, Does Not Appear to be Equal

☐ Accepted ☐ Accepted as Noted

☐ Received Too Late

By _____

Date _____

Remarks _____

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Coordination by General Contractor
 - 2. Job Site Administration
 - 3. Submittals
 - 4. Field Conditions
 - 5. Preconstruction Meeting
 - 6. Progress Meetings
 - 7. Pre-installation Meetings
 - 8. Cutting and Patching
 - 9. Special Procedures

1.02 COORDINATION BY GENERAL CONTRACTOR

- A. Coordinate use of premises under direction of Owner.
- B. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
 - 1. Coordinate activities for mutual benefit and cooperate to facilitate the general progress of the Work.
 - 2. Each subcontractor shall be thoroughly familiar with all provisions governing the Work of other contractors and shall obtain from such contractors all information as may be required to coordinate Work with theirs.
 - 3. Each trade shall perform its Work in proper sequence and arrangement in relation to other activities and shall join his Work to that of others in accordance with the intent of the Drawings and specifications.
 - 4. Each trade shall give due notice and proper information for any special provisions necessary in the placing or setting of Work that may come in contact with Work of other contractors.
- C. Inspect the Contract Documents for Work of others that is inter-related, and afford other trades every reasonable opportunity for the installation of their Work. Coordinate Work of various specification sections having interdependent responsibilities.
- D. Prepare coordination drawings where off-site fabricated products and materials are by separate entities and must accurately interface. Coordination drawings shall indicate how Work, shown by separate Shop Drawings, will interface and shall indicate sequence for installation.
- E. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- F. Coordinate space requirements, supports, and installation of mechanical and electrical Work, which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- G. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

- H. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.
- I. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.03 JOB SITE ADMINISTRATION

- A. Supervise and direct the Work. Employ and maintain a full time, qualified supervisor or superintendent to act as Contractor's representative at the Site.
- B. Enforce good order and conduct among contractors, installers, and construction employees.
- C. Require installers to inspect conditions under which Work is to be performed. Installer shall report all unsatisfactory conditions in writing to Contractor. Do not proceed with Work until unsatisfactory conditions have been corrected.
- D. Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation to the extent that these instructions and recommendations are more explicit or more stringent than requirements indicated in the Contract Documents. Where manufacturer provides contradictory instructions, notify Engineer immediately and request clarifications.
- E. Recheck measurements and dimensions of the Work, as an integral step of starting each installation.
- F. Coordinate enclosure of Work with required inspections and tests, so as to minimize necessity of uncovering Work for that purpose.
- G. Where mounting heights are not indicated, mount individual units of work at industry recognized standard mounting heights for the particular application indicated. Refer questionable mounting height choices to Engineer.
- H. Supervise performance of the Work to ensure that none of the Work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- I. Clean and perform maintenance as frequently as necessary throughout construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Coordinate completion and cleanup of Work.

1.04 SUBMITTALS

- A. Provide listing of Contractor's principal staff assignments and consultants, including name, home and work addresses, and telephone numbers.
- B. Provide supervisors or superintendent's name, home and work address, and telephone numbers.
- C. Provide names, work address, telephone numbers, samples of signature, and limits of authority of each individual authorized to sign change orders, field modifications, and monthly pay requests for Contractor.

1.05 FIELD CONDITIONS

- A. Before ordering material or commencing Work, check and verify all dimensions and conditions. Notify Engineer of any omissions or discrepancies immediately.
- B. Field measurements shall be furnished in a timely manner to suppliers and fabricators who require them to complete their Work. Ascertain the requirement for such measurements at the earliest practical date and make every reasonable effort to expedite the affected Work.
- C. Conflicts: Engineer has exercised reasonable professional care to ensure there are no conflicts between the Work of the various trades. Such conflicts, however, may exist and no warranty to the contrary is made or implied.

1.06 PRECONSTRUCTION MEETING

- A. Engineer will schedule a preconstruction conference after the Contract Times start to run and before Work at the site is started.
- B. Authorized representatives of the Owner, Engineer, Contractor and its superintendent; major subcontractors; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to make binding decisions of matters relating to the Work.
- C. Agenda:
 - 1. Items of significance that could affect progress including, but not limited to:
 - a. Submittal of executed bonds and insurance certificates.
 - b. Execution of Owner-Contractor Agreement if not previously completed.
 - c. Distribution of Contract Documents.
 - d. Use of premises by Owner and Contractor:
 - 1) Owner's requirements and occupancy.
 - 2) Construction facilities provided by Owner (if any).
 - 3) Temporary utilities provided by Owner (if any).
 - 4) Use of premises office, work, and storage areas.
 - e. Security and housekeeping procedures.
 - f. Submittals:
 - 1) Final list of subcontractors, suppliers, products.
 - 2) Schedule of Values.
 - 3) Progress Schedule.
 - 4) Designation of responsible personnel:
 - a) Contractor's principal staff and consultants.
 - b) Contractor's superintendent or job foreman acting as Contractor's Site representative.
 - c) Owner's and Contractor's designated individuals authorized to sign Change Orders, field modifications, and monthly pay requests.
 - g. Procedures for processing:
 - 1) Field decisions.
 - 2) Submittals:
 - a) Shop Drawings.
 - b) Product Data.
 - c) Samples.
 - 3) Substitutions.
 - 4) Applications for Payments.
 - 5) Proposal requests.
 - 6) Change Orders.
 - 7) Contract Closeout.
 - h. Schedules:

- 1) Tentative construction schedule.
- 2) Critical Work sequencing.
- 3) Progress meetings.
- i. Procedures for testing.
- j. Procedures for maintaining Record Documents.
- k. Requirements for startup of equipment: Inspection and acceptance of equipment put into service during construction period.
- l. Equipment deliveries and priorities.
- m. Contractor responsibilities:
 - 1) Safety procedures.
 - 2) First aid.

1.07 PROGRESS MEETINGS

- A. Progress meetings at the Project site will be scheduled by the Engineer at regular intervals.
- B. In addition to representatives of Owner, Engineer, and Contractor, each subcontractor, supplier, or 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 conference shall be familiar with the Project and authorized to make binding decisions on matters relating to the Work.
- C. Items of significance will be reviewed that could affect progress.
- D. Review progress since the last meeting. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether scheduled revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
- E. Agenda:
 - 1. Items of significance that could affect progress, including topics for discussion as appropriate to current status of Project, minimally:
 - a. Approval of minutes of last meeting.
 - b. Review of Work progress.
 - c. Field observations, problems and decisions.
 - d. Identifications of problems which impede planned progress.
 - e. Review of submittal schedule and status of submittals.
 - f. Review of off-site fabrication and delivery schedules.
 - g. Maintenance of progress schedule.
 - h. Corrective measures to regain projected schedules.
 - i. Planned progress during succeeding Work period.
 - j. Coordination of projected progress.
 - k. Maintenance of quality and work standards.
 - l. Effect of proposed changes on progress schedule and coordination.
 - m. Other business relating to Work.
- F. Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule within 5 days after each meeting.

1.08 PRE-INSTALLATION MEETINGS

- A. Conduct a pre-installation meeting at the Project site at least 7 days before each construction activity that requires coordination with other construction.
- B. The 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 Engineer of scheduled meeting dates.
- C. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
 - 1. Contract Documents.
 - 2. Options.
 - 3. Related Change Orders.
 - 4. Purchases.
 - 5. Deliveries.
 - 6. Shop drawings, product data, and quality control samples.
 - 7. Review of mockups.
 - 8. Possible conflicts.
 - 9. Compatibility problems.
 - 10. Time schedules.
 - 11. Weather limitations.
 - 12. Manufacturer's recommendations.
 - 13. Warranty requirements.
 - 14. Compatibility of materials.
 - 15. Acceptability of substrates.
 - 16. Temporary facilities.
 - 17. Space and access limitations.
 - 18. Governing regulations.
 - 19. Inspecting and testing requirements.
 - 20. Required performance results.
 - 21. Recording requirements.
 - 22. Protection.
- D. Record significant discussions and agreements and disagreements of each conference and the approved schedule. Promptly distribute the record of the meeting to everyone concerned including Owner and Engineer.
- E. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

1.09 REQUEST FOR INTERPRETATION (RFI)

- A. Contractor's tool to request information.
- B. Submit on form at end of this Section or on Contractor's form approved by Engineer.

- C. If latent or unforeseen conditions require modifications to Contract, Contractor may propose changes by submitting request for a change to Engineer.
 - 1. Provide a complete description of proposed change, including a statement outlining reasons for the change and the effect of the change on the Work.
 - 2. Indicate the effect of the proposed change on Contract Sum and Contract Time.
 - 3. 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.
 - 4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 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 Contract Time.
 - 6. Comply with requirements in Section 01 25 13 if proposed change requires substitution of a product or system for product or system specified.
- D. Report to Engineer on this form any Contract Document requirements known to be in nonconformance with applicable laws, statutes, ordinances, building codes, and rules and regulations.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affect:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
- D. Fit the several parts together, to integrate with other Work.
- E. Uncover Work to install or correct ill-timed Work.
- F. Remove and replace defective and non-conforming Work.
- G. Remove samples of installed Work for testing.
- H. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- I. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- J. Cut masonry and concrete materials using masonry saw or core drill.
- K. Restore Work with new products in accordance with requirements of Contract Documents.
- L. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- M. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- N. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of the penetrated element.
- O. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

- P. Identify hazardous substances or conditions exposed during the Work to Engineer for decision or remedy.

3.02 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- H. Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring products and finishes to original or specified condition.
- I. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with a neat transition to adjacent finishes.
- J. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- K. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Engineer for review.
- L. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition; to Engineer for review.
- M. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.
- N. Patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections.
- O. Finish surfaces as specified in individual product sections.

END OF SECTION

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SECTION 01 32 16
PROGRESS SCHEDULES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Format
 - 2. Content
 - 3. Revisions to Schedules
 - 4. Submittals
- B. Related Sections:
 - 1. Section 01 11 00 - Summary of Work
 - 2. Section 01 29 10 - Applications for Payment
 - 3. Section 01 33 00 - Submittal Procedures

1.02 FORMAT

- A. Prepare schedules as a horizontal bar chart with separate bar for each major portion of Work or Operation, identifying first workday of each week.
- B. Sequence of Listings: The Table of Contents of this Project Manual. The chronological order of the start of each item of work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Minimum 11 by 17 inches. Multiples of 8-1/2 by 11 inches.

1.03 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify Work of separate stages, separate floors, and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01 11 00.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- G. Provide separate schedule of submittal dates for Shop Drawings, Product Data, and Samples, including Owner furnished products and products identified under Allowances, and dates reviewed. Submittals will be required from Engineer. Indicate decision date for selection of finishes.
- H. Indicate delivery dates for Owner furnished products and products identified under Allowances.
- I. Coordinate content with Schedule of Values.

1.04 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.

- C. Provide narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.

1.05 SUBMITTALS

- A. Submit initial schedules within 10 days after date of Notice to Proceed. After review, resubmit required revised data within 10 days.
- B. Submit revised Progress Schedule with each Application for Payment.
- C. Submit two (2) copies which will be retained by Engineer.
- D. Distribute copies of reviewed schedules to Site file, subcontractors, suppliers, and other concerned parties.
- E. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Requirements Included:
 - 1. Procedures
 - 2. Construction Progress Schedule
 - 3. Schedule of Values
 - 4. Shop Drawings
 - 5. Product Data
 - 6. Samples
 - 7. List of Proposed Subcontractors
 - 8. List of Proposed Suppliers
 - 9. Material Safety Data Sheets

1.02 PROCEDURES

- A. Electronic Submittals: Deliver submittals to Engineer via Newforma Project Center submittal process described below.
- B. Transmit each item under Engineer-accepted form.
 - 1. Identify Project, Contractor, subcontractor, major supplier.
 - 2. Identify pertinent Drawing sheet and detail number, and specification Section number.
 - 3. Identify deviations from Contract Documents.
 - 4. Provide space for Engineer and consultant review stamps.
- C. Submit initial progress schedules and schedule of values in duplicate within 10 days after date of Owner-Contractor Agreement. After review by Engineer, revise and resubmit as required.
- D. Submit revised schedules with each Application for Payment, reflecting changes since previous submittal.
- E. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- F. After Engineer review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- G. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.

1.03 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
 - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punch list, and any other document any participant wishes to make part of the project record.

2. Contractor and Engineer are required to use this service.
 3. It is Contractor's responsibility to submit documents in allowable format.
 4. Subcontractors, suppliers, and Engineer's consultants will be permitted to use the service at no extra charge.
 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Submittal Service: The selected service is:
1. Newforma Project Center. www.newforma.com
 2. The Engineer will establish and administer the Newforma Project Center electronic submittals process. The electronic submittal software charges are the responsibility of the Engineer.
 3. Training is available regarding use of the submittal software and web-based program. The Engineer will arrange the time and location for such training if desired by the Contractor.
- C. Submit .pdfs of shop drawings and product data to the Engineer using an agreed naming convention.
- D. The Electronic Document Submittal Service is not intended for color samples, color charts, or physical material samples.

1.04 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit horizontal bar chart with separate bar for each major trade or operation, identifying first work day of each week.

1.05 SCHEDULE OF VALUES

- A. Submit typed schedule on Contractor's standard form **OR** media-driven printout.
- B. Format:
1. Table of Contents of this Project Manual.
 2. Identify each line item with number and title of the major technical sections.
- C. Include in each line a directly proportional amount of Contractor's overhead and profit.
- D. Provide a sub schedule for each separate stage of Work specified.
- E. Revise schedule to list Change Orders for each application for payment submittal.

1.06 SHOP DRAWINGS

- A. Shop Drawings will not be accepted for review by Engineer until after they have been checked and approved by the Contractor as evidenced by his approval stamp and signature.
- B. Submit all Shop Drawings electronically in pdf format to the Engineer via Electronic Document Submittal Service.
- C. Submit showing system fabrication, installation drawings including plans, elevations, section details of components, and configuration between system and adjoining systems.

1.07 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options, testing compliance, warranty, and other data; supplement manufacturers' standard data to provide information unique to the Work.

- B. Submit all Product Data electronically in pdf format to the Engineer via Electronic Document Submittal Service.
- C. Submit manufacturer's printed instructions for delivery, storage, assembly, installation start-up, adjusting, finishing, and maintenance.

1.08 SAMPLES

- A. Submit full range of manufacturer's standard colors, textures, and patterns for Engineer's selection. Submit samples for selection of finishes within 21 days after date of Contract.
- B. Submit samples to illustrate functional characteristics of the product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing Work.
- C. Include identification on each sample, giving full information.
- D. Submit the number specified in respective specification section; 1 will be retained by Engineer. Reviewed samples that may be used in the Work are indicated in the technical sections.
- E. Field Samples:
 - 1. Provide field samples of finishes as required by individual technical section.
 - 2. Install sample complete and finished.
 - 3. Acceptable samples in place may be retained in completed Work.

1.09 LIST OF PROPOSED SUBCONTRACTORS

- A. Submit a list of subcontractors who will provide Work on the Project.
- B. The submitted list shall include:
 - 1. Name of Subcontractor
 - 2. Address
 - 3. Type of work to be provided
 - 4. Contact list for administrative and supervisory personnel.

1.10 LIST OF PROPOSED SUPPLIERS

- A. Submit a list of suppliers who will provide materials, equipment or components principle to the Work.
- B. The submitted list should include:
 - 1. Name of supplier.
 - 2. Address.
 - 3. Equipment, material or component to be provided.
 - 4. Contact list for administrative and supervisory personnel.

1.11 MATERIAL SAFETY DATA SHEETS

- A. Submit SDS to the Site on all products with chemical emissions and as called for in individual technical sections.

1.12 ENGINEER'S REVIEW RESPONSIBILITIES, PROCEDURES AND DEFINITIONS

- A. General
 - 1. Review of shop drawings, data, and samples will be for general conformance with the design concept and Contract Documents. They shall not be construed:
 - a. As permitting any departure from the Contract requirements
 - b. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials

- c. As approving departures from details furnished by the Engineer, except as otherwise provided herein
 - d. As approving substitutions to specified products or manufacturers.
 - 2. The Engineer does not review for verification of quantities, weights, dimensions, or means and methods.
 - 3. Partial review status will not be given to a submittal. Entire submittal shall be either acceptable or the entire submittal must be resubmitted with corrections as clarified by status definitions below.
 - 4. Submittals will be reviewed in order received unless Contractor requests a revised order of review, in writing. All submittals shall be submitted sufficiently in advance of construction requirements to provide no less than 21 calendar days for review from the time the Engineer receives them. No less than 30 calendar days will be required for major equipment that requires review by more than one engineering discipline.
- B. All submittals that have been reviewed by Engineer will have Engineer's Review Stamp affixed, initialed, and dated, indicating Engineer's review action. No submittals shall be used for construction unless they bear the initialed Engineer's Review Stamp or indicated as reviewed and found acceptable by Engineer as per the Newforma electronic review process. Possible review actions by Engineer are:
- 1. REVIEWED/NO EXCEPTIONS. Engineer's review did not detect deviations from conformance and intent of the Contract Documents. Fabrication, delivery, and installation may proceed as indicated in the submittal and in accordance with the Contract Documents.
 - 2. FURNISH AS NOTED. Engineer's review did not detect major deviations from conformance and intent of the contract documents; minor discrepancies and/or deficiencies are noted. Corrected copies are not required; however, the item(s) to be furnished are to be furnished in accordance with the Engineer's comments. If the Contractor elects to take exception to any comments, then corrected copies (with supplemental explanatory data) are to be re-submitted to the Engineer similar to a Revise and Resubmit status process.
 - 3. REVISE AND RESUBMIT. Engineer's review found major discrepancies and/or deficiencies, and corrected submittals (in their entirety) are required to determine conformance and intent to the contract documents. Make revisions noted and re-submit entire submittal for further review.
 - 4. REJECTED. Engineer's review concluded that the item(s) submitted do not meet the requirements of the "Or Equal" allowance, or a "Substitution" has been provided without proper approval process. An additional submittal cycle is required containing suitable items to determine conformance and intent of the contract documents.
- C. Resubmittals
- 1. Re-submittals will be handled in the same manner as first submittals. On re-submittals, direct specific attention, in writing on the transmittal letter and on re-submitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the Engineer, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. Make corrections to any work done because of this type revision that is not in accordance with the Contract Documents as may be required by the Engineer.
 - 2. Engineer will review all initial information for each submittal. Contractor shall reimburse Owner for the Engineer's charges for review of additional re-submittals. Contractor will be charged for review of all re-submittals over 20% of the initial submittals.
 - a. **EXAMPLE:** If the Contractor has a total of 50 initial submittals, there will be no charge for reviewing a combined total of 60 submittals and re-submittals. There will be a charge to review all submittals and re-submittals in excess of 60.
 - 3. The need for more than one re-submittal or any other delay in obtaining Engineer's review of submittals, will not entitle Contractor to extension of the contract time unless delay of the Work is the direct result of a change in the Work authorized by a Change Order or failure of Engineer to review and return any submittal to Contractor within the specified review period.

4. An assigned review status of REVISE AND RESUBMIT or REJECTED requires the original full number of submittals to be resubmitted free of the Engineers previous correction marks and review status stamp. The Engineer reserves the right to retain the same number of copies for each review cycle.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 40 00
QUALITY CONTROL REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes quality control of the installation of the work.
- B. Contractor Responsibility: These required services do not relieve Contractor of responsibility for compliance with any requirements

1.02 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. Neither the contractual relationships, duties, nor responsibilities of the parties in Contract nor those of Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.
- F. Industry Standards - "Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction," ASTM E329.
- G. IBC, Section 1704 - Special Inspections
- H. American Society for Testing and Materials (ASTM):
 - 1. C90 - Standard Specification for Loadbearing Concrete Masonry Units
 - 2. C129 - Standard Specification for Nonloadbearing Concrete Masonry Units
 - 3. C136 - Standard Method for Sieve Analysis of Fine and Coarse Aggregates
 - 4. C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete
 - 5. C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
 - 6. C270 - Standard Specification for Mortar of Unit Masonry
 - 7. C1019 - Standard Test Method for Sampling and Testing Grout
 - 8. D698 - Laboratory Compaction Using Standard Effort
 - 9. D2216 - Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
 - 10. D2922 - Density of Soil by Nuclear Methods
 - 11. D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
 - 12. D4253 and D4254 - Test Methods for Maximum Index Density of Soils using a Vibratory Table and Minimum Index Density of Soils and Calculation of Relative Density

1.03 DEFINITIONS

- A. Quality Control: Inspections, tests, related actions including reports, performed by independent agencies and governing authorities, as well as directly by Contractor.

1.04 QUALITY ASSURANCE

- A. Testing:
 - 1. Contractor shall employ and pay for services of an independent testing laboratory (Testing Agency) to perform specified inspection and testing as specified for each particular type of work.
 - 2. Employment of testing agency shall in no way relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.
- B. Testing Laboratory/Agency: Select laboratory qualified in accordance with referenced ASTM standard to acceptance of Engineer.
- C. Codes and Standards: Comply with pertinent codes, regulations, selected standards of ASTM.

1.05 RESPONSIBILITIES

- A. Contractor Responsibility:
 - 1. Contractor shall coordinate testing per the schedule included in this section. The schedule includes minimum testing requirement for the Work. Additional testing may be required and additional coordination shall be considered incidental to the Project.
 - 2. Code Compliance Testing: Quality control required by codes or ordinances, or by plan approval authority, made by legally constituted authority unless otherwise provided in Contract Documents.
 - 3. Verification of conformance of the Work within specified construction tolerances.
 - 4. Contractor's Convenience Testing.
 - 5. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring inspections and testing services.
 - 6. Provide incidental labor and facilities to:
 - 7. Provide access to Work to be tested.
 - 8. Obtain and handle samples at the Site or at source of products to be tested.
 - 9. Facilitate tests and inspections, and storage and curing of test samples.
 - 10. Coordinate with each independent agency the sequence of activities to accommodate required services with minimum delay in progress of Work and to avoid removing and replacing Work. Schedule times for quality control.
- B. Retest Responsibility:
 - 1. Where results of quality control prove unsatisfactory and do not indicate compliance of related Work with requirements of the Contract Documents, retests are responsibility of Contractor, regardless of whether the original test was Contractor's responsibility.
 - 2. Retest of Work revised or replaced by Contractor is Contractor's responsibility, where required tests were performed on original Work.
 - 3. Retesting costs will be deducted from Contract amount by Change Order.
 - 4. Provide a minimum of 2 retests for each failed test.
- C. Responsibility for Associated Services:
 - 1. Cooperate with independent agencies performing required quality control.
 - 2. Provide such auxiliary services as reasonably requested.
 - 3. These auxiliary services include, but are not necessarily limited to:
 - a. Cooperate with independent agencies performing required quality control.
 - b. Provide such auxiliary services as reasonably requested.
 - c. Contractor to notify testing agency sufficiently in advance of operations to permit assignment of personnel.

- d. Providing access to Work.
- e. Taking samples or assistance with taking samples.
- f. Delivery of samples to test laboratories.
- g. Security and protection of samples and test equipment at Site.

1.06 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on Shop Drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.07 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from the Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.08 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so by Engineer.

1.09 TESTING AND INSPECTION SERVICES

- A. The independent firm shall perform tests, inspections and other services specified in individual specification sections and as required by Engineer.
- B. Testing, inspections and source quality control may occur on or off the project site. Perform off-site testing as required by Engineer or Owner.
- C. Reports shall be submitted by the independent firm to Engineer, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- D. Coordinate and cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
 - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

- E. Testing and employment of testing Independent Testing Agency or Laboratory or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- F. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by Engineer. Payment for re-testing or re-inspection shall be by Contractor at no additional expense to Owner.
- G. Independent Testing Agency or Laboratory Responsibilities:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
 - 6. Perform additional tests required by Engineer.
 - 7. Attend preconstruction meetings and progress meetings.
- H. Independent Testing Agency or Laboratory Reports: After each test, promptly submit two copies of report to Engineer and to Contractor. When requested by Engineer, provide interpretation of test results. Include the following:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and specifications section.
 - 6. Location in the Project.
 - 7. Type of inspection or test.
 - 8. Date of test.
 - 9. Results of tests.
 - 10. Conformance with Contract Documents.
- I. Limits on Testing Authority:
 - 1. Independent Testing Agency or Laboratory or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Independent Testing Agency or Laboratory or laboratory may not approve or accept any portion of the Work.
 - 3. Independent Testing Agency or Laboratory or laboratory may not assume any duties of Contractor.
 - 4. Independent Testing Agency or Laboratory or laboratory has no authority to stop the Work.

1.10 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 10 days in advance of required observations. Observer subject to approval of Engineer.

- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 ADJUSTING

- A. Upon completion of quality control performed on Work, repair damaged Work, restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.

3.04 PROTECTION

- A. Protect Work exposed by or for quality control service activities, and protect repaired Work.

3.05 RESPONSIBILITY FOR ADJUSTING AND REPAIR

- A. Contractor's responsibility, regardless of assignment of responsibility for quality control.

3.06 TESTING AND INSPECTION

- A. See individual specification sections or Drawings for testing required.
- B. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
 - 2. Perform inspections, sampling, testing, and other services specified in individual specification sections and as required by the Engineer.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Engineer and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Engineer.
 - 6. Submit reports of all tests/inspections specified to Engineer, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:

1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs, equipment, tools, storage, and assistance as requested.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Make arrangements with testing agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Secure inspection and acceptance of subgrades and fill layers before subsequent construction is permitted.

3.07 ADDITIONAL TESTS

- A. Owner may choose to have Engineer perform certain inspection and testing activities in addition to those specified as required by the Contractor. Payment for initial Owner/Engineer inspection and testing will be by Owner. Payment for Owner/Engineer retesting required because of non-conformance to specified requirements will be charged to the Contractor by deducting inspection and testing charges from the Contract Sum.

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. This section describes the temporary facilities necessary for the execution of the work by Contractor. The Contractor, in examining the site, shall note that all construction operations and storage of equipment, materials, and tools shall be confined to the limitations of the site and additional lands acquired by the Owner, if any, as defined on the Site Plan/Civil Sheets of the Drawings.
- B. Temporary utilities and controls are incidental to the installation of the work. Provide temporary facilities and controls required for construction activities except, if any, for facilities and controls indicated as provided by the Owner.

1.02 UTILITY USE CHARGES

- A. Include cost or use charges for temporary facilities in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
 - 1. Owner's construction forces.
 - 2. Occupants of Project.
 - 3. Engineer.
 - 4. Testing agencies.
- B. Pay sewer service use charges for sewer usage (portable toilet), by all parties engaged in construction, at Project site.
- C. Pay water service use charges, whether metered or otherwise, for water used by all entities engaged in construction activities at Project Site.
- D. Pay electric power service use charges, whether metered or otherwise, for electricity used by all entities engaged in construction activities at Project Site.

1.03 QUALITY ASSURANCE

- A. Comply with industry standards and with applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
 - 1. Health and safety regulations.
 - 2. Utility company regulations.
 - 3. Police, fire department and rescue squad rules.
 - 4. Environmental protection regulations.
 - 5. NFPA 241 "Standards for Safeguarding Construction, Alterations and Demolition Operations".
 - 6. ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
 - 7. NECA Electrical Design Library "Temporary Electrical Facilities", NFPA 70, and NEMA, NECA and UL standards and regulations for temporary electric service.
- B. Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.04 COORDINATION

- A. Utility interruptions required for tie-ins:

1. Determine requirements, time constraints, etc. for installing temporary service to the Site, or to make connections to existing service.
 - a. Shall be requested by Contractor in writing to Engineer or Owner.
 - b. Shall not commence until Contractor has received written response from Engineer or Owner.
 - c. Engineer/Owner reserves the right to restrict the time and duration of interruption.
2. Arrange with utility companies for service interruption, where necessary, to make connections for temporary services.

1.05 PROJECT CONDITIONS

- A. At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.
- B. Installer of each permanent service shall 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.
- C. The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 1. Keep temporary services and facilities clean and neat.
 2. Relocate temporary services and facilities as required by progress of the Work.

1.06 DRAINAGE CONTROL

- A. Maintain excavations free of water.
 1. Grade Site to drain.
 2. Provide, operate, and maintain pumping equipment.
 3. Protect Site from puddling or running water.

1.07 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.08 EROSION AND SEDIMENT CONTROL

- A. Prevent erosion and sedimentation:
 1. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas.
 2. Minimize amount of bare soil exposed at one time.
 3. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 4. Use selective placement at construction fill and waste areas to avoid erosive surface silts or clays.
 5. Periodically inspect earthwork to detect evidence of erosion and sedimentation.
 6. Promptly apply corrective measures.

1.09 NOISE CONTROL

- A. Comply with local noise ordinances.
- B. Avoid use of tools or equipment that produce harmful noise.
- C. Restrict use of noise-making tools and equipment to hours of use that will minimize noise complaints from persons or businesses near Site.
- D. Provide noise suppression barriers or equipment used to perform the Work.

1.10 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.11 BARRIERS

- A. Provide barriers as required to:
 - 1. Prevent public entry to construction areas.
 - 2. Protect existing facilities, designated plantings and trees, and adjacent properties from damage from construction activities.
- B. Access: Provide barricades and covered walkways as required for public rights-of-way, for public access to, and emergency egress from existing buildings.

1.12 PROTECTION

- A. Shoring and Bracing:
 - 1. Provide temporary shoring, bracing, and protection as required for installation and protection of Work.
 - 2. Ensure adequacy of such items.
 - 3. Repair or replace damaged Work occasioned by inadequate temporary supports.
 - 4. Leave temporary shoring and bracing in place until permanent construction is complete to point where installed Work is properly supported.
- B. Enclosures:
 - 1. Exterior:
 - a. Provide temporary weather-tight closures of openings in exterior surfaces to:
 - 1) Provide acceptable working conditions and protection for materials.
 - 2) To allow for temporary heating.
 - 2. Interior:
 - a. Provide temporary partitions and ceilings as required to:
 - 1) Separate Work areas from Owner-occupied areas.
 - 2) Prevent penetration of dust and moisture into Owner-occupied areas.
 - 3) Prevent damage to existing areas and equipment.
 - b. Construction:
 - 1) Framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.
- C. Installed Work:
 - 1. Provide temporary protection for installed products; control traffic in immediate area to minimize damage.
 - 2. Provide protective coverings at walls, projections, jambs sills, and soffits of openings; protect finished floors and stairs from traffic, movement of heavy objects.
 - 3. Prohibit traffic and storage on waterproofed and roofed surfaces or on lawn and landscaped areas.
- D. Protection of Trees and Plants:
 - 1. All trees and other vegetation which must be removed to perform the Work shall be removed and properly disposed of by the Contractor; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the Drawings. All trees and plants not removed shall be protected against injury from construction operations by the Contractor.

2. The Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades, trimming to prevent damage from construction equipment, and installing underground facilities by hand or tunneling methods. Designated trees shall not be endangered by stockpiling excavated material or storing equipment against the trunk.
 3. When injury or removal of trees designated to be preserved cannot be avoided, or when removal and replacement is indicated on the Drawings, each tree injured beyond repair or removed shall be replaced with a similar tree of the nearest size available.
- E. Damage to Existing Property:
1. The Contractor will be held responsible for any damage to existing structures, Work, materials, or equipment because of his operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, the Owner. The Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other means necessary for such protection.
 2. The Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or personnel to or from the Work. The Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.
- F. Security:
1. Provide security program and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, and theft.
 2. Provide doors in enclosures with self-closing hardware and locks.
 3. Provide temporary locks for doors installed in Work.
- G. Fire Protection:
1. Fire extinguishers shall be non-freeze type such as A-B-C rated dry chemical of not less than 10-pound capacity.
 2. Provide and maintain in working order during entire construction period, a minimum of 1 fire extinguisher in construction area and 1 in field office.
 3. Contractors who maintain enclosed sheds on the premises shall provide and maintain, in an accessible location, a minimum of 1 non-freezing type extinguisher in each shed.
 4. Each Contractor using open flame (i.e., welding or soldering) shall have a 10-pound minimum extinguisher within closest practical distance.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide undamaged materials in serviceable conditions and suitable for use intended.
- B. Provide all required materials and equipment for temporary utilities, services, and facilities.
- C. Used materials and equipment may be used, if acceptable to Engineer.
- D. Provide only materials and equipment that are suitable for intended use and comply with appropriate standards.

2.02 EQUIPMENT

- A. Provide undamaged equipment in serviceable conditions and suitable for use intended.
- B. Provide temporary self-contained toilet units of temporary single-occupant toilet units of the chemical, aerated recirculation, or combustion type for use by all construction personnel. Units shall be properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 CONSTRUCTION WATER:

- A. Owner will pay for water used for construction purposes.
- B. Secure water necessary for construction and testing and pay service connection charges.
- C. Install water service and distribution piping of sizes and pressures adequate for construction purposes.
- D. Where available supply of potable water is inadequate, provide non-potable water for purposes other than drinking and washing.
- E. Where non-potable water is used, provide warning signs on the discharge end of each length of hose and at the shut-off nozzles.
- F. Where shut-off nozzles are used at water hose discharge, provide heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system.
- G. Trades needing a larger source of water are responsible for the source and distribution.
- H. Exercise control over usage to conserve water.
- I. Sterilize temporary water piping for potable water prior to use.
- J. Maintain distribution system to avoid damage to existing or new construction.
- K. Avoid damage to permanent plumbing at source of temporary water.

3.03 TEMPORARY ELECTRIC POWER SERVICE:

- A. Provide weatherproof grounded electric power service and distribution system of sufficient size, capacity and power characteristics for construction needs.
- B. Contractor shall pay for electricity used for construction purposes.
 - 1. Electrical service shall be provided and installed by Contractor.
 - 2. Any Trade requiring power with different characteristics than provided shall arrange and pay for access to such power.
- C. When permanent power and lighting systems are in operation, they may be used for construction purposes.
- D. Whenever an overhead floor or roof deck has been installed, install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in area of Work.
- E. Install service and grounding in compliance with NFPA 70. Include necessary meters, transformers, overload protected disconnect, and main distribution switch gear.
- F. Connect temporary service to local electric power company main as directed by electric company officials.
- G. Install temporary service with an automatic ground-fault interrupter feature, activated from circuits of the system.
- H. Install circuits of adequate size and proper characteristics for each use.
 - 1. Run wiring overhead and rise vertically where wiring will be least exposed to damage from construction operations.

2. Install rigid steel conduit or equivalent raceways for wiring that must be exposed on grade, floors, decks, or other areas of possible damage or abuse.
- I. Provide identification/warning signs at power outlets that are other than 110 to 120 volt power.
- J. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110 to 120 volt plugs into higher voltage outlets.
- K. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for plug-in connection of power tools and equipment.
- L. Use only grounded extension cords.
 1. Use "hard-service" cords where exposed to abrasion and traffic.
 2. Use single lengths or waterproof connectors to connect separate lengths of electric cords.

3.04 TEMPORARY LIGHTING:

- A. Install local switching of temporary lighting, spaced to allow lighting to be turned off in patterns to conserve energy and retain light suitable for work-in-progress, access traffic, security check, and Project lock-up.
- B. Provide not less than one 200-watt incandescent lamp per 1,000 square feet of floor area, uniformly distributed, for general construction lighting, or equivalent illumination of a similar nature.
 1. In corridors and similar traffic areas, provide not less than one 100-watt incandescent lamp every 50 feet.
 2. In stairways and at ladder runs, locate not less than one 100-watt incandescent lamp for illuminating each landing and flight.
- C. Install and operate temporary lighting that will fulfill security and protection requirements, without the necessity of operating entire temporary lighting system.
- D. Provide general service incandescent lamps of wattage required for adequate illumination.
- E. Protect lamps with guard cages or tempered glass enclosures.

3.05 TEMPORARY HEAT AND VENTILATION:

- A. Provide temporary heat for performance of the Work, curing or drying of recently installed work, or protection of work-in-place from adverse effects of elements.
- B. Provide temporary heating units, tested and labeled by UL, FM, or other recognized trade association related to the fuel being consumed.
- C. Select units known to be safe and without deleterious effect upon work-in-place or being installed.
 1. Except where conditions make it necessary to use another system, and where use of the permanent heating system is available and authorized by Engineer, provide properly vented self-contained liquid propane gas or fuel oil heaters with individual space thermostatic controls for temporary heat.
 2. Do not use open burning or salamander type heating units unless authorized by Engineer.
- D. Coordinate ventilation requirements to produce indicated ambient condition required, to prevent accumulations of dust, fumes, vapors or gases, and to minimize consumption of fuel or energy.
- E. Coordinate use of existing facilities with Owner.
- F. Temporary heating and ventilation required by Work under Contract shall be provided and paid by Contractor requiring same.
- G. Extend and supplement with temporary units as required to maintain specified conditions for construction operations, and to protect materials and finishes from damage due to temperature or humidity.
- H. After Enclosure:

1. Owner will allow installation and use of permanent heating system for temporary heat after building is weather-tight and concrete floor slabs have been poured.
2. Cost of temporary heat after enclosure shall be borne by Owner.
 - a. Contractor shall install new filters at time of Substantial Completion.
- I. Maintain a minimum temperature of 50 degrees in permanently enclosed portions of the structures and areas where finished Work has been installed.

3.06 TEMPORARY SANITARY FACILITIES FOR USER BY CONTRACTOR(S):

- A. Provide for toilets, wash facilities and drinking water fixtures in compliance with regulations and health codes for type, number, location, operation and maintenance of fixtures and facilities.
- B. Provide toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each facility, and provide covered waste containers for used materials.
- C. Install separate self-contained toilet units for male and female personnel shielded to ensure privacy.
- D. Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition.
 1. Dispose of drainage properly.
 2. Supply cleaning compounds appropriate for each condition.
 3. Include safety showers, eyewash fountains and similar facilities for the convenience, safety and sanitation of personnel.
- E. Provide drinking water fountains or containerized tap-dispenser bottled-drinking water units, complete with paper cup supplies. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 degrees Fahrenheit (7 to 13 degrees Celsius).

3.07 TEMPORARY SANITARY SEWER SERVICE:

- A. During construction, maintain flow in sanitary sewers and force mains on a continuous basis until service from newly constructed mains can be restored.
- B. Provide pumps, portable generators, hoses and related items appurtenant to the Work.
- C. When necessary to pump sewage overnight, provide an operator to stay with the pumping operation until construction resumes the next day.
- D. Sewer service lines to individual users may be disconnected for a period not to exceed 4 hours in any one day.
- E. Operate temporary service in a safe and efficient manner, do not overload or allow unsanitary conditions, public nuisances, or hazardous conditions to develop or persist on the Site.

3.08 STORM SEWERS AND DRAINAGE:

- A. Where storm sewers are available, provide temporary connections to remove effluent that can be discharged lawfully.
- B. If storm sewers are not available, provide containers to remove and dispose of effluent off-site in a lawful manner.
- C. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways.
- D. Connect temporary storm sewers as directed by sewer utility officials.
- E. Maintain temporary storm sewers and facilities in a clean, sanitary condition. Following heavy use, promptly restore sewers and facilities to normal conditions.

3.09 STORMWATER CONTROLS:

- A. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of stormwater from heavy rains.

- B. Provide erosion control facilities required to prevent eroded soil from leaving the Site in accordance with local, state and federal requirements.

3.10 TEMPORARY SUPPORT FACILITIES

A. Temporary Paving:

1. Construct and maintain temporary roads and paving to support indicated loadings, if any, and to withstand exposure to traffic during the construction period.
2. Locate temporary paving for roads, storage areas and parking where same permanent facilities will be located, or obtain authorization from the Contracting Officer's Representative for proposed temporary paving not located at permanent paving locations.
 - a. Comply with Division 2 sections applicable to paving for construction and maintenance of temporary paving.
 - b. Coordinate temporary paving development with subgrade grading, compaction, installation and stabilization of subbase, and installation of permanent paving.
 - c. Install temporary paving to minimize the need to rework installations and result in permanent roads and paved areas without damage or deterioration when occupied.
 - d. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration and supervision.
 - e. Coordinate with weather conditions to avoid unsatisfactory results.

B. Dewatering Facilities and Drains:

1. Comply with dewatering requirements of applicable Division 2 sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities.
2. Where feasible, use same facilities provided for the construction activities.
3. Maintain site, excavation and construction free of water.

C. Temporary Enclosures:

1. Provide temporary enclosures for protection of construction, in progress or completed, from exposure, inclement weather, other construction operations and similar conditions.
2. Where heat is needed and the building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions or unacceptable effects.
3. Install tarpaulins securely with incombustible framing. Close openings of 25 square feet. (2.3 square m.) or less with plywood or similar materials.
4. Close openings through floor or roof decks and other horizontal surfaces with load-bearing wood-framed construction.
5. Where enclosure exceeds 100 square feet. (9.2 square m.) in area, use UL labeled fire-retardant-treated wood and plywood for framing and sheathing.

D. Temporary Lifts and Hoists: Provide facilities for hoisting materials and personnel.

E. Collection and Disposal of Waste:

1. Collect waste from construction areas and elsewhere daily. Enforce requirements strictly and dispose of material lawfully.
2. Comply with NFPA 241 for removal of combustible waste material and debris.
3. Do not hold waste materials more than 7 days during periods when the ambient temperature remains continuously less than 80 degrees Fahrenheit (27 degrees Celsius), or more than 3 days when the temperature exceeds or is expected to rise above 80 degrees Fahrenheit (27 degrees Celsius).

4. Handle and properly containerize hazardous, dangerous or unsanitary waste materials separately from other waste.
- F. Rodent and Pest Control:
1. Retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches and other pests.
 2. Employ this service to perform extermination and control procedures at regular intervals so the project will be free of pests and their residue at completion.
 3. Perform control operations lawfully, using environmentally safe materials.
- G. Temporary Stairs:
1. Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
 2. When permanent stairs are available, cover finishes with protective coverings to result in undamaged conditions at project completion.

3.11 TEMPORARY PROTECTION FACILITIES

- A. Temporary Fire Protection
1. Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of types needed to protect against reasonably predictable and controlled fire losses.
 2. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".
 3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher at or near each access route exit or entrance, including stairwells on each floor.
 4. Store combustible materials in containers in fire-safe locations.
 5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities and access routes.
 6. Prohibit smoking in hazardous fire-exposure areas.
 7. Provide supervision of welding operations, combustion-type temporary heating units and other sources of fire ignition.
- B. Barricades, Warning Signs, and Lights:
1. Comply with standards and code requirements for erecting structurally adequate barricades.
 2. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard involved.
 3. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- C. Enclosure Fence:
1. When excavation begins, install an enclosure fence with lockable entrance gates to prevent people and animals from easily entering the site, except by the entrance gates.
 2. Locate where indicated or, if not indicated, enclose the entire site or the portion determined sufficient to accommodate construction operations.
 3. Provide open-mesh chain link fencing with posts set in a compacted mixture of gravel and earth.
 4. Provide 8 feet (2.5 m) high plywood fence framed with four nominal 2-by-4-inch (50-by-100-mm) wood rails, and preservative-treated wood posts spaced not more than 8 feet (2.5 m) apart.
 5. Provide either open-mesh chain link fencing with posts set in a compacted mixture of gravel and earth, or provide 8 feet (2.5 m) high plywood fence framed with four nominal 2-by-4 inch (50-by-100 mm) wood rails and preservative-treated wood posts spaced not more than 8 feet (2.5 m) apart.

D. Security Enclosure and Lockup:

1. Install substantial temporary enclosure of partially completed areas of construction.
2. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
3. Provide a secure lockup for valuable stored materials and equipment.
4. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

E. Environmental Protection:

1. Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result.
2. Avoid using tools and equipment that produce harmful noise.
3. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons near the site.

3.12 OPERATION, TERMINATION, AND REMOVAL

A. Supervision:

1. Enforce strict discipline in use of temporary facilities.
2. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance:

1. Maintain facilities in good operating condition until removal.
2. Protect from damage by freezing temperatures and similar elements.
3. 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.
4. Prevent water-filled piping from freezing.
5. Maintain markers for underground lines.
6. Protect underground lines from damage during excavation operations.

C. Termination and Removal:

1. Unless the Owner requests that a temporary facility be maintained longer, each temporary facility shall be removed when the need for its service has ended and can be replaced by authorized use of a permanent facility.
2. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility.
3. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
4. Materials and facilities that constitute temporary facilities are the property of the Contractor, except the Government reserves the right to take possession of project identification signs.
5. Remove temporary paving not intended for or acceptable for integration into permanent paving.
 - a. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for subsoil or fill in the area.
 - b. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns.

- c. Repair or replace street paving, curbs, and sidewalks at temporary entrances, in accordance with the requirements of the governing authority.
- 6. Prior to project completion, replace clean and restore permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

3.13 SITE CLEANING

- A. Keep Site neat, clean, free of debris.
- B. Prevent papers, cardboard or other debris from blowing around Site or onto adjacent property.
- C. Contractor shall provide and pay for dumpsters for collection of trash.
- D. Control accumulation of waste materials and rubbish. Collect and dispose of all trash from the Site at regular intervals.
- E. Separate and recycle applicable materials.

END OF SECTION

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SECTION 01 55 24
TEMPORARY TRAFFIC CONTROL

PART 1 GENERAL

1.01 SUMMARY

- A. All temporary traffic control work associated with this project shall be in accordance with Iowa SUDAS Standard Specifications, Division 8, Section 8030 – Temporary Traffic Control, and as indicated on the Drawings.

1.02 REFERENCES

- A. Iowa SUDAS Standard Specifications, Division 8, 8030 – Temporary Traffic Control
- B. U.S. Department of Transportation Federal Highway Administration (FHA)
 - 1. Manual on Uniform Traffic Control Devices

1.03 MEASUREMENT AND PAYMENT

- A. The cost for Traffic Control shall be incidental to construction and no separate payment will be made, unless included as a specific bid item.

1.04 SUBMITTALS

- A. Provide written traffic control plan. Conform to Traffic Control and/or Staging Plan included in the Drawings, if provided.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 PREPARATION

- A. Prior to the commencement of the Work, develop a written traffic control plan.
- B. Prior to any lane, street, or road closure, the provide the Owner's Public Works, Police and Fire Departments with advance notice of closures (24 hours minimum preferred).
- C. Notify residents having driveways or parking areas directly affected by the Work at least 72 hours in advance of the proposed disturbance to their ingress and egress.
 - 1. Provide acceptable alternate parking locations established in cooperation with the residents and the City as required.

3.02 PROTECTION AND RESTORATION OF EXISTING TRAFFIC SIGNS

- A. Remove, when authorized by the Owner, any traffic or information sign within the limits of construction which interferes with construction operations or which is obscured by or otherwise interfered with by the construction operations to the extent that it no longer has the desired effect on traffic.
 - 1. Re-erect removed signs immediately, as approved by the Owner, at a temporary location.
 - 2. Maintained signs straight and neat appearing for the duration of a temporary setting.
 - 3. As soon as construction operations permit, the sign shall be re-erected at its permanent location to the satisfaction of the Owner.
- B. Any traffic sign designated as critical by the Owner shall not be disturbed.
- C. Replace any traffic sign or post which has been damaged due to the Contractor's operation.

3.03 PROTECTION OF ROAD SURFACES

- A. Protect the traveled portion of permanent and temporary surfaces and structures on or adjacent to the Work from lug or cleat damage.
- B. When crossing or working upon such surfaces with equipment having lugs or cleats, place timber or rubber pads under the lugs or cleats to prevent any type of damage to the surfaces.
- C. Equipment used in the prosecution of the Work shall comply with the legal loading limits established by the statutes of the State, local regulations, or the Owner when moved or operated on any traveled surface or structure.
 - 1. Secure any required permits before using any equipment which may exceed the legal loading.
 - 2. Provide to the Engineer and other governing authorities an analysis of stresses to determine whether or not the proposed loading will be within safe limits.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

1.02 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, which is current as of the date of the Contract Documents.
 - b. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the work.
 - c. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.03 MATERIALS - QUALITY ASSURANCE

- A. It is the intent of these specifications to procure a quality product by an established manufacturer of the latest design. All components of systems shall be engineered for long, continuous, uninterrupted service. The cost of the equipment shall include all royalties and costs arising from patents and licenses associated with furnishing the specified equipment.
- B. All materials shall be designed to withstand stresses encountered in continuous operation, fabrication and erection. All equipment shall be of corrosion-resistant materials or shall be suitably protected by the supplier with corrosion-resistant industrial coatings. Provisions shall be made for ease of lubrication, adjustment and replacement of parts.
- C. Material for which no detailed specifications are given shall:
 - 1. Meet the particular industry standard for the material used.
 - 2. Meet the specifications of ASTM, ANSI or SAE for metals and plastics for the use intended.
 - 3. Not be used unless it has previously been used for a like purpose for a sufficient length of time in the field or under field-simulated laboratory conditions to demonstrate its successful use.
- D. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Engineer to determine the most important product qualities to consider before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing products that possess these qualities, to the fullest extent possible.
 - 2. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.04 PRODUCT REQUIREMENTS

- A. Minimum Requirements: Comply with specifications and referenced standards.
- B. Product Provision: Provide products complete with all accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and for the intended use and effect.
- C. Components: Items required to be supplied in quantity within a specification section shall be the same and shall be interchangeable.
- D. Compatibility of Options: When Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- E. Existing Products: Do not use materials and equipment removed from existing premises, except as specifically required or permitted by Contract Documents.
- F. Nameplates:
 - 1. Except for required labels and operating data, do not attach or imprint manufacturer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
 - 2. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on an accessible surface that is not conspicuous.
 - 3. Equipment Nameplates:
 - a. Provide permanent nameplate on each item of service-connected or power-operated equipment.
 - b. Locate on an easily accessible surface that is inconspicuous in occupied spaces.
 - c. Provide the following information and other essential operating data on nameplate:
 - 1) Name of product and manufacturer.
 - 2) Model and serial number.
 - 3) Capacity.
 - 4) Speed.
 - 5) Ratings.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - 1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Provide equipment and personnel to handle products by methods that avoid soiling or damage.
 - 4. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 5. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that quantities are correct, products are undamaged, and properly protected. Inform the Engineer or Owner before the inspection occurs, so that they may participate in the inspection if so desired.
 - 6. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units. Seals and labels shall be intact and legible.

7. Store products in accordance with manufacturer's instructions. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
8. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.
9. Arrange for fabricated items or products stored outside to be placed on sloped supports above the ground. Items subject to deterioration shall be covered by weather proof sheet covering which is ventilated to prevent condensation.
10. Store loose granular materials on solid surfaces which are well drained and prevent contamination by foreign matter.
11. Arrange for periodic inspection of stored materials to insure that materials remain undamaged and are maintained under required conditions.
12. All shipment, delivery and storage charges shall be at the expense of the contractor.

PART 2 PRODUCTS

2.01 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 2. Semi-proprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers, provide 1 of the products indicated. No substitutions will be permitted.
 - a. Where Specifications specify products or manufacturers by name, accompanied by the term "or equal" or "or approved equal," comply with the Contract Document provisions concerning "Substitutions" to obtain approval for use of an unnamed product.
 3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 - b. General overall performance of a product is implied where the product is specified for a specific application.
 5. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
 6. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.

- a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "Substitutions" for selection of a matching product in another product category.
- 7. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Engineer will select the color, pattern, and texture from the product line selected.
- 8. Allowances: Refer to individual Specification Sections and "Allowances" provisions in Division 1 for allowances that control product selection and for procedures required for processing such selections.

PART 3 EXECUTION

3.01 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 - 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

3.02 FIELD QUALITY CONTROL

- A. Qualifications of Manufacturers Field Personnel
 - 1. Personnel shall be authorized by the manufacturer to erect start-up and initiate warranty of the equipment provided.
 - 2. Personnel shall come to the site with the required tools and electrical instruments and shall have full knowledge of electrical controls pertaining to the equipment and control panels furnished.
 - 3. Failure to provide personnel with full qualifications shall be cause for service trip to be disqualified as part of the requirements and may because for reimbursement for costs incurred by the Owner due to services required for a qualified start-up inspection.

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Administrative and procedural requirements for contract closeout, including:
 - 1. Submittals.
 - 2. Inspection procedures.
 - 3. Warranties.
 - 4. Record document submittals.
 - 5. Final cleaning.
 - 6. Pest control.
- B. Related Sections:
 - 1. Specific requirements for individual units of work are included in appropriate technical sections

1.02 SUBSTANTIAL COMPLETION

- A. Complete the following before requesting Engineer's inspection for certification of Substantial Completion for each phase of work. List items that are incomplete in 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. Obtain, submit releases enabling Owner unrestricted use of the Work and access to services and utilities.
 - 3. Regulatory requirements:
 - a. Where required, obtain occupancy permits, operating certificates, similar releases.
 - b. Obtain elevator inspection from State Inspector.
 - 4. Bonding and insurance:
 - a. Consent of Surety to Reduction In or Partial Release of Retainage (if Performance Bond provided).
 - b. Advise Owner of pending insurance change-over-requirements (if Builder's Risk Insurance is provided by Contractor).
- B. Inspection Procedures:
 - 1. When prerequisites are complete, submit request in writing to Engineer stating that all requirements are satisfied, and requesting inspection.
 - 2. Upon receipt of Contractor's request for inspection, Engineer will either proceed with inspection or advise Contractor of unfilled prerequisites.
 - 3. Following initial inspection, Engineer will either prepare Certificate of Substantial Completion, or advise Contractor of work which must be performed before certificate will be issued. Engineer will repeat inspection when requested and when assured that work has been substantially completed.
 - 4. Results of completed inspection will form the basis of requirements for Final Acceptance.

1.03 FINAL ACCEPTANCE

- A. Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submittals:
 - a. Certificate of Substantial Completion.
 - b. Consent of Surety (if Performance Bond provided).
 - 1) To Partial Release of Retainage.
 - 2) To Final Payment.
 - c. Assurance that unsettled claims will be settled.
 - d. Proof that fees and similar obligations have been paid.
 - e. Evidence of final, continuing insurance coverage complying with insurance requirements.
 - f. Notarized certification of compliance with wage rate requirements, if required by Funding Agency.
 - g. Certified copy of Engineer's final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by Engineer.
 2. Warranties: Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications, and other similar documents.
 3. Operation and Maintenance manuals:
 - 1) Organize operating, maintenance data into suitable sets of manageable size.
 - 2) Bind into individual heavy-duty 2-inch, 3-ring vinyl-covered binders with pocket folders, each set of data, marked with appropriate identification on both front and spine of each binder.
 - 3) Include:
 - a) Emergency instructions.
 - b) Spare parts listing.
 - c) Copies of warranties.
 - d) Wiring diagrams.
 - e) Recommended "turnaround" cycles.
 - f) Inspection procedures.
 - g) Shop Drawings and Product Data.
 4. Miscellaneous Record Submittals:
 - a. Refer to other sections of specifications for requirements of miscellaneous record keeping and submittals in connection with actual performance of work.
 - b. Complete miscellaneous records, place in good order, properly identified and bound or filed, ready for continued use and reference.
 5. Records:
 - a. Test/adjust/balance records.
 - b. Startup performance reports.
- B. Record Drawings: Submit to Engineer a set of record prints marked to show "as-built" conditions for work of contract.

C. Adjusting:

1. Repair and restore marred exposed finishes.
2. Touch up of painting of marred surfaces.
3. Complete final cleaning requirements.

D. Final Payment Request:

1. Include certificates of insurance for products and completed operations where required.
2. Updated final statement, accounting for final additional changes to Contract Sum.
3. Final liquidated damages settlement statement, acceptable to Owner.

E. Re-inspection Procedure:

1. Engineer will re-inspect work upon receipt of notice that work, including punch list items resulting from earlier inspections, has been completed, except for items whose completion has been delayed because of circumstances that are acceptable to Engineer.
2. Engineer will either prepare a certificate of final acceptance, or will advise Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
3. If necessary, re-inspection procedure will be repeated.

1.04 TRANSFER OF SITE TO OWNER

- A. Deliver tools, spare parts, extra materials and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
- B. Change door locks to Owner's access. Advise Owner's personnel of changeover in security provisions.
- C. Advise Owner of changeover in heat and other utilities.
- D. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

1.05 OPERATING AND MAINTENANCE INSTRUCTIONS/DEMONSTRATIONS

- A. Arrange for each installer of operating equipment and other work requiring regular or continuing maintenance, to meet at Site with Owner's personnel to provide necessary basic instruction in proper operation and maintenance of entire work. Where installers are not experienced in required procedures, include instruction by manufacturer's representatives.
- B. Provide detailed review of following items:
 1. Maintenance manuals.
 2. Record documents.
 3. Spare parts and materials.
 4. Tools.
 5. Lubricants.
 6. Fuels.
 7. Identification systems.
 8. Control sequences.
 9. Hazards.
 10. Cleaning materials and procedures.
 11. Warranties, bonds, maintenance agreements similar continuing commitments.
- C. As part of this instruction for operating equipment, demonstrate following procedures:
 1. Start-up.
 2. Shut-down.

3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.
- D. Provide a video tape of above procedures.

PART 2 PRODUCTS

2.01 CLEANING AGENTS

- A. Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned.
- B. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 EXECUTION

3.01 FINAL CLEANING

- A. Provide final cleaning, following manufacturer's written instructions.
- B. Conduct cleaning and waste-removal operations to comply with local laws and ordinances, and federal and local environmental and antipollution regulations.
- C. Employ experienced workers or professional cleaners for final cleaning.
- D. Comply with safety standards for cleaning.
 1. Do not burn waste materials.
 2. Do not bury debris or excess materials on Owner's property.
 3. Do not discharge volatile, harmful, or dangerous materials into drainage systems.
 4. Remove waste materials from Site and dispose of lawfully.
- E. Clean Site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- F. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.
 1. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 2. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 3. Remove tools, construction equipment, machinery, and surplus material from Site.
 4. Remove snow and ice to provide safe access to building.
 5. 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.
 6. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 7. Sweep concrete floors broom clean in unoccupied spaces.
 8. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.

9. 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.
10. Remove labels that are not permanent.
11. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
12. Replace parts subject to unusual operating conditions.
13. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
14. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
15. Clean ducts, blowers, and coils if units were operated without filters during construction.
16. 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.

END OF SECTION

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SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents. Maintain at site one record copy of:
 - 1. Drawings
 - 2. Project Manual
 - 3. Addenda
 - 4. Change Orders and other modifications to Contract.
 - 5. Engineer Field Orders, written instructions or clarifications.
 - 6. Approved submittals.
 - 7. Field test records.
 - 8. Construction photographs.
 - 9. Associated permits.

1.02 SUBMITTALS

- A. At Substantial Completion deliver one marked up set of Drawings to Engineer for use in preparation of record drawings.
- B. Prior to submitting request for final payment, submit the final Project Record Documents to Engineer for Owner.
- C. Accompany submittals with transmittal letter containing the following:
 - 1. Date.
 - 2. Project title and number.
 - 3. Contractor's name and address.
 - 4. Title of record document.
 - 5. Signature of Contractor or authorized representative.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide secure storage space for storage of samples.
- B. Maintain documents in clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- C. Label each document "Project Record" in neat, large letters.
- D. Make documents and samples available for inspection by Engineer and Owner.

- E. Failure to properly maintain record documents may be reason to delay a portion of progress payments until records comply with Contract Documents.

3.02 RECORD DOCUMENTS

- A. Maintain record set of Drawings and Specifications legibly annotated to show all changes made during construction.
- B. Record information concurrently with construction progress.
- C. Drawings
 - 1. Graphically depict changes by modifying or adding to plans, details, sections, elevations or schedules.
 - 2. Using a colored pencil or pen, clearly describe the changes by graphic line and note as required.
 - 3. Note the following:
 - a. Depths of various elements of foundation in relation to finished first floor elevation.
 - b. Horizontal and vertical locations of underground utilities and appurtenances, referenced to visible and accessible features.
 - c. Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features.
 - d. Field changes.
 - e. Details not on original Drawings.
 - f. Location and identification of exposed interior piping, including those shown schematically on Drawings.
 - g. Size of equipment and location including connections.
 - h. Horizontal and vertical locations and size of underground cable, conduit, and duct runs dimensioned from established and visible features.
 - i. Plan location and size of interior concealed and exposed electrical feeders.
 - j. Size and location of electrical access panels.
 - k. Departures from original Drawings.

END OF SECTION

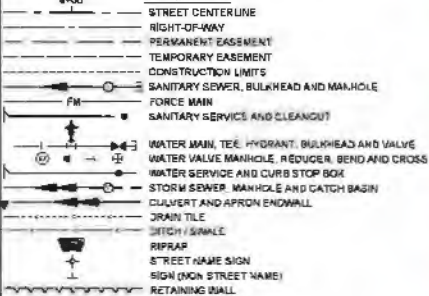
CITY OF BOONE, IOWA

CONSTRUCTION PLANS FOR S MARSHALL ST MILL & OVERLAY

EXISTING



PROPOSED

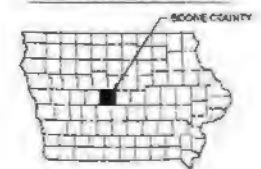


INDEX

SHEET NO.	DESCRIPTION
A-1	TITLE SHEET
B-1-B-2	TYPICAL SECTIONS
C-1-C-2	QUANTITIES AND REFERENCES
D-2-D-5	TABULATIONS
D-1-D-2	S MARSHALL ST PLAN SHEETS
D-3	PARK AVE PLAN SHEETS
J-1-J-2	TRAFFIC CONTROL AND STAGING
L-1-L-2	INTERSECTION DETAIL SHEETS
M-1-M-3	PAVEMENT MARKING AND SIGNING
S-1-S-4	SIDEWALK SHEETS
U-1-U-2	DETAILS

THIS PLAN CONTAINS 24 SHEETS

PROJECT LOCATION



THE 2021 EDITION OF THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS FOR PUBLIC IMPROVEMENTS (SUDAS), PLUS GENERAL SUPPLEMENTAL SPECIFICATIONS AND APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION ON THIS PROJECT

NOTE

"THE SURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CHANCE 38-2, ENTITLED 'STANDARD GUIDELINES FOR "HIS COLLECTION AND DISPOSITION OF EXISTING SUBSURFACE UTILITY DATA."

"THE CONTRACTOR SHALL CALL IOWA ONE CALL SYSTEM AT 811 BEFORE COMMENCING EXCAVATION.



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

Robert E. Allen
License Number: 24525
My License renewal date is December 31, 2025.

Pages or sheets covered by this SUDAS A-1
S-EETS

ENGLISH

DESIGN TEAM SEH

CITY OF BOONE

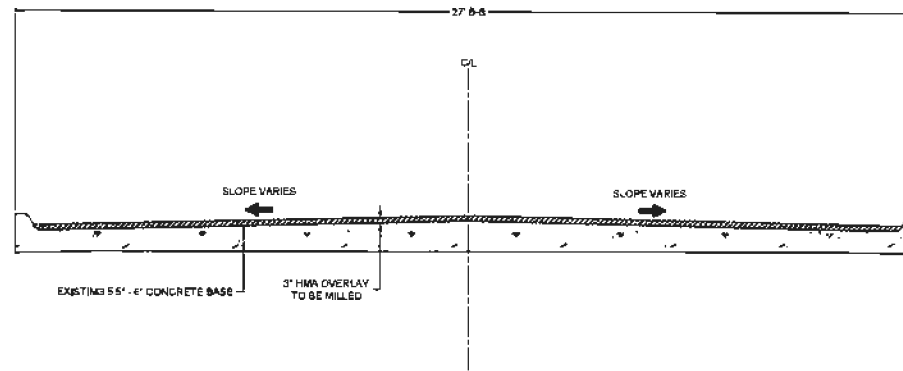
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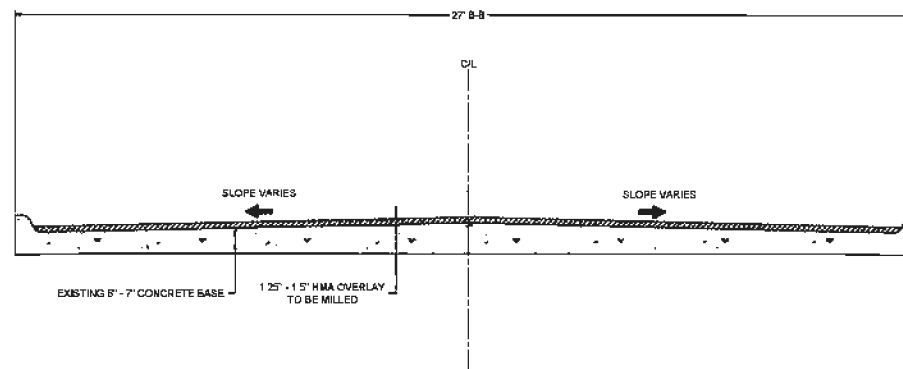
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EXISTING SECTION
S MARSHALL ST
STA 1+00 - STA 9+62.19
PARK AVE
STA 103+72.73 - STA 104+48.80



EXISTING SECTION
S MARSHALL ST
STA 9+62.197 - STA 20+43.58
PARK AVE
STA 100+74.11 - STA 103+72.73

ENGLISH

DESIGN TEAM SEH

CITY OF BOONE

PROJECT NUMBER

160642

SHEET NUMBER

B.1

ESTIMATED PROJECT QUANTITIES					
Item No.	Item Code	Item	Unit	Total	As Built Qty.
2.01	2010-0-3	TOPSOIL, OFF-SITE	CY	50	
2.02	2010-E	EXCAVATION, CLASS 13	CY	145	
2.03	2010-I	SUBBASE, MODIFIED	SY	410	
6.01	6010-A	MANHOLE, SW-301, 48"	EA	1	
6.02	6010-E	MANHOLE ADJUSTMENT, MINOR	EA	5	
6.03	6010-E	INTAKE ADJUSTMENT, MINOR	EA	1	
6.04	6010-H	REMOVE MANHOLE	EA	1	
7.01	7010-A	PAVEMENT, PCC, 8"	SY	136	
7.02	7010-E	CURB AND GUTTER, 2.5' WIDTH, 6" THICKNESS.	LF	315	
7.03	7010-E	CURB AND GUTTER, 2.5' WIDTH, 7" THICKNESS.	LF	81	
7.04	7010-999-E	VALLEY GUTTER, 2' WIDTH, 8" THICKNESS.	LF	68	
7.05	7021-A	HMA OVERLAY, INTERMEDIATE COURSE, 1/2" MIX, PGS8-285	TION	215	
7.06	7021-A	HMA OVERLAY, SURFACE COURSE, 1/2" MIX, PGS8-285	TION	548	
7.07	7030-A	REMOVAL OF SIDEWALK	SY	82	
7.08	7030-A	REMOVAL OF DRIVEWAY	SY	37	
7.09	7030-E	SIDEWALK, PCC, 6"	SY	78	
7.10	7030-E	SIDEWALK, PCC, 4"	SY	46	
7.11	7030-G	DETECTABLE WARNING	SF	128	
7.12	7030-H-1	DRIVEWAY, PAVED, PCC, 6"	SY	37	
7.13	7040-A	CULL DEPTH PATCHES, PCC, 6"	SY	50	
7.14	7040-G	MILLING	SY	6730	
7.15	7040-H	PAVEMENT REMOVAL	SY	136	
7.16	7040-I	CURB AND GUTTER REMOVAL	LF	396	
8.01	8010-999-A	TRAFFIC SIGNAL LOOP	EA	2	
8.02	8010-999-B	REMOVE AND REINSTALL SIGN	EA	4	
8.03	8010-999-C	SIGN POSTS, PERFORATED SQUARE STEEL TUBE	EA	4	
8.04	8010-999-D	TYPE A SIGN, SHEET ALUMINUM	SF	24	
8.05	8010-A	PAINTED PAVEMENT MARKING, WATERBORNE	STA	33.4	
8.06	8030-A	TEMPORARY TRAFFIC CONTROL	LS	1	
9.01	9010-B	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING	AC	0.1	
9.02	9040-T-1	INLET PROTECTION DEVICE, CRATE INTAKE SEDIMENT FILTER BAG	EA	2	
9.03	9040-T-2	INLET PROTECTION MAINTENANCE	EA	2	
11.01	11,010-A	CONSTRUCTION SURVEY	LS	1	
11.02	11,020-A	MOBILIZATION	LS	1	
11.03	11,030-A	MAINTENANCE OF POSTAL SERVICE	LS	1	
11.04	11,030-B	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1	

ESTIMATE REFERENCE INFORMATION		
Item No.	Item Code	Description
2.02	2010-D-3	TOPSOIL, OFF-SITE REFER TO SUDAS SECTION 2010. REFER TO TYPICAL SECTIONS ON B SHEETS FOR DETAILS OF CONSTRUCTION.
2.02	2010-E	EXCAVATION, CLASS 13 REFER TO SUDAS SECTION 2010. REFER TO TYPICAL SECTIONS ON B SHEETS FOR LOCATIONS. ITEM SHALL BE MEASURED AND PAID AT PLAIN QUANTITY. NO PAYMENT FOR OVERHAUL WILL BE MADE ON THIS PROJECT.
2.03	2010-I	SUBBASE, MODIFIED REFER TO SUDAS SECTION 2010. REFER TO TABULATION 4.1 ON SHEET C.4. INCLUDES MODIFIED SUBBASE UNDER CURB AND GUTTER. REFER TO TYPICAL SECTIONS ON SHEET B.2. REFER TO TYPICAL SECTIONS ON B SHEETS FOR DETAILS OF CONSTRUCTION.
6.01	6010-A	MANHOLE, SW-301, 48" REFER TO TABULATION 2.1 ON SHEET C.2 AND D SHEETS FOR LOCATIONS. ITEM INCLUDES ALL PIPE AND FITTING NECESSARY TO CONNECT TO EXISTING SEWER LINES. REFER TO SUDAS SECTION 6010.
6.02	6010-C	MANHOLE ADJUSTMENT, MINOR REFER TO TABULATION 2.1 ON SHEET C.2 AND D SHEETS FOR LOCATIONS. REFER TO SHEET U.1 FOR DETAILS OF CONSTRUCTION. REFER TO SUDAS SECTION 6010. SAVING AND REMOVAL OF PAVEMENT FOR BOXDUTS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.
6.03	6010-E	INTAKE ADJUSTMENT, MINOR REFER TO TABULATION 2.1 ON SHEET C.2 AND D SHEETS FOR LOCATIONS. REFER TO SUDAS SECTION 6010. SAVING AND REMOVAL OF PAVEMENT FOR BOXDUTS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

ESTIMATE REFERENCE INFORMATION		
Item No.	Item Code	Description
6.04	6010-H	REMOVE MANHOLE REFER TO SUDAS SECTION 7010. REFER TO TABULATION 2.3 ON SHEET C.2 AND D SHEETS FOR LOCATION.
7.01	7010-A	PAVEMENT, PCC, 8" REFER TO TABULATION 4.1 ON SHEET C.4 AND L SHEETS FOR LOCATIONS AND DETAILS. REFER TO SUDAS SECTION 7010. PCC TESTING REQUIRED PER SUDAS 7010 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.02	7010-C	CURB AND GUTTER, 2.5' WIDTH, 6" THICKNESS REFER TO TABULATION 2.2 ON SHEET C.2 AND D SHEETS FOR LOCATIONS. REFER TO SUDAS SECTION 7010. PCC TESTING REQUIRED PER SUDAS 7010 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.03	7010-E	CURB AND GUTTER, 2.5' WIDTH, 7" THICKNESS REFER TO TABULATION 2.2 ON SHEET C.2 AND D SHEETS FOR LOCATIONS. REFER TO SUDAS SECTION 7010. PCC TESTING REQUIRED PER SUDAS 7010 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.04	7010-999-E	VALLEY GUTTER, 2' WIDTH, 6" THICKNESS REFER TO SHEET J.1 FOR CONSTRUCTION DETAILS. REFER TO SUDAS SECTION 7010 FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT. PCC TESTING REQUIRED PER SUDAS 7010 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.05	7021-A	HMA OVERLAY, INTERMEDIATE COURSE, 1/2" MIX, PG58-28S REFER TO TABULATION 3.1 ON SHEET C.3. HMA STANDARD TRAFFIC (ST) INTERMEDIATE, 1/2", PG58-28S REFER TO SUDAS SECTION 7021. TACK COAT SHALL BE APPLIED ON THE EXISTING SURFACE AND IN BETWEEN EACH LIFT. AGGREGATE SHALL BE TYPE A PER SUDAS 7020 AND IDOT I.M. 510. ALL REQUIRED HMA SAMPLING AND TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.06	7021-A	HMA OVERLAY, SURFACE COURSE, 1/2" MIX, PG58-28S REFER TO TABULATION 3.1 ON SHEET C.3. HMA STANDARD TRAFFIC (ST) SURFACE, 1/2", PG58-28S REFER TO SUDAS SECTION 7021. TACK COAT SHALL BE APPLIED ON THE EXISTING SURFACE AND IN BETWEEN EACH LIFT. AGGREGATE SHALL BE TYPE A PER SUDAS 7020 AND IDOT I.M. 510. ALL REQUIRED HMA SAMPLING AND TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.07	7030-A	REMOVAL OF SIDEWALK REFER TO TABULATION 5.5 ON SHEET C.5 FOR LOCATIONS. REFER TO SUDAS SECTION 7030.
7.08	7030-A	REMOVAL OF DRIVEWAY REFER TO TABULATION 5.3 ON SHEET C.5 FOR LOCATIONS. REFER TO SUDAS SECTION 7030.
7.09	7030-E	SIDEWALK, PCC, 6" REFER TO TABULATION 5.2 ON SHEETS C.5 AND S SHEETS FOR DETAILS. REFER TO SUDAS SECTION 7030. PCC TESTING REQUIRED PER SUDAS 7030 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.10	7030-E	DRIVEWAY, PCC, 4" REFER TO TABULATION 5.2 ON SHEETS C.5 AND S SHEETS FOR DETAILS. REFER TO SUDAS SECTION 7030. PCC TESTING REQUIRED PER SUDAS 7030 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.11	7030-G	DETECTABLE WARNING REFER TO TABULATION 5.2 ON SHEETS C.5 AND S SHEETS FOR DETAILS. REFER TO SUDAS SECTION 7030.
7.12	7030-H-1	DRIVEWAY, PAVED, PCC, 6" REFER TO TABULATION 5.1 ON SHEET C.5. REFER TO SUDAS SECTION 7030. PCC TESTING REQUIRED PER SUDAS 7030 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THIS ITEM.
7.13	7040-A	FULL DEPTH PATCHES, PCC, 6" LOCATIONS AND QUANTITIES SHALL BE DETERMINED BY ENGINEER AFTER THE COMPLETION OF MILLING. REFER TO SUDAS SECTION 7040.
7.14	7040-G	MILLING REFER TO SUDAS SECTION 7040. MILLING LIMITS SHALL BE THE ENTIRE AREA OF RESURFACING AND KILLED JOINTS. MILLING AROUND UTILITY MANHOLES AND VALVES WITH SMALL MACHINES SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

FILE NO.	ENGLISH	DESIGN TEAM	SEH
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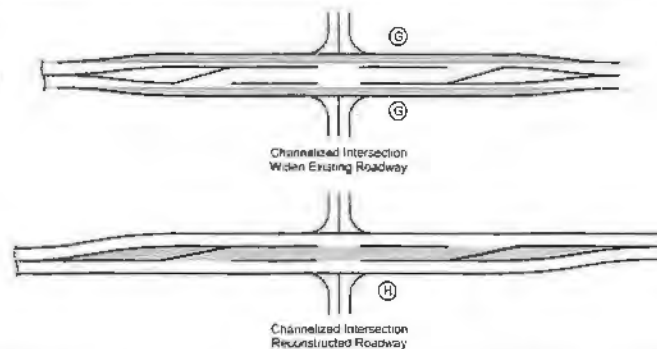
ESTIMATE REFERENCE INFORMATION		
Item No.	Item Code	Description
7.15	7040-H	PAVEMENT REMOVAL REFER TO SUDAS SECTION 7040. ITEM IS COMPENSATION FOR REMOVAL AND DISPOSAL OF EXISTING CONCRETE BASE AND ASPHALT OVERLAY PAVEMENT SECTION.
7.16	7040-I	CURB AND GUTTER REMOVAL REFER TO TABULATION 5.4 ON SHEET C.5. REFER TO SUDAS SECTION 7040.
8.01	8010-999-A	TRAFFIC SIGNAL LOOP REFER TO SHEET U.1 FOR STANDARD DETAILS. REFER TO SUDAS SECTION 8010. METHOD OF MEASUREMENT: PER EACH TRAFFIC LOOP INSTALLED. BASIS OF PAYMENT: PAYMENT IS FULL COMPENSATION FOR FURNISHING AND INSTALLING NEW TRAFFIC LOOPS AND CONDUIT CONNECTIONS TO EXISTING TRAFFIC HANDHOLE, REMOVAL AND DISPOSAL OF EXISTING SIGNAL LOOPS AND PAVEMENT, AND REHABILITATION OF ROAD SURFACE.
8.02	8010-999-B	REMOVE AND REINSTALL SIGN REFER TO TABULATION 3.2 ON SHEET C.3 AND D SHEETS FOR LOCATIONS. REFER TO SUDAS SECTION 8010. REINSTALL SIGNS USING EXISTING WOOD OR SQUARE STEEL POSTS. METHOD OF MEASUREMENT: PER EACH SIGN REMOVED AND REINSTALLED. BASIS OF PAYMENT: PAYMENT IS FULL COMPENSATION FOR REMOVAL, STORAGE, AND ERECTING THE SIGNS COMPLETELY, INCLUDING MOUNTING AND ANCHORING HARDWARE.
8.03	8010-999-C	SIGN POST, PERFORATED SQUARE STEEL TUBE REFER TO TABLE 3.3 ON SHEET C.3 AND N SHEETS FOR LOCATIONS. PERFORATED SQUARE STEEL TUBE POSTS SHALL MEET ALL REQUIREMENTS OF DOT SECTION 4186. METHOD OF MEASUREMENT: EACH SIGN POST INSTALLED. BASIS OF PAYMENT: PAYMENT IS COMPENSATION, FURNISHING, INSTALLATION, AND ERECTING SIGN POSTS AND SOIL ANCHORS.
8.04	8010-999-D	TYPE A SIGN, SHEET ALUMINUM REFER TO TABLE 3.3 ON SHEET C.3 AND N SHEETS FOR LOCATIONS. SIGNS SHALL MEET ALL REQUIREMENTS OF DOT SECTION 4186 AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) METHOD OF MEASUREMENT: PER SQUARE FOOT OF SIGN AREA BASIS OF PAYMENT: PAYMENT IS FULL COMPENSATION FOR FURNISHING, FABRICATING, AND ERECTING THE SIGNS COMPLETELY, INCLUDING MOUNTING HARDWARE.
8.05	8020-B	PAINTED PAVEMENT MARKING, WATERBORNE REFER TO SUDAS SECTION 8020. REFER TO TABULATION 4.2 ON SHEET C.4.
8.06	8030-A	TEMPORARY TRAFFIC CONTROL REFER TO 3 SHEETS FOR TRAFFIC CONTROL AND STAGING PLANS AND INFORMATION. REFER TO TABULATION 3.4 ON SHEET C.3. REFER TO SUDAS SECTION 8030.
9.01	9010-B	HYDRAULIC SEEDING, FERTILIZING, AND MULCHING REFER TO SUDAS SECTION 9010. SEED MIXTURE SHALL BE TYPE 1 PER SUDAS SECTION 9010.
9.02	9040-T-1	INLET PROTECTION DEVICE, GRAVE INTAKE SEDIMENT FILTER BAG REFER TO SUDAS SECTION 9040.
9.03	9040-T-2	INLET PROTECTION MAINTENANCE REFER TO SUDAS SECTION 9040.
11.01	11,010-A	CONSTRUCTION SURVEY REFER TO SUDAS SECTION 11,010.
11.02	11,020-A	MOBILIZATION REFER TO SUDAS SECTION 11,020.
11.03	11,030-A	MAINTENANCE OF POSTAL SERVICE REFER TO SUDAS SECTION 11,030 CONTRACTOR SHALL MAINTAIN POSTAL SERVICE FOR AFFECTED PROPERTIES THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL COORDINATE WITH POST OFFICE TO MAINTAIN MAIL DELIVERY AND INSTALLATION OF TEMPORARY MAILBOXES AS REQUIRED. REFER TO D SHEETS FOR LOCATIONS OF MAILBOXES REQUIRING TEMPORARY RELOCATION.
11.04	11,030-B	MAINTENANCE OF SOLID WASTE COLLECTION REFER TO SUDAS SECTION 11,030. SOLID WASTE COLLECTION SHALL BE MAINTAINED FOR ALL AFFECTED PROPERTIES THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL COORDINATE WITH SOLID WASTE COLLECTION COMPANY TO ESTABLISH TEMPORARY COLLECTION POINTS SHOULD CONSTRUCTION ACTIVITIES PREVENT ACCESS FOR COLLECTION VEHICLES AT NORMAL COLLECTION LOCATIONS.

ADJUSTMENT OF FIXTURES			
No.	Location Station	Type of Fixture	Adjustment
1	8+81.62	WATER VALVE BOX	ADJUST WATER VALVE BOX (INCIDENTAL)
2	9+28.18	SANITARY MANHOLE	MANHOLE ADJUSTMENT, MINOR
3	9+36.85	WATER VALVE BOX	ADJUST WATER VALVE BOX (INCIDENTAL)
4	9+36.85	WATER VALVE BOX	ADJUST WATER VALVE BOX (INCIDENTAL)
5	9+43.35	SANITARY MANHOLE	MANHOLE ADJUSTMENT, MINOR
6	10+19.13	STORM SEWER INTAKE	INTAKE ADJUSTMENT, MINOR
7	13+56.92	CURB STOP	ADJUST CURB STOP (INCIDENTAL)
8	13+61.13	CURB STOP	ADJUST CURB STOP (INCIDENTAL)
9	13+74.20	WATER VALVE BOX	ADJUST WATER VALVE BOX (INCIDENTAL)
10	13+83.77	SANITARY MANHOLE	MANHOLE ADJUSTMENT, MINOR
11	13+90.63	WATER VALVE BOX	ADJUST WATER VALVE BOX (INCIDENTAL)
12	17+23.04	SANITARY MANHOLE	MANHOLE ADJUSTMENT, MINOR
13	20+22.97	SANITARY MANHOLE	MANHOLE ADJUSTMENT, MINOR
14	102+22.89	SANITARY MANHOLE	MANHOLE REPLACEMENT, SW-381, 48"

CURBS AND RAISED ISLANDS							2.2
Point No.	Station	Island Interior Offset	Curb and Gutter				Remarks
			Curb Type	Gutter Width		Length	
Area sq	FT	LF					
	1448.84		6" Standard PCC	2.5	39.0	6" THICKNESS	
	2+27.39		6" Standard PCC	2.5	45.0	6" THICKNESS	
	3+32.80		6" Standard PCC	2.5	88.0	6" THICKNESS	
	3+41.37		6" Standard PCC	2.5	18.0	6" THICKNESS	
	3+94.14		6" Standard PCC	2.5	12.0	6" THICKNESS	
	4+44.21		6" Standard PCC	2.5	12.0	6" THICKNESS	
	5+47.77		6" Standard PCC	2.5	7.0	6" THICKNESS	
	6+29.63		6" Standard PCC	2.5	118.0	6" THICKNESS	
	8+38.92		6" Standard PCC	2.5	25.0	7" THICKNESS	
	9+50.00		Valley Gutter		88.0	REFER TO DETAIL ON SHEET U-1	
	18+43.52		6" Standard PCC	2.5	7.0	7" THICKNESS	
	13+46.95		6" Standard PCC	2.5	50.8	7" THICKNESS	
	14+45.27		6" Standard PCC	2.5	9.0	7" THICKNESS	

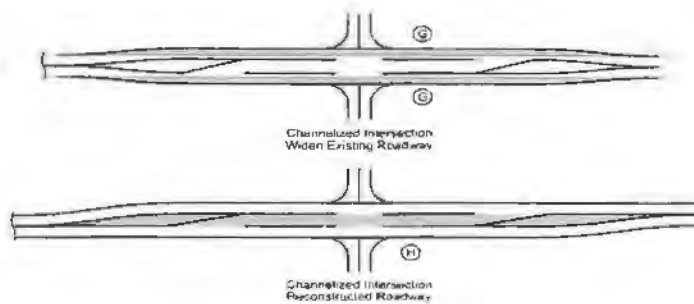
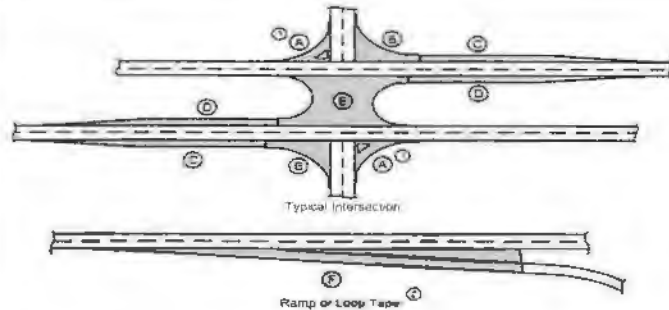
REMOVAL OF INTAKES AND UTILITY ACCESSES			
No.	Location/Description	Type	Remarks
1	Sta 102+23 on Park Avenue	Utilities	Sanitary Manhole

REMOVAL OF PAVEMENT						
* Not a Bid Item						
Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				Sq	Lf	
9+83.85	103+72.91	LEFT	PCC	14.7	35.0	
8+93.83	104+40.12	RIGHT	PCC	21.7	50.0	
103+72.90	9+55.77	LEFT	PCC	15.4	45.0	
104+39.55	9+62.13	RIGHT	PCC	20.6	35.0	
13+48.86	13+78.79	LEFT	PCC	23.4	55.0	
13+88.87	14+18.27	LEFT	PCC	21.8	50.0	
102+17.81	102+27.81	LEFT	PCC	17.8	36.0	



Calculations assume a surface course unit weight (lbs/cf) of 147, an intermediate course unit weight (lbs/cf) of 147, a base course unit weight (lbs/cf) of 147, and a special basefill unit weight (lbs/cf) of 147.

PCC PAVEMENT



- ① Does not include raised island area or curb. Refer to tabulation 11-4 for quantities.
- ② Quantity includes Pavement Header.

Road Identification	Location		Mainline		Area (1)								Total Area By		Special Backfill	Modified Subbase	Granular Subbase	Remarks	
	Direction of Travel	Station to Station	width	Length	Area	Area (2)								Pavement Thickness					
						A	B	C	D	E	F	G	H						SV
FT	FT	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	# IN	100 LN	TONS	SV	SV		
S MARSHALL ST	S	9+03.05	9+18.83	15.0	14.7	14.7							14.7			21.7	SW QUADRANT OF PARK AVE INTERSECTION		
S MARSHALL ST	N	9+03.05	9+18.83	24.5	21.7	21.7							21.7			28.7	SE QUADRANT OF PARK AVE INTERSECTION		
S MARSHALL ST	S	9+47.63	9+55.77	8.1	15.4	15.4							15.4			22.3	NW QUADRANT OF PARK AVE INTERSECTION		
S MARSHALL ST	N	9+48.55	9+62.13	21.6	20.6	20.6							20.6			27.6	NE QUADRANT OF PARK AVE INTERSECTION		
S MARSHALL ST	S	13+48.86	13+70.79	29.9	23.4	23.4							23.4			38.4	SW QUADRANT OF LINCOLN AVE INTERSECTION		
S MARSHALL ST	S	13+68.87	14+10.27	29.4	21.8	21.8							21.8			28.8	NW QUADRANT OF LINCOLN AVE INTERSECTION		
PARK AVE	N	102+17.61	102+33.81	10.8	16.8	17.8				17.8			17.8			21.4	MANGLED BOXJUL		

PAVEMENT MARKING LINE TYPES

*MCHS - Place on the same side of the roadway to match existing markings near the project.
 **NPVS - For estimating purposes only. No Passing Zone lines will be located in the field.

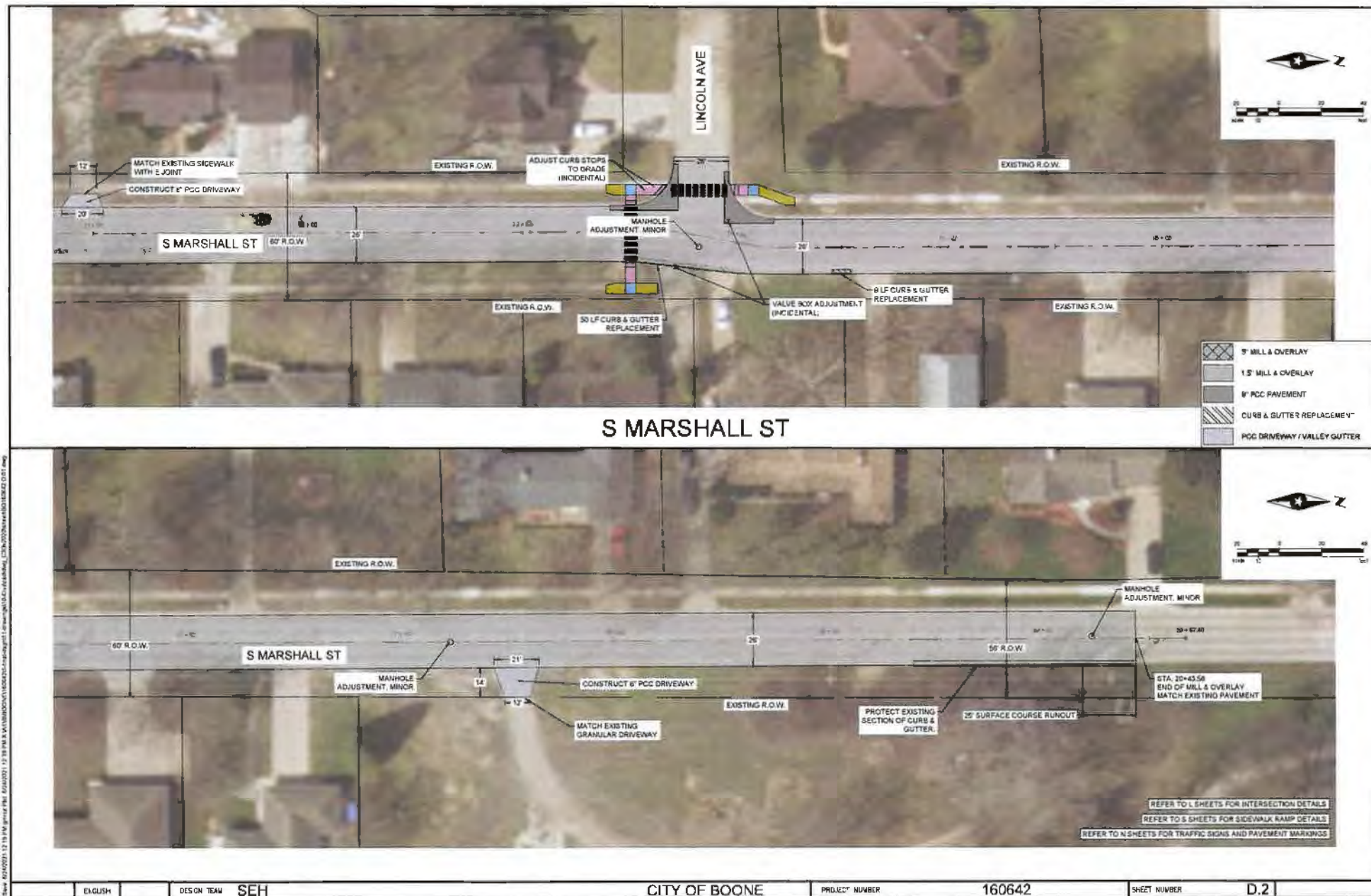
**PMA - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

SLWZ: Stop Line (White) @ 6.00

CMB: Crosswalk Bar (White) @ 15.00

STVG: Standard Curb B" (Yellow) @ 3.83

			Location	Length by Line Type (Unfactored)																		Remarks	
Road ID	Station to Station	Dir. of Travel	Marking Type	Stop			SLWZ	CBW	STVG														
				L	E	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA			
S MARSHALL ST	8+92.69	NR	Waterborne/Solvent Paint			X			0.13														NR Stop Bar
S MARSHALL ST	8+96.97	BOTH	Waterborne/Solvent Paint	X	X	X				0.26													S Marshall Crosswalk
S MARSHALL ST	9+08.58	NR	Waterborne/Solvent Paint			X																	SE S Marshall & Park Curb
S MARSHALL ST	9+09.58	SB	Waterborne/Solvent Paint	X																			SW S Marshall & Park Curb
PARK AVE	103+80.00	BOTH	Waterborne/Solvent Paint	X	X	X				8.38													Park Ave Crosswalk
PARK AVE	104+98.00	BOTH	Waterborne/Solvent Paint	X	X	X				8.27													Park Ave Crosswalk
S MARSHALL ST	9+50.00	NR	Waterborne/Solvent Paint			X																	NE S Marshall & Park Curb
S MARSHALL ST	9+56.00	SB	Waterborne/Solvent Paint	X																			NW S Marshall & Park Curb
S MARSHALL ST	9+53.37	BOTH	Waterborne/Solvent Paint	X	X	X				0.29													S Marshall Crosswalk
S MARSHALL ST	9+58.37	BOTH	Waterborne/Solvent Paint	X					0.13														SB Stop Bar
S MARSHALL ST	13+50.29	BOTH	Waterborne/Solvent Paint	X	X	X				0.26													S Marshall Crosswalk
S MARSHALL ST	13+63.85	SB	Waterborne/Solvent Paint	X							0.42												SW S Marshall & Lincoln Curb
LINCOLN AVE	13+68.00	BOTH	Waterborne/Solvent Paint	X	X	X				8.26													Lincoln Ave Crosswalk
S MARSHALL ST	14+00.00	SB	Waterborne/Solvent Paint	X							0.35												NW S Marshall & Lincoln Curb
PARK AVE	108+66.00	NR	Waterborne/Solvent Paint	X					0.13														Park Ave Stop Bar
Factored Total Waterborne/Solvent Paint							2.38	24.68	6.45														
aid quantity: Painted Pavement Markings, Waterborne on Solvent-based										33.39													





PARK AVE

RELOCATION OF EXISTING MAILBOXES

STATION	ADDRESS	REMARKS
3+67.34	920 S MARSHALL ST.	
4+55.76	904 S MARSHALL ST.	REINSTALL LANDSCAPING
7+36.58	820 S MARSHALL ST.	REINSTALL LANDSCAPING

REFER TO L SHEETS FOR INTERSECTION DETAILS
 REFER TO S SHEETS FOR SIDEWALK RAMP DETAILS
 REFER TO N SHEETS FOR TRAFFIC SIGNS AND PAVEMENT MARKINGS

ENGLISH

DESIGN TEAM SEH

CITY OF BOONE

PROJECT NUMBER

160642

SHEET NUMBER

D.3

GENERAL STAGING AND TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE ALL SIGNS, BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES EMPLOYED DURING CONSTRUCTION FOR ALL ASPECTS OF WORK ON THE PROJECT.
2. PROPOSED CHANGES IN THE TRAFFIC CONTROL PLAN SHALL BE REVIEWED WITH THE RESIDENT CONSTRUCTION ENGINEER BEFORE CHANGES MAY BE ALLOWED.
3. CONTRACTOR SHALL MAINTAIN AND/OR PROVIDE ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
4. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE, BARRICADES, AND FENCING REQUIRED FOR PEDESTRIAN TRAFFIC CONTROL CLOSURES AS A PART OF THE TRAFFIC CONTROL BID ITEM.
5. WASTE COLLECTION AND MAIL SERVICES WILL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL ACCOMMODATE POSTAL SERVICE AND GARBAGE COLLECTION PROVIDER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD.
6. TRAFFIC CONTROL SIGNAGE SHALL BE KEPT CLEAN AND LEGIBLE AT ALL TIMES.
7. NOTIFY THE CITY OF BOONE A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO ROAD CLOSURES OR DETOUR SETUP.
8. CONTRACTOR SHALL MAINTAIN ACCESS TO AFFECTED RESIDENCES THROUGHOUT THE DURATION OF THE PROJECT.

STAGE 1 CONSTRUCTION STAGING REQUIREMENTS

1. REMOVALS AND CONCRETE WORK
 - A. PERFORM ALL CURB AND GUTTER, SIDEWALK, PAVEMENT, AND DRIVEWAY SAW CUTS NECESSARY TO COMPLETE THE WORK.
 - B. REMOVE EXISTING PAVEMENT, SIDEWALK, AND CURB AND GUTTER SECTIONS.
 - C. CONSTRUCT NEW PCC CURB AND GUTTER INCLUDING INTERSECTION RADIUS.
 - D. CONSTRUCT NEW DRIVEWAY PAVEMENTS.
 - E. GRADE AND CONSTRUCT ADA RAMPS ACCORDING TO 6 SHEETS.
 - F. REMOVE MANHOLE CASTINGS AND VALVE BOXES PRIOR TO MILL AND OVERLAY.
2. MILL AND OVERLAY S MARSHALL ST.
 - A. SCARIFY PAVEMENT AS SHOWN. TRANSITION BETWEEN 1" MILL AND 3" MILL SHALL BE DETERMINED BY THE RESIDENT CONSTRUCTION ENGINEER.
 - B. PLACE HMA OVERLAY.
3. COMPLETE STRIPING AND OTHER MISCELLANEOUS WORK.

STAGE 1A CONSTRUCTION STAGING REQUIREMENTS

1. REMOVALS AND CONCRETE WORK
 - A. PERFORM ALL CURB AND GUTTER SAW CUTS NECESSARY TO COMPLETE THE WORK.
 - B. REMOVE EXISTING PAVEMENT, SIDEWALK, AND CURB AND GUTTER SECTIONS.
 - C. CONSTRUCT NEW CURB AND GUTTER.
 - D. COORDINATE WITH CITY AND ENGINEER REGARDING MANHOLE REPLACEMENT.
2. MILL AND OVERLAY PARK AVE.
 - A. SCARIFY PAVEMENT AS SHOWN.
 - B. PLACE HMA RESURFACING PAVEMENT.
3. COMPLETE OTHER MISCELLANEOUS WORK.

STAGE 1 AND 1A TRAFFIC CONTROL REQUIREMENTS

NOTE: STAGE 1 AND STAGE 1A MAY BE COMPLETED CONCURRENTLY WITH APPROVAL OF THE CITY.

1. PRIOR TO WORK, ERECT INITIAL TRAFFIC CONTROL.
 - A. ERECT HAZARD CLOSURES PER TC-252, SITUATION 1 (URBAN) FOR NORTHBOUND TRAFFIC AT HANCOCK DR AND SOUTHBOUND AT PRAIRIE AVE.
 - B. ERECT DETOUR ROUTE FOR S MARSHALL ST AS DETAILED IN SHEET J.2.
 - C. ERECT HAZARD CLOSURES PER TC-252, SITUATION 1 (URBAN) AT APPROX. STA 8+25, 50' LT AND 50' RT, AND APPROX. STA 13+75, 50' LT ON S MARSHALL ST.
 - D. ERECT HAZARD CLOSURE PER TC-252, SITUATION 1 (URBAN) AT APPROX. STA 100+80 ON PARK AVE PRIOR TO COMMENCEMENT OF STAGE 1A.
 - E. ERECT PEDESTRIAN DETOURS PER TC-401 AS NECESSARY.
 - F. ERECT SAFETY FENCE AND DELINEATORS AROUND REMOVED AREAS TO PROTECT WORK AND THE PUBLIC.
2. PROTECT WORK AND THE PUBLIC. PERFORM WORK IN A MANNER THAT MINIMIZES DURATION OF HAZARDS.
 - A. NOTIFY PROPERTY OWNERS IF WORK WILL AFFECT ACCESS TO THEIR PROPERTY.
 - B. PLACE DELINEATORS AS NECESSARY AROUND REMOVED AREAS TO PROTECT WORK AND THE PUBLIC.
 - C. ERECT PEDESTRIAN DETOURS PER TC-401 AS NECESSARY.
3. CLOSE APPROPRIATE STREETS DAILY DURING MILL AND OVERLAY.
 - A. PRIOR TO BEGINNING WORK, ERECT SAFETY FENCE ANYWHERE TRAFFIC MAY ATTEMPT TO ACCESS THE WORK AREA.
 - B. PLACE EXCESS MATERIAL AT MILLED HEADERS PRIOR TO RE-OPENING THE STREET TO MAKE THEM EASILY TRAVERSABLE.
 - C. REMOVE SAFETY FENCE UPON COMPLETION OF DAY'S WORK. LEAVE ALL OTHER TRAFFIC CONTROL IN PLACE.
4. AFTER COMPLETION OF OTHER MISCELLANEOUS WORK, REMOVE REMAINING TRAFFIC CONTROL DEVICES.

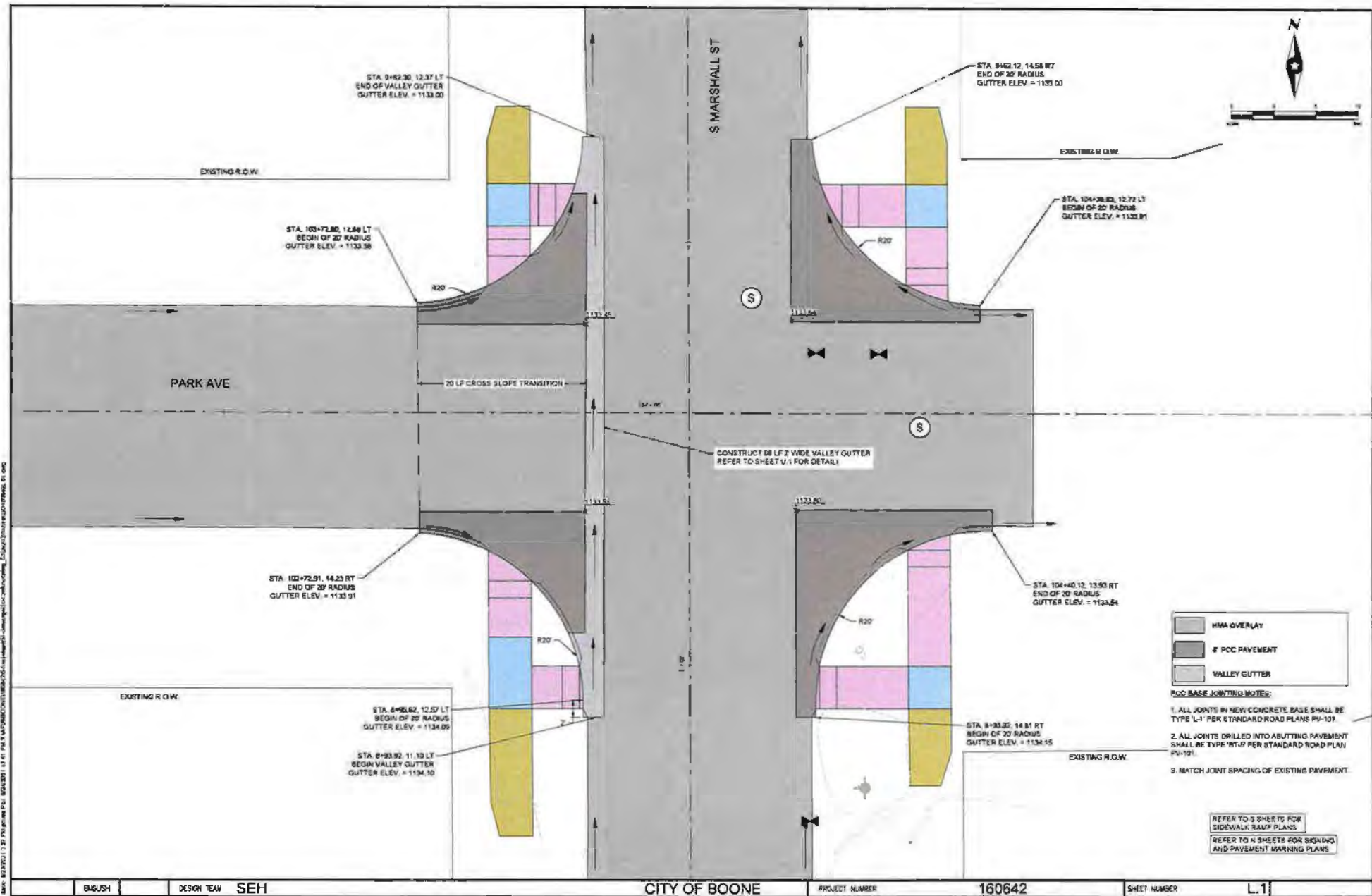


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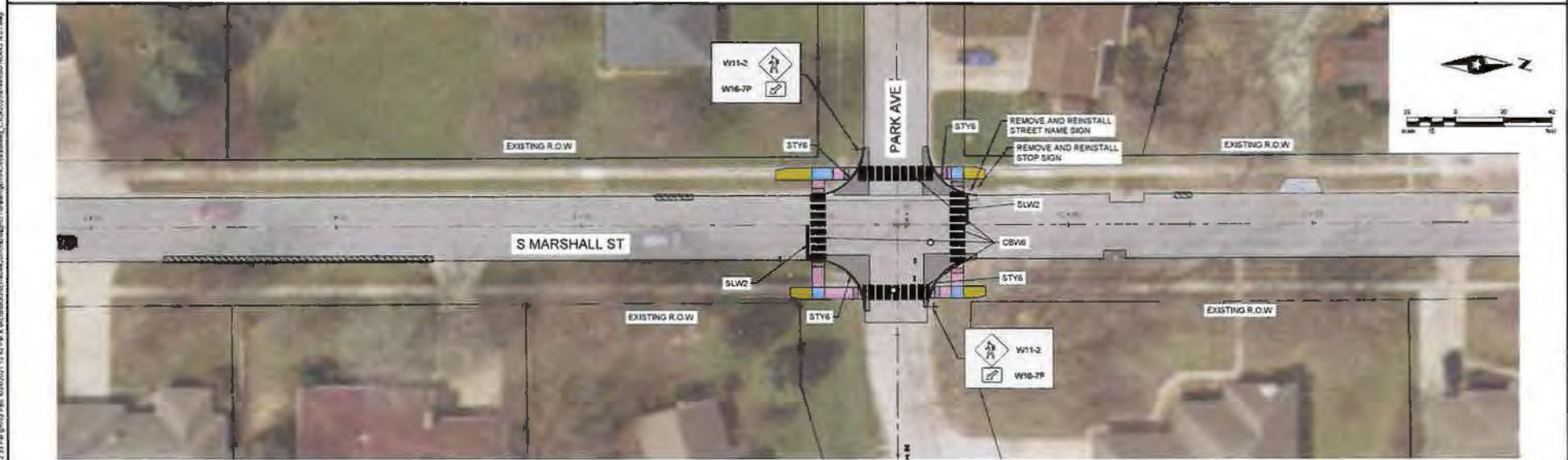
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S MARSHALL ST



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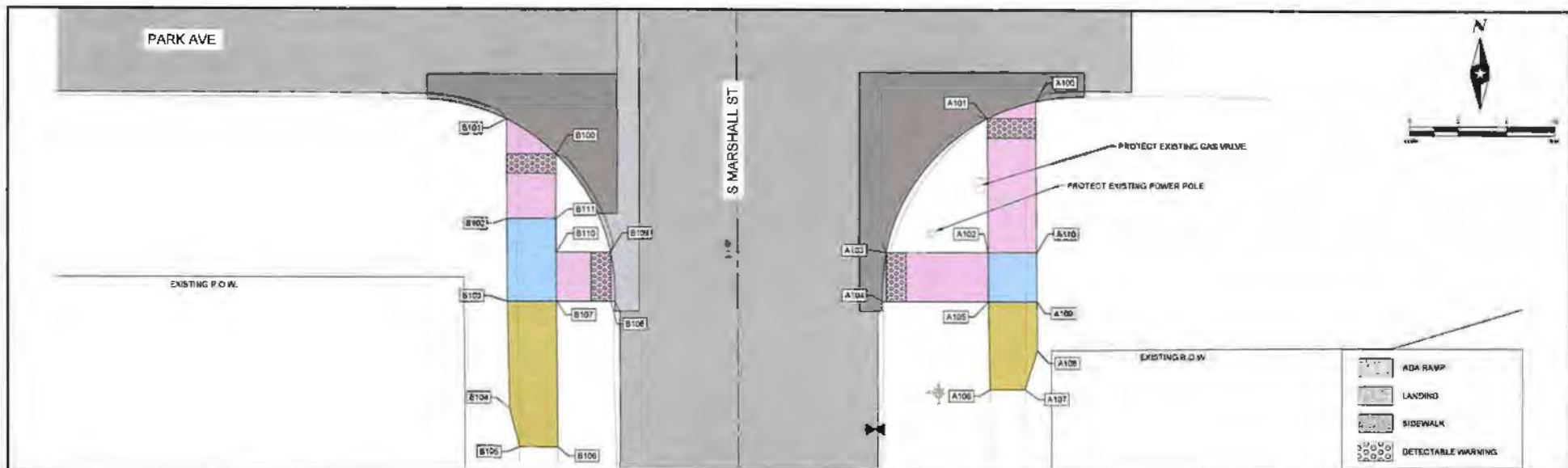
CITY OF BOONE

PROJECT NUMBER

160642

SHEET NUMBER

N.1



SIDEWALK COMPLIANCE

See 5 Sheets

① Does not include curb
Staking required by Contracting Authority.

Point to Point	Sidewalk Designation	PCC Sidewalk ②	Distance*	Elevation		Slope	Acceptable Constructed Range	Staking Required on this Quadrant? ③	Measured Slope	Initials	Remarks	FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
				FT	FT	%						Point	Station	Offset	Elevation
A100	A101	Crosswalk Cross Slope - No Yield Condition	6	5.00	0.04	0.8%	0.0% to 0.3%					A100	9+15.37	38.58	1133.66
A101	A102	Ramp Running Slope	6	13.76	0.91	6.6%	0.5% to 8.3%					A101	9+13.64	25.76	1133.70
A100	A110	Ramp Running Slope	6	15.56	1.00	6.4%	0.5% to 8.3%					A102	9+99.70	25.72	1134.61
A102	A110	Landing/Turning Space	6	5.00	0.05	1.0%	0.1% to 2.0%					A103	9+99.82	15.26	1134.11
A102	A105	Landing/Turning Space	6	5.00	0.05	1.0%	0.1% to 2.0%					A104	9+94.82	14.82	1134.16
A110	A109	Landing/Turning Space	6	5.00	0.06	1.2%	0.1% to 2.0%					A105	9+94.78	25.63	1134.66
A105	A109	Landing/Turning Space	6	5.00	0.00	1.2%	0.1% to 2.0%					A106	9+85.78	25.78	1134.99
A103	A102	Ramp Running Slope	6	10.40	0.50	4.8%	0.5% to 8.3%					A107	9+85.77	29.59	1134.57
A104	A105	Ramp Running Slope	6	10.05	0.30	4.6%	0.5% to 8.3%					A108	9+89.76	38.64	1134.87
A103	A104	Crosswalk Cross Slope - Yield Condition	6	5.00	0.05	1.0%	0.0% to 2.0%					A109	9+94.75	38.64	1134.72
A105	A106	Sidewalk Running Slope	4	9.89	0.24	2.7%	0.5% to 5.0%					A110	9+89.76	30.64	1134.66
A106	A107	Sidewalk Running Slope	4	4.08	0.10	2.5%	0.5% to 5.0%								
A109	A108	Sidewalk Running Slope	4	5.89	0.15	3.0%	0.5% to 5.0%								
A106	A107	Match Existing Cross Slope	4	4.08	0.07	1.7%	Match Existing								
B100	B101	Crosswalk Cross Slope - No Yield Condition	6	5.00	0.05	1.2%	0.0% to 5.0%					B100	9+10.61	-18.53	1133.65
B100	B111	Ramp Running Slope	6	4.61	0.53	8.0%	0.5% to 8.3%	Yes				B101	9+13.58	-23.57	1133.71
B101	B102	Ramp Running Slope	6	10.23	0.54	5.3%	0.5% to 8.3%					B102	9+03.39	-23.57	1134.25
B102	B112	Landing/Turning Space	6	5.00	-0.07	-1.4%	0.1% to 2.0%					B103	9+04.96	-23.57	1134.38
B102	B103	Landing/Turning Space	6	0.42	0.13	3.5%	0.1% to 2.0%					B104	9+04.89	-23.57	1134.98
B111	B107	Landing/Turning Space	4	0.42	0.05	0.6%	0.1% to 2.0%					B105	9+09.87	-22.57	1135.31
B103	B107	Landing/Turning Space	4	5.00	-0.06	-1.6%	0.1% to 2.0%	Yes				B106	9+09.87	-18.57	1135.94
B109	B110	Ramp Running Slope	6	5.54	0.22	4.0%	0.5% to 8.3%					B107	9+04.94	18.57	1134.39
B108	B107	Ramp Running Slope	6	5.95	0.21	3.5%	0.5% to 8.3%					B108	9+04.94	-22.58	1134.89
B109	B108	Crosswalk Cross Slope - Yield Condition	6	5.00	0.00	1.0%	0.0% to 2.0%					B109	9+09.92	-13.00	1134.01
B106	B107	Sidewalk Running Slope	4	15.00	-0.74	-4.9%	0.5% to 5.0%	Yes				B110	9+09.92	-18.57	1134.28
B103	B104	Sidewalk Running Slope	4	10.09	0.09	0.6%	0.5% to 5.0%					B111	9+03.38	-18.57	1134.18
B104	B105	Sidewalk Running Slope	4	5.00	0.21	4.2%	0.5% to 5.0%	Yes							
B105	B106	Match Existing Cross Slope	4	4.88	-0.07	-1.7%	Match Existing								

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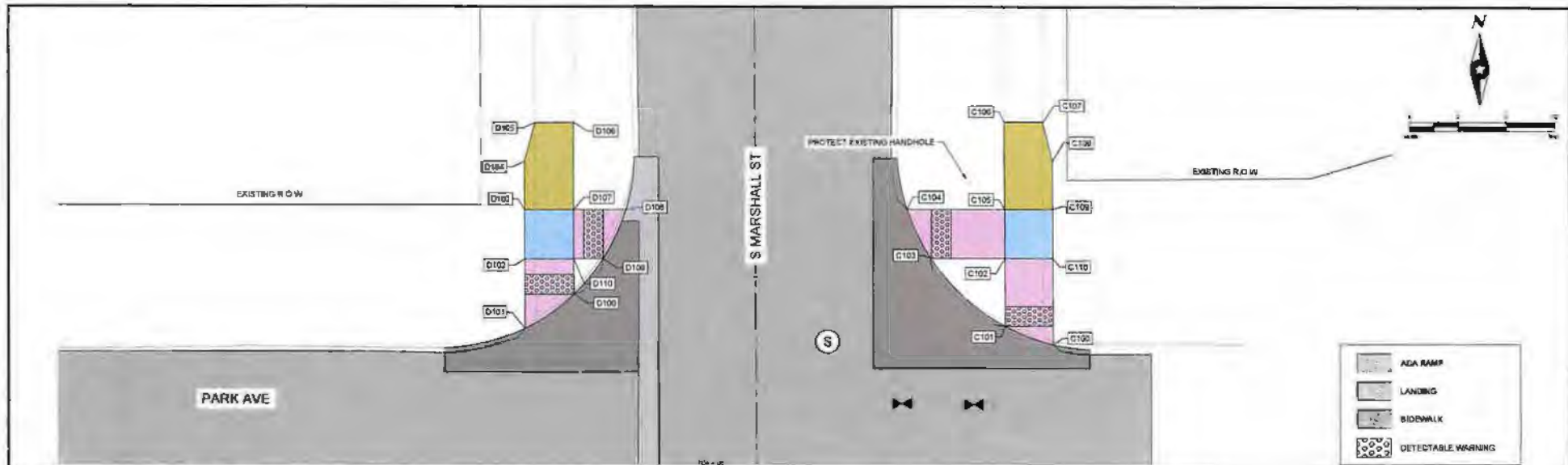
CITY OF BOONE

PROJECT NUMBER

160642

SHEET NUMBER

S.1



SIDEWALK COMPLIANCE

See 5 Sheets

- * Does not include curb
 ① Staking required by Contracting Authority.

Point to Point	Sidewalk Designation	PCC Sidewalk	Distance*	Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant?	Measured Slope	Initials	Remarks	FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIRED SLOPES			
											Point	Station	Offset	Elevation
C100	C101	Crosswalk Cross Slope - No Yield Condition	6	5.00	-0.06	-1.2%	0.0% to 5.0%				C100	9+41.00	30.46	1133.67
C100	C110	Ramp Running Slope	6	8.70	0.05	0.6%	0.5% to 8.3%				C102	9+44.85	25.56	1133.63
C101	C102	Ramp Running Slope	6	8.89	0.07	1.0%	0.5% to 8.3%				C102	9+51.00	25.59	1133.68
C102	C110	Landing/Turning Space	6	5.00	0.04	0.8%	0.1% to 2.0%				C103	9+51.83	18.02	1133.46
C102	C105	Landing/Turning Space	6	5.00	0.04	0.8%	0.1% to 2.0%				C104	9+56.83	15.60	1133.54
C105	C109	Landing/Turning Space	6	5.00	0.04	0.8%	0.1% to 2.0%				C105	9+56.80	25.54	1133.72
C110	C109	Landing/Turning Space	6	5.00	0.04	0.8%	0.1% to 2.0%				C106	9+65.00	25.55	1133.87
C103	C107	Ramp Running Slope	6	6.83	0.22	3.2%	0.5% to 8.3%				C107	9+65.77	29.45	1134.00
C104	C105	Ramp Running Slope	6	9.94	0.18	1.8%	0.5% to 8.3%				C108	9+61.77	30.42	1133.86
C103	C104	Crosswalk Cross Slope - Yield Condition	6	5.00	0.08	1.6%	0.0% to 2.0%				C109	9+56.78	30.43	1133.76
C105	C106	Sidewalk Running Slope	4	9.00	0.15	1.7%	0.5% to 5.0%				C110	9+55.78	30.44	1133.72
C109	C108	Sidewalk Running Slope	4	5.00	0.10	2.0%	0.5% to 5.0%							
C108	C107	Sidewalk Running Slope	4	4.08	0.14	3.5%	0.5% to 5.0%							
C106	C107	Match Existing Cross Slope	4	4.00	0.13	3.3%	Match Existing							
D100	D101	Crosswalk Cross Slope - No Yield Condition	6	5.00	0.08	1.6%	0.0% to 5.0%							
D100	D110	Ramp Running Slope	6	3.50	0.19	5.1%	0.5% to 8.3%				D100	9+48.37	-10.67	1133.42
D101	D102	Ramp Running Slope	6	7.09	0.16	2.3%	0.5% to 8.3%				D101	9+46.89	-23.57	1133.59
D101	D102	Ramp Running Slope	6	7.09	0.16	2.3%	0.5% to 8.3%				D102	9+51.06	-23.54	1133.66
D102	D110	Landing/Turning Space	6	5.00	-0.05	-1.0%	0.1% to 2.0%				D103	9+58.98	-23.65	1133.62
D102	D101	Landing/Turning Space	6	5.00	-0.04	-0.8%	0.1% to 2.0%				D104	9+61.07	-23.56	1133.67
D107	D101	Landing/Turning Space	6	5.00	0.05	1.0%	0.1% to 2.0%				D105	9+65.02	-22.49	1133.70
D107	D110	Landing/Turning Space	6	5.00	0.04	0.8%	0.1% to 2.0%				D106	9+65.96	-18.55	1133.56
D109	D110	Ramp Running Slope	6	2.98	0.21	7.0%	0.5% to 8.3%				D107	9+56.94	-17.31	1133.33
D103	D107	Ramp Running Slope	6	5.26	0.24	4.6%	0.5% to 8.3%				D109	9+51.95	-15.68	1133.48
D108	D109	Crosswalk Cross Slope - Yield Condition	6	5.00	0.07	1.4%	0.0% to 2.0%				D110	9+51.96	-18.57	1133.61
D107	D106	Sidewalk Running Slope	4	9.00	0.09	1.0%	0.5% to 5.0%							
D103	D104	Sidewalk Running Slope	4	5.00	0.05	1.0%	0.5% to 5.0%							
D104	D105	Sidewalk Running Slope	4	4.00	0.03	0.7%	0.5% to 5.0%							
D105	D106	Match Existing Cross Slope	4	4.00	-0.04	-1.0%	Match Existing							

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CITY OF BOONE

PROJECT NUMBER

160642

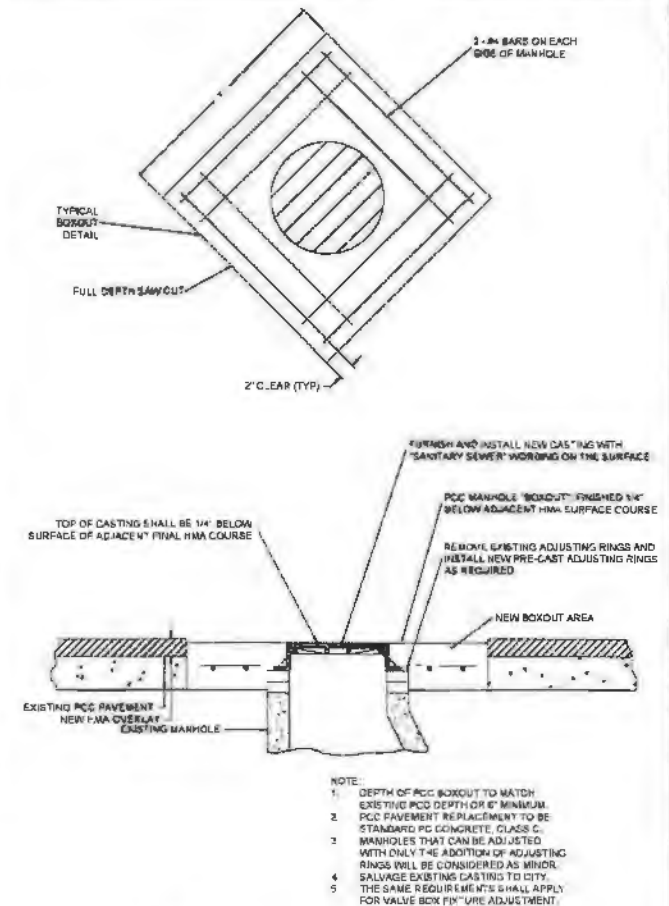
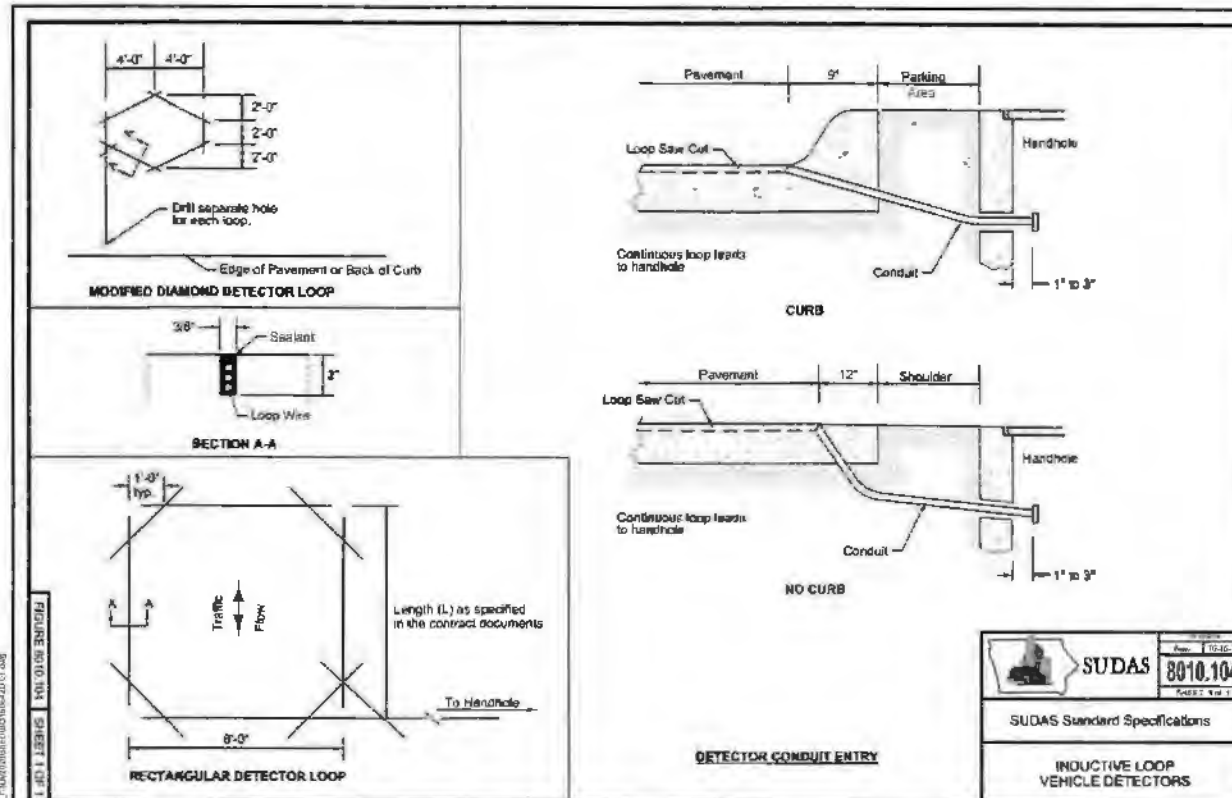
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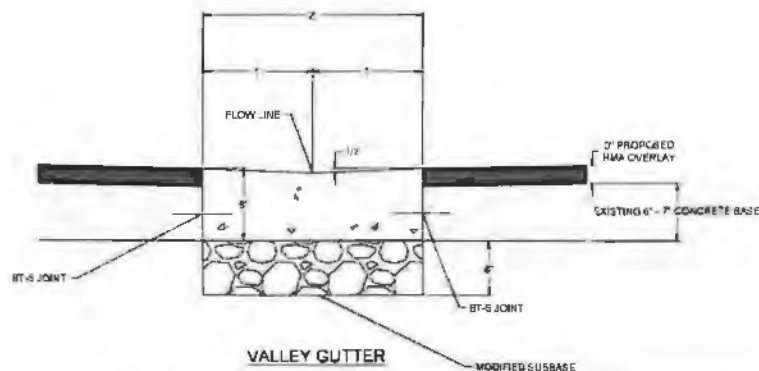
See 5 Sheets

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FIXTURE ADJUSTMENT, MANHOLE, MINOR



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CITY OF BOONE

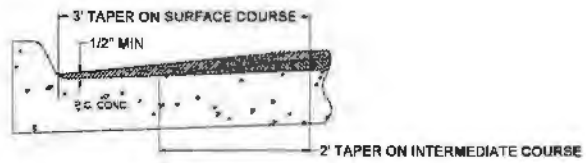
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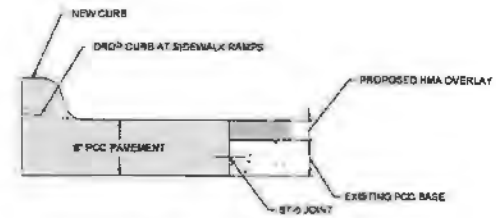
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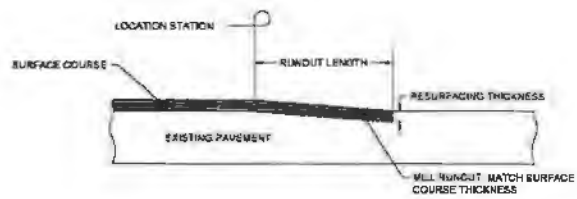
SHEET 1 OF 1



HMA TAPER DETAIL AT CURB



8' PCC PAVEMENT AT RADIUS



MILLED SURFACE NOTCH FOR RUNOUT

CITY COUNCIL
CITY OF BOONE, IOWA

RESOLUTION NO. 2895
RESOLUTION APPROVING PLANS, SPECIFICATIONS, FORM OF CONTRACT
AND ESTIMATE OF COST FOR THE WATER PLANT EXTERIOR WALL
PROJECT

WHEREAS, Short Elliott Hendrickson, Inc. has prepared and filed plans, specifications, form of contract, and estimate of cost for the Water Treatment Plant Exterior Walls Rehabilitation Project to include: replacement of certain exterior glass block, resealing cracks, pressure wash and seal block, and route and seal block joints; and

WHEREAS, notice of hearing on plans, specifications, form of contract, and estimate of cost was published as required by law; and

WHEREAS, The City Council of Boone, Iowa held a public hearing on the proposed plans, specifications, form of contract, and estimate of cost for the construction of said improvements on July 5, 2021 at 6:00 p.m. in the Council Chambers, located at 923 8th Street, Boone, Iowa.

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

Section 1: That the detailed plans, specifications, form of contract and an estimate of cost set at \$241,480.80 as prepared by Short Elliott Hendrickson, Inc. for the Water Plant Exterior Wall Project, are hereby approved.

Section 2: That said plans, specifications, form of contract and estimate of costs for the Water Plant Exterior Wall Project have been placed on file with the City of Boone, Iowa.

PASSED THIS 5th day of July, 2021.

AYES (A), NAYES (N), ABSENT (X) ABSTAIN (/):

BJ McGinn	☐	David Byrd	☐	Elijah Stines	☐
Steven Ray	☐	Holly Stecker	☐	Greg Piklapp	☐
Terry Moorman	☐				

Mayor
City of Boone

Clerk
City of Boone

Project Manual

Water Treatment Facilities Exterior Wall Repair and Repointing Project

City of Boone, Iowa

SEH No. BOONE 154710

June, 2021



Building a Better World
for All of Us®

Engineers | Architects | Planners | Scientists

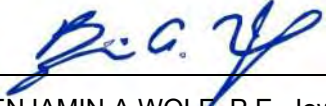
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**Water Treatment Facilities
Exterior Wall Repair and Repointing Project
City of Boone, Iowa**

SEH No. BOONE 154710

June, 2021

Structural:

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.	
		June 14, 2021
	BENJAMIN A WOLF, P.E Iowa Reg. No. 15523 My license renewal date is 12/31/2022 Pages covered by this seal: All	

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DOCUMENT 00 01 08

PROJECT DIRECTORY

Project Name: Water Treatment Facilities Exterior Wall Repair and Repointing Project

Location: Boone, Iowa

Owner

Name: City of Boone, Iowa

Address: 923 – 8th Street
Boone, IA 50036

Contact: Dave Moore, Water Treatment Plant Operator

Phone: 515-433-0536

E-mail: dmoore@city.boone.ia.us

Engineer

Name: Short Elliott Hendrickson, Inc. (SEH®)

Address: 5414 NW 88th St, Ste 140
Johnston, IA 50131

Contact: Perry Gjersvik, P.E. (IA), Project Manager

Phone: 515-608-6005 (direct)

E-mail: pgjersvik@sehinc.com

Contact: Benjamin Wolf, P.E. (IA), Structural Engineer

Phone: 507-316-6648 (direct)

E-mail: bwolf@sehinc.com

END OF DOCUMENT

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DOCUMENT 00 01 10

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DRAWINGS – UNDER SEPARATE COVER

Drawings bearing the general title “Water Treatment Facilities, Exterior Wall Repair and Repointing Project, Boone, Iowa” are bound separately.

END OF DOCUMENT

SECTION 00 11 12
NOTICE TO BIDDERS

Sealed bids will be received by the City Clerk of the City of Boone, Iowa at the Boone City Hall at 923 – 8th Street, Boone, IA 50036, until 2:00 p.m., local time, on July 28, 2021, for the following described public improvement:

Water Treatment Facilities, Exterior Wall Repair and Repointing Project

Boone, Iowa

At the above time and place all bids received by the City will be opened and publicly read with the results being reported to the Boone City Council at their meeting at 6:00 p.m., local time, on August 2, 2021, at which time the Council may take action on the proposals submitted or at such time as may then be fixed.

The extent of work on this project is the furnishing of all labor, equipment, and materials for the construction of improvements in Boone, Iowa under one contract with two Divisions (if both are awarded) generally described as follows:

Division 1 – Water Plant Building: Work consists of masonry restoration, creating new movement joints, installing a new insulated furring system on the outside of the exposed precast beam at the top of the north facing wall, and replacing north wall windows with aluminum storefront type windows, or as an alternate, translucent panels. Masonry restoration will include repointing cracked mortar joints inside and outside of wall as designated on plan, replacing cracked face shells with new masonry units, and applying masonry sealer to north and west walls of the building.

Division 2 – Pump Station Building: Work consists primarily of masonry restoration and creating new movement joints. Repair cracks in mortar joints, replace cracked face shells, cut and apply joint sealant to new control joints in masonry walls, replace broken glass block window, and apply masonry sealer to entire structure after masonry repair work is complete.

The kinds of materials, estimated quantities, and work to be done for the project on which bids will be received are as shown on the bid proposal for said project.

All work is to be done in strict compliance with the Plans and Specifications prepared by Short Elliott Hendrickson Inc. which have been heretofore approved by the City Council and which are now on file for public examination in the office of the City Clerk.

A Pre-Bid Conference will not be held for this project.

All bids shall be made on the forms included in the project specifications and shall be filed on or before the time specified above, in a sealed envelope addressed to the City Clerk of Boone, Iowa, clearly stating that the envelope contains a bid on this project.

Each Bid shall be accompanied by a Bid Bond, certified check, cashier's check, or certified credit union share draft in a separate sealed envelope in an amount equal to five (5) percent of the total amount of the Bid. If Bid Bond is submitted, it must be on the form provided with the Contract Documents. The certified check, cashier's check, or certified credit union share draft shall be drawn on a bank in Iowa, a bank chartered under the laws of the United States of America, or said certified share draft shall be drawn on a credit union in Iowa or chartered under the laws of the United States and payable to the Treasurer of the Owner as security that if awarded a contract, the Bidder will enter into a contract at the prices Bid and furnish the required Performance, Payment and Warranty Bond(s) each in the amount of one hundred percent of the Work, and provide a Certificate of Insurance. The certified check, cashier's check, or certified share draft may be cashed, or the Bid Bond forfeited, and the proceeds retained as liquidated damages if the Bidder fails to execute a contract or file acceptable Performance, Payment and Warranty Bond(s) or provide an acceptable Certificate of Insurance within fifteen (15) days after the acceptance of said Bid by resolution of the Owner.

No Bidder may withdraw a Bid within sixty (60) days after the date set for opening Bids.

By virtue of statutory authority preference will be given to products and provisions grown and coal produced within the State of Iowa and to Iowa domestic labor.

In accordance with Iowa statutes, a resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor

force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident. Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

If it is determined that adherence to these Iowa statutory requirements may cause denial of federal funds which would otherwise be available for a public improvement or would otherwise be inconsistent with requirements of any federal law or regulation, the application of Iowa Code Chapters 73 and 73A shall be suspended to the extent necessary to prevent denial of the funds or to eliminate the inconsistency with federal requirements.

The Bidder shall not include sales tax in the Bid. The City of Boone is exempt from paying sales tax and will issue a sales tax exemption certificate to the Contractor for all material purchased for incorporation into the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued.

Work on said project shall commence within ten (10) days of a written notice to proceed. The Work shall be substantially completed as follows:

Work on said project shall commence within ten (10) days of a written notice to proceed. The Work will be substantially completed on or before October 15, 2021, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 29, 2021

Liquidated damages in the amount of Five Hundred Dollars (\$500.00) consecutive per day will be assessed for each day that the work remains uncompleted after the dates specified above for substantial completion and readiness for final payment.

Payment for the work will be made by the City in cash from such funds as may be legally available including cash on hand, proceeds from the sale and issuance of General Obligation Bonds and such other funds including the proceeds from the sale and issuance of such other bonds as may lawfully be issued as the City Council may at its sole discretion determine and provide.

Payment will be made to the contractor based on monthly estimates in amounts equal to ninety-five percent of the contract value of the work completed during the preceding calendar month and will be based upon an estimate prepared by the Contractor on the first day of the month, subject to the approval of the Engineer. Any such payment by the City shall in no way be construed as an act of acceptance for any part of the work partially or totally completed. Final payment by the City will be made in accordance with Iowa statutes and the contract documents.

Copies of the contract documents are on file with the City of Boone for examination by bidders. Paper copies of Bidding Forms and copies of Plans and Specifications and contract documents may be obtained from the Engineer's Office at Short Elliott Hendrickson Inc. (SEH), 5414 NW 88th Street, Suite 140, Johnston, Iowa 50131 (515-608-6000) for \$100 per set, all of which will be refunded if returned in reusable condition within 14 days of the Award of Contract. If all documents are not returned in reusable condition and within 14 days, the deposit shall be forfeited.

Complete digital image (.pdf) copies of the Bidding Documents, Contract Documents, and Plans and Specifications are available for download at no cost at <https://www.questcdn.com>. These documents may be viewed or downloaded by entering eBidDoc™ Number **7897686** on the QuestCDN Search Projects page. For assistance and free membership registration, contact QuestCDN at 952.233.1632 or info@questcdn.com. Website registration is necessary to ensure that prospective bidders remain informed of addendum and other essential communications prior to the bid date.

The City reserves the right to reject any and/or all bids and to waive any and/or all technicalities and/or all irregularities. This notice is given by authority of the City of Boone, Iowa.

By John Slight
(Mayor)

ATTEST: Ondrea Elmquist
(City Clerk)

Posted to the Iowa League of Cities and the Master Builders of Iowa websites on July 6, 2021,

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.
 - 1. **The Issuing Office for paper copies of the Bidding Documents for this project is Short Elliott Hendrickson Inc. 5414 NW 88th Street, Suite 140, Johnston, IA 50131; telephone 515-608-6000. The charge to obtain paper copies of Bidding Documents from this Issuing Office is as noted in the Notice to Bidders (Advertisement for Bids).**
 - 2. **The Issuing Office for electronic copies of the Bidding Documents that are available to download free of charge for this project is the QuestCDN Construction Data Network, whose website address is www.questcdn.com.**
 - a. **Bidders are encouraged to obtain Bidding Documents from QuestCDN.**
 - b. **QuestCDN will maintain the official Planholders List for the project.**
 - B. **Owner – The Owner of this Project is the City of Boone, Iowa, whose address is 923 – 8th Street, Boone, IA 50036.**

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid and further described below. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- A. **Complete digital image (.pdf) copies of the Bidding Documents, Contract Documents, and Plans and Specifications are available for download at no cost at <https://www.questcdn.com>. These documents may be viewed or downloaded by entering eBidDocTM Number **7897686** on the QuestCDN Search Projects page. For assistance and free membership registration, contact QuestCDN at 952.233.1632 or info@questcdn.com. Website registration is necessary to ensure that prospective bidders remain informed of addendum and other essential communications prior to the bid date.**
- 2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely

that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

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

2.06 *Electronic Documents*

- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.05.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.
- C. After the Contract is awarded, the Owner will provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.
1. Electronic Documents that are available in native file format include:
 - a. **None**
 2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.
 3. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.
 4. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract Documents and any related document in native file format.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **five (5)** days of Owner's request, Bidder must submit the following information:
- A. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - B. Bidder's state or other contractor license number, if applicable.
 - C. Other required information regarding qualifications.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A pre-bid conference will not be conducted for this Project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:
 - 1. **None.**Owner will make copies of these other Site-related documents available to any Bidder on request.
- B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
- C. The other Site-related documents are not part of the Contract Documents.
- D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.
- E. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

- A. It is highly recommended that the Bidder visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. Bidders visiting the Site are required to arrange their own transportation to the Site.
- C. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner or Engineer contact for visiting the Site. Bidder must conduct the required Site visit during normal working hours.
 - 1. **Dave Moore, Boone Water Treatment Plant, 515-433-0536**
- D. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- E. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.
- F. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- G. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. All questions to the Engineer shall be submitted in writing via email to the following:
 - 1. **Engineer: Short Elliott Hendrickson Inc.**
 - a. **Perry Gjersvik, P.E. (IA), Project Manager**
 - b. **Email: pgjersvik@sehinc.com**
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **five (5)** percent of Bidder's maximum Bid price (determined by adding the base bid and all add alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be

released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work **within five days after Bid opening**:
 - A. **All work.**
- 11.02 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes

no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 Unit Price

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity”, which Owner or its representative has set forth in the Bid Form, for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
 - C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.
 - D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance, payment and warranty bonds, other required bonds

(if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

- 21.01 Owner is exempt from **Iowa** state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes must not be included in the Bid. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

ARTICLE 22—PREFERENCE

- 22.01 The State of Iowa, its agencies, and its political subdivisions, including cities, school districts and public utilities are required by Iowa Code Section 73A.21 to require a reciprocal resident bidder and resident labor force preference.
- A. “Resident Bidder” means a person or entity authorized to transact business in the State of Iowa and having a place of business for transacting business within the state at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. If another state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.
 - B. A resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country other than Iowa if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident.
 - C. A completed Bidder Status Form included in the Bid Documents must be submitted with the Bid.

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

City of Boone
923 8th Street
PO Box 550
Boone, IA 50036-0550

1.02 This Bid is submitted by:

Bidder Name: _____
(Printed name of Organization)

1.03 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
- C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- D. Bidder Status Form

ARTICLE 3—BASIS OF BID

3.01 *Unit Price Bids*

- A. Bidder will perform the following Work at the indicated unit prices. **Bidders shall provide bid prices for both Divisions and for each Bid Alternative.**

Division 1 – Water Plant Building

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	Insulated Furring and Cladding	LS	1	\$	\$
2	Aluminum Framed Windows	LS	1	\$	\$
3	Replace CMU Face Shells	SF	72	\$	\$
4	Repoint Mortar Joints	LF	1,200	\$	\$
5	Replace Control Joint Sealant	LF	340	\$	\$
6	Install New Expansion Joint	LF	60	\$	\$

7	Install New Control Joint	LF	128	\$	\$
8	Replace Sealant at Windows and Doors	LF	80	\$	\$
9	Remove and Patch Locations of Iron Deposits	EA	5	\$	\$
10	Apply Concrete Block Sealer	SF	5,800	\$	\$
11	Paint Interior Walls around Repairs	SF	1,320	\$	\$
Total of All Unit Price Bid Items – Base Bid - Division 1 - Water Plant Building					\$

Division 2 – Pump Station Building

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	Aluminum Framed Window	LS	1	\$	\$
2	Replace CMU Face Shells	SF	14	\$	\$
3	Repoint Mortar Joints	LF	60	\$	\$
4	Install New Control Joint	LF	160	\$	\$
5	Apply Concrete Block Sealer	SF	2,400	\$	\$
6	Paint Interior Walls around Repairs	SF	200	\$	\$
Total of All Unit Price Bid Items – Base Bid - Division 2 – Pump Station Building					\$

Bid Alternates:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
A1	Insulated Translucent Panels – Water Plant	LS	1	\$	\$
A2	Insulated Translucent Panel – Pump Station	LS	1	\$	\$

B. Bidder acknowledges that:

- each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
- estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.
- Owner reserves the right to award contract for either or both Divisions, and for either or both Bid Alternatives, dependent upon Owner's budget.**

ARTICLE 4—TIME OF COMPLETION

- Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
 7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for

the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable)

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BID BOND (PENAL SUM FORM)

Bidder Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: City of Boone, Iowa Address <i>(principal place of business)</i> : 923 – 8th Street Boone, IA 50036	Bid Project <i>(name and location)</i> : Water Treatment Facilities Exterior Wall Repair and Repointing Project Boone, Iowa Bid Due Date: July 28, 2021
Bond Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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.

309-6001 (09-15)

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.

NOTICE OF AWARD

Date of Issuance:

Owner: City of Boone, Iowa

Owner's Project No.: NA

Engineer: Short Elliott Hendrickson, Inc.

Engineer's Project No.: BOONE 154710

Project: Water Treatment Facilities, Exterior Wall
Repair and Repointing Project

Contract Name: General

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[Describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is **\$(Contract Price)**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Three (3) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☒ Project Manual and Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner Three (3) counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): Deliver required insurance certificate(s).

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: City of Boone, Iowa

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

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AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **the City of Boone, Iowa** ("Owner") and _____ ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Division 1 – Water Plant Building: Work consists of masonry restoration, creating new movement joints, installing a new insulated furring system on the outside of the exposed precast beam at the top of the north facing wall, and replacing north wall windows with aluminum storefront type windows, or as an alternate, translucent panels. Masonry restoration will include repointing cracked mortar joints inside and outside of wall as designated on plan, replacing cracked face shells with new masonry units, and applying masonry sealer to north and west walls of the building.

Division 2 – Pump Station Building: Work consists primarily of masonry restoration and creating new movement joints. Repair cracks in mortar joints, replace cracked face shells, cut and apply joint sealant to new control joints in masonry walls, replace broken glass block window, and apply masonry sealer to entire structure after masonry repair work is complete.

ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

Water Treatment Facilities, Exterior Wall Repair and Repointing Project

ARTICLE 3—ENGINEER

- 3.01 The Owner has retained Short Elliott Hendrickson Inc. ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by Engineer.

ARTICLE 4—CONTRACT TIMES

- 4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

- 4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before October 15, 2021, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 29, 2021.

- 4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if

the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion*: Contractor shall pay Owner \$500.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500.00 for each day that expires after such time until the Work is completed and ready for final payment.
 3. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

4.06 *Special Damages*

- A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.
- C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

ARTICLE 5—CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:
- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make monthly progress payments on the basis of Contractor's Applications for Payment each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and

less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

- a. **95** percent of the value of the Work completed (with the balance being retainage).
 1. Deleted
- b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

- B. Upon Substantial Completion **of the entire construction to be provided under the construction Contract Documents** Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the maximum rate allowed by law.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 1. This Agreement.
 2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 3. General Conditions (not attached but incorporated by reference).
 4. Supplementary Conditions (not attached but incorporated by reference).
 5. Specifications as listed in the table of contents of the project manual (not attached but incorporated by reference).
 6. Drawings (not attached but incorporated by reference) with each sheet bearing the following general title: Sanitary Sewer Improvements, Lewis, Iowa.
 7. Addenda (numbers **[number]** to **[number]**, inclusive) (not attached but incorporated by reference).
 9. Exhibits to this Agreement (enumerated as follows):
 - a. **Bid Form and Attachments**
 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.

- e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 Contractor's Representations

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - 1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 - 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 - 5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 - 6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 - 7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 - 8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 - 9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 - 10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
 - 11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:

City of Boone, Iowa

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name: John Slight

(typed or printed)

Title: Mayor

(typed or printed)

Attest:

(individual's signature)

Title: City Clerk

(typed or printed)

Address for giving notices:

Designated Representative:

Name: William Skare

(typed or printed)

Title: City Administrator

(typed or printed)

Address:

923 – 8th Street

Boone, IA 50036

Phone: 515-432-4211

Email: bskare@city.boone.ia.us

Contractor:

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

(If **Contractor** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

Email:

License No.:

(where applicable)

State:

NOTICE TO PROCEED

Owner: City of Boone, Iowa Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc. Engineer's Project No.: 154710
Contractor: _____ Contractor's Project No.: NA
Project: Water Treatment Plant, Exterior Wall Repair and Repointing Project, Boone, IA
Contract Name: General
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **[date for Substantial Completion, from Agreement]**, and the date by which readiness for final payment must be achieved is **[date for readiness, from Agreement]**.

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner: City of Boone, Iowa
By *(signature)*: _____
Name *(printed)*: William Skare
Title: City Administrator
Date Issued: _____
Copy: Engineer

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PERFORMANCE BOND

Contractor Name: Address (<i>principal place of business</i>):	Surety Name: Address (<i>principal place of business</i>):
Owner Name: City of Boone, Iowa Mailing address (<i>principal place of business</i>): 923 – 8th Street Boone, IA 50036	Contract Description (<i>name and location</i>): Water Treatment Plant Exterior Wall Repair and Repointing Project Boone, Iowa Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☒ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the

commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

- 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
 14. Definitions
 - 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
 15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
 16. Modifications to this Bond are as follows: **None**

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PAYMENT BOND

Contractor Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: City of Boone, Iowa Mailing address <i>(principal place of business)</i> : 923 – 8th Street Boone, IA 50036	Contract Description <i>(name and location)</i> : Water Treatment Facilities Exterior Wall Repair and Repointing Project Boone, Iowa Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☒ None ☐ See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;
 - 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
 - 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **None**

Contractor's Application for Payment

Owner: _____ Engineer: _____ Contractor: _____ Project: _____ Contract: _____	Owner's Project No.: _____ Engineer's Project No.: _____ Contractor's Project No.: _____
Application No.: _____ Application Date: _____	
Application Period: From _____ to _____	

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ _____ Work Completed	\$	-
b. _____ X \$ _____ Stored Materials	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	-
6. Amount eligible to date (Line 4 - Line 5.c)	\$	-
7. Less previous payments (Line 6 from prior application)		
8. Amount due this application	\$	-
9. Balance to finish, including retainage (Line 3 - Line 4)	\$	-

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____	
Signature: _____	Date: _____

Recommended by Engineer By: _____ Title: _____ Date: _____	Approved by Owner By: _____ Title: _____ Date: _____
Approved by Funding Agency By: _____ Title: _____ Date: _____	By: _____ Title: _____ Date: _____

Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	G	H	I
Item No.	Description	Scheduled Value (\$)	Work Completed		Materials Currently Stored (not in D or E) (\$)	Work Completed and Materials Stored to Date (D + E + F) (\$)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) (\$)
			(D + E) From Previous Application (\$)	This Period (\$)				
Original Contract								
			-			-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
Original Contract Totals		\$ -	\$ -	\$ -	\$ -	\$ -		\$ -

Contractor's Application for Payment

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Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

[illegible]

Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

Application No.:	Application Period:	From	to	Application Date:

A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information				Work Completed		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
Change Order Totals					\$ -		\$ -	\$ -	\$ -		\$ -
Original Contract and Change Orders											
Project Totals					\$ -		\$ -	\$ -	\$ -		\$ -

Contractor's Application for Payment

Owner:		Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract:			

Application No.:	Application Period:	From	to	Application Date:

[illegible]

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson Inc.	Engineer's Project No.: BOONE 154710
Contractor:	Contractor's Project No.: NA
Project: Water Treatment Facilities, Exterior Wall Repair and Repointing Project	
Contract Name: General	

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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NOTICE OF ACCEPTABILITY OF WORK

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson Inc.	Engineer's Project No.: BOONE 154710
Contractor:	Contractor's Project No.: NA
Project: Water Treatment Facilities, Exterior Wall Repair and Repointing Project	
Contract Name: General	
Notice Date: [Date]	
Effective Date of the Construction Contract: [Date]	

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated February 5, 2020, ("Owner-Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By (*signature*): _____

Name (*printed*): _____

Title: _____

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 Hazardous Environmental Conditions at Site

A. Reports and Drawings: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
 - 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*
 - 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
 - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Definitions and Terminology*

SC-1.01.A.8 – Add the following at the end of the Paragraph:

The Change Order form to be used on this Project is EJCDC C-941 (2018).

SC-1.01.A.50 – Add the following at the end of the Paragraph:

The Work Change Directive form to be used on this Project is EJCDC C-940 (2018).

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **five (5)** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

SC-3.01 Add the following language at the end of Paragraph 3.01B:

Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result shall be provided whether or not specifically called for, at no additional cost to Owner.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A – Delete the last sentence of paragraph.

4.05 *Delays in Contractor's Progress*

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work

as scheduled. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered abnormal weather conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information listed in SC 4.05.C.5.b

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03.C - Add the following new paragraphs immediately after Paragraph 5.03.B:

C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:

1. None.

5.06 *Hazardous Environmental Conditions*

SC-5.06.A - Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers Compensation: A standard Workers Compensation policy approved for use in the State of Iowa shall be issued with the following coverages:
 - a. Statutory Benefits covering all employees injured on the job by accident or disease as prescribed by Iowa Code Chapter 85.
 - b. Employers Liability insurance with the following limits:

Bodily injury by accident	\$1,000,000 each accident
Bodily injury by disease	\$1,000,000 each accident
Bodily injury by disease	\$1,000,000 policy limit

2. Commercial General Liability Insurance: No less comprehensive and no more restrictive than the coverage provided by a standard form Commercial General Liability Policy (ISO CG

0001 or its equivalent) with all standard exclusions with minimum limits shown below covering claims for damages because of bodily injury, personal injury, or damage to property that occur on the premises under contract or arise out of the operations in performance of the contract. Any additional exclusions shall be identified on the Certificate of Insurance and shall be subject to the review and approval of the Owner.

General Aggregate Limit	\$2,000,000
Products' Completed Operations Aggregate Limit	\$2,000,000
Personal and Advertising Injury Limit	\$1,000,000
Each Occurrence Limit	\$1,000,000
Fire Damage Limit (any one fire)	\$100,000
Medical Damage Limit (any one person)	\$5,000

3. Automobile Liability Insurance: Covers all owned, non-owned, hired, and leased vehicles with a minimum combined single limit of \$1,000,000 per accident covering claims for damages because of bodily injury, personal injury, or damage to property that arise out of operations in performance of the contract. The insurance must include contractual liability coverage. Any fellow employee exclusion shall be deleted. The policy shall provide Auto Cargo Pollution Endorsement (ISO CA 99 48 or its equivalent), if required in the special provisions.
4. Railroad Protective Liability: If required by the Owner by special provision, or by an affected railroad, the Contractor shall procure and maintain Railroad Protective Liability Insurance naming the railroad as the insured with minimum limit for bodily injury and property damage liability of \$2,000,000 per occurrence, \$6,000,000 aggregate, or with such other limits as the railroad shall require. The original of said policy shall be furnished to the railroad and a certified copy of said policy shall be furnished to the Owner prior to any construction or entry upon the railroad easement premises by the Contractor.
5. Umbrella/Excess Insurance: At the Contractor's option, the limits specified in Section 1070, 3.02, C, 1, 2, 3 may be satisfied with a combination of primary and Umbrella/Excess Insurance. At the Owner's option, the minimum insurance limits specified above may be increased by special provision. This increase may be satisfied with a combination of primary and Umbrella/Excess Insurance.
6. Additional Insured Endorsements: Except for Workers Compensation, the insurance specified shall:
 - a. Include the Owner as an additional insured, per Section 1070, 3.06, B; and
 - b. Be primary to and not in excess of or contributory with any other insurance available to the Owner.
7. Reference to ISO: Wherever the term "ISO" appears in these specifications, any subsequent equivalent ISO form or non-ISO equivalent form may be used.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 Labor; Working Hours

- SC-7.03 Amend the first and second sentences of Paragraph 7.03.C to state "...all Work at the Site must be performed during regular working hours, 8:00 a.m. to 4:00 p.m., Monday through

Friday. Contractor will not perform Work on a Saturday or Sunday, or any legal holiday, unless authorized by Owner in writing."

7.04 *Services, Materials, and Equipment*

SC-7.04.A.1 Add the following paragraph under Paragraph 7.04.A:

1. Where the Work requires equipment be furnished, due to the lack of standardization of equipment as produced by the various manufacturers, it may become necessary to make minor modifications in the structures, buildings, piping, mechanical work, electrical work, accessories, controls, or other work, to accommodate the particular equipment offered. All such modifications shall be subject to approval by Engineer and shall be made by Contractor at no additional cost to Owner.

SC-7.07.H - Delete Paragraph 7.07.H in its entirety and substitute the following in its place:

Upon Owner's request, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of request.

7.09 *Permits*

SC-7.09.B - Add new paragraphs immediately after Paragraph 7.09.A to read as follows:

- B. Contractor shall be responsible for obtaining and paying for any necessary building, plumbing and electrical permits from the applicable jurisdiction for the Project.
- C. Contractor shall be responsible for coordinating inspections by the local building inspector related to building, electrical and plumbing construction.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- B. Owner is exempt from Iowa state sales taxes and local option sales taxes on all materials and equipment to be incorporated in the work. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.
- C. The Contractor shall provide a listing to the City identifying all appropriate subcontractors qualified for use of the tax exemption certificate. The listing shall include the Federal Employer Identification Number (FEIN) for the Contractor and each Subcontractor.
- D. The Owner will complete an on-line application to register this Contract with the Iowa Department of Revenue and Finance and will furnish the Contractor and all listed subcontractors with an authorization letter and Tax Exemption Certificate for use in the purchase of supplies and materials to be incorporated into the Work. The Contractor and subcontractors may make copies of the tax exemption certificates and authorization letters and provide a copy to each supplier providing construction materials to be incorporated into this project.
- E. The Contractor shall be responsible for complying with all applicable provisions of Iowa Code Section 422.7.12

7.12 *Record Documents*

SC-7.12.A Amend paragraph by adding the following after "written interpretations and clarifications,":
Manufacturers' Certifications,

SC-7.12.B Add a new paragraph immediately after Paragraph 7.12.A:

- B. The Engineer may refuse to recommend the whole or any part of a progress payment when the requirements of General Conditions 7.12 are not being satisfied.

7.13 *Safety and Protection*

SC-7.13.K Add the following paragraph immediately after Paragraph 7.13.J:

- K. The Contractor shall note that hydrogen sulfide, methane, or other hazardous gases may be present at several areas of the work site, including but not limited to manholes, control structures, pipelines and sewers, treatment structures, pumping stations, and process or control buildings. Contractor shall maintain safe working conditions at all times.

ARTICLE 8—OTHER WORK AT THE SITE

No Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 - 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 - 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
 - 3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
 - 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
 - 5. *Inspections and Tests*
 - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 6. *Payment Requests: Review Applications for Payment with Contractor.*
- 7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.03 Unit Price Work

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. *Adjustments in Unit Price*
 - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to **15** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **50** percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
 - 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work,

such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

No Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

SC-15.01.B.4 – Add the following language at the end of paragraph:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage or invest the retainage for the benefit of the Contractor.

SC-15.01.B.5 – Add new paragraph immediately after Paragraph 15.01.B.4:

5. The Application for Payment form to be used on this Project is EJCDC® C-620.

15.02 *Contractor's Warranty of Title*

SC-15.02.A – Amend paragraph by striking out the following text: “7 days after”.

SC-15.03.A.1 - Add the following two new subparagraphs under paragraph 15.03.A:

1. For this Work, Substantial Completion is further defined as follows:
 - a. “Substantial Completion” means that the facilities are completed to the point that all facilities, treatment systems, and appurtenances, affected by the construction are fully functional and ready for Owner’s continuous use as intended, to the satisfaction of the Engineer. All process equipment shall be installed and operational or temporary arrangements satisfactory to Owner shall have been made. All performance testing and O&M manuals shall be completed prior to the date of Substantial Completion.
2. Portions of the Work not essential to facility operation, which can be completed without interruption of facility operation, may be completed after the Work is accepted as substantially complete, and may include the following items: site grading, surface restoration, landscaping and cleanup.

SC-15.03.B - Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.05 *Final Inspection*

SC-15.05.A - Add the following language after the second sentence of Paragraph 15.05.A:

If, after such measures are taken, subsequent inspections by Engineer reveal that any of the previously identified particulars remain incomplete or defective, Engineer will again notify Contractor in writing of the remaining particulars. All costs associated with any subsequent inspections in which said remaining particulars are revealed, will be documented by Engineer and paid by Contractor to Owner.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

No Supplementary Conditions in this Article.

ARTICLE 18—MISCELLANEOUS

No Supplementary Conditions in this Article.

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc.	Engineer's Project No.: BOONE 154710
Contractor:	Contractor's Project No.: NA
Project: Water Treatment Facilities, Exterior Wall Repair and Repointing Project	
Contract Name: General	
Date Issued:	Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price:	\$	[increase] [decrease] [not yet estimated].
Contract Time:	days	[increase] [decrease] [not yet estimated].

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

Authorized by Owner

By: _____

Title: _____

Date: _____

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CHANGE ORDER NO.: [Number of Change Order]

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc.	Engineer's Project No.: BOONE 154710
Contractor:	Contractor's Project No.: NA
Project: Water Treatment Facilities, Exterior Wall Repair and Repointing Project	
Contract Name: General	
Date Issued:	Effective Date of Change Order:

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

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	Change in Contract Times
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] : \$ _____	[Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] : Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: \$ _____	[Increase] [Decrease] this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)

By: _____

Title: _____

Date: _____

Authorized by Owner

By: _____

Title: _____

Date: _____

FIELD ORDER NO.: [Number of Field Order]

Owner: City of Boone, Iowa	Owner's Project No.: NA
Engineer: Short Elliott Hendrickson, Inc.	Engineer's Project No.: BOONE 154710
Contractor:	Contractor's Project No.: NA
Project: Water Treatment Facilities, Exterior Wall Repair and Repointing Project	
Contract Name: General	
Date Issued:	Effective Date of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

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SECTION 01 11 00
SUMMARY OF WORK

PART 1 GENERAL

1.01 REFERENCES

A. Definitions

1. Basic Contract definitions and terminology are included in the General Conditions of the Contract.
2. The term "approved," when used to convey Engineer's action on Contractor's submittals, applications, and requests, is limited to Engineer's duties and responsibilities as stated in the General Conditions of the Contract.
3. The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

B. Industry Standards

1. 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.
2. Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
3. 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.
4. 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.
5. Each entity engaged in construction on the Project shall be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

1.02 SPECIFICATION FORMATS AND CONVENTIONS

- A. The Specifications are organized into Divisions and Sections using the 49-division format and The Construction Specifications Institute "Master Format" 2004 Edition Numbering and Titles.
- B. The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
- C. General and Supplementary Conditions of the Contract apply to all Specification Sections.
- D. Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

1.03 WORK INCLUDED IN THE CONTRACT DOCUMENTS

A. Project Identification

1. Project Name: Water Treatment Facilities, Exterior Wall Repair and Repointing Project
2. Project Location: Water Treatment Plant, 1190 – 188th Road, Boone, Iowa
3. Owner: City of Boone, 923 – 8th Street, Boone, IA 50036 (City Hall)

4. Engineer: Short Elliott Hendrickson Inc. (SEH), 5414 NW 88th Street, Suite 140, Johnston, IA 50131

B. The Work includes:

1. Work shall be completed under one contract with two Divisions (if both are awarded) as stipulated below:
 - a. Division 1 – Water Plant Building: Work consists of masonry restoration, creating new movement joints, installing a new insulated furring system on the outside of the exposed precast beam at the top of the north facing wall, and replacing north wall windows with aluminum storefront type windows, or as an alternate, translucent panels. Masonry restoration will include repointing cracked mortar joints inside and outside of wall as designated on plan, replacing cracked face shells with new masonry units, and applying masonry sealer to north and west walls of the building.
 - b. Division 2 – Pump Station Building: Work consists primarily of masonry restoration and creating new movement joints. Repair cracks in mortar joints, replace cracked face shells, cut and apply joint sealant to new control joints in masonry walls, replace broken glass block window, and apply masonry sealer to entire structure after masonry repair work is complete.

1.04 CONTRACT INFORMATION

A. Type of Contract: Owner will award one Prime Contract.

B. Scope of Contract:

1. This Contractor is solely responsible for the Work.
2. The Contract will include:
 - a. Contract Forms:
 - 1) Agreement
 - 2) Performance Bond
 - 3) Payment Bond
 - 4) Certificates
 - b. Conditions of the Contract:
 - 1) General Conditions
 - 2) Supplementary Conditions
 - 3) Specifications:
 - a) Technical Sections
 - b. Addenda
 - c. Contract Modifications

1.05 WORK UNDER OTHER CONTRACTS

A. Other Work at Site:

1. Owner reserves the right to let other separate contracts for Work of the Project, or to pursue other Work at the Site with its own personnel.
2. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.
3. Coordinate the Work of this Contract with work performed under separate contracts.

B. Work Not Included:

1. Work not included is either marked "NIC," or "by others," on Drawings or is noted in each section of Specifications.

2. Provide all labor and materials required unless so specifically noted or marked.
3. Install Work indicated to be furnished by others or Owner unless specifically stipulated to be furnished and installed by others or Owner.

1.06 WORK PHASES

- A. See Drawings for staging or phasing requirements, if any.

1.07 CONTRACTOR USE OF PREMISES

- A. Confine operations at Site to areas permitted under contract or as directed by Owner.
- B. Conform to site rules and regulations affecting Work while engaged in Project construction.
- C. Existing Structures:
 1. Keep existing driveways, playgrounds, playing fields, and adjacent streets clear and available to public in accordance with Owner's or local authority's requirements.
 2. Maintain buildings in weathertight condition throughout the construction period.
 3. Protect building and occupants during construction period.
 4. Repair damages caused to existing public and private property and structures due to operations of Contractor to the satisfaction of, and at no additional cost to Owner.
 5. Take complete field measurements affecting all existing construction, wiring, piping, and equipment in this Contract, and assume responsibility for proper fit between Work and existing structures and other equipment.
- D. Construction personnel may park only in areas designated by the Owner.
- E. Damaged Property:
 1. Patch and/or clean existing improvements and restore damage of property on, or adjacent to Site occasioned by this Work, including, but not limited to, lawns, walks, curbs, pavements, roadways, structures, and utilities which are cut or damaged by operations and are not designated for removal, relocation, or replacement in the course of construction.
 2. Public Property or Utilities: Comply with laws, ordinances, rules, regulations, standards, orders of utility owner or any public authority having jurisdiction.
 3. Provide written acceptance of restoration work by authority or Owner.

1.08 OCCUPANCY REQUIREMENTS

- A. General Requirements:
 1. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
 2. Schedule the Work to accommodate this requirement.
 3. Coordinate activities which could cause interruption to Owner's activities.
 4. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner Occupation During Construction:
 1. Owner will occupy the premises during entire construction period, with the exception of areas under construction.
 - a. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities, unless receiving written permission from Owner and authorities having jurisdiction.
 - b. Maintain existing exits, unless otherwise indicated.
- C. Owner Occupancy of Completed Areas of Construction:
 1. Owner reserves the right to place and install equipment as necessary in completed areas and to occupy such completed areas prior to Substantial Completion in accordance with the Supplementary Conditions. Such use shall not constitute acceptance of such portions of the Work

or relieve the Contractor of any obligations except for improper use or damage caused by employees or agents of Owner.

1.09 PRODUCTS ORDERED IN ADVANCE

A. Storage:

1. Products will be allowed to be stored at the Site prior to commencement of construction activities.
2. Contractor shall store such items as directed by Owner.

1.10 OWNER FURNISHED PRODUCTS

A. Items furnished by Owner will be identified in the Specification sections.

B. Owner's Responsibilities:

1. Arrange for, and deliver Owner reviewed Shop Drawings, Product Data and samples to Contractor.
2. Arrange and pay for product delivery to Site.
3. At time of delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective or deficient items.
5. Arrange for manufacturer's warranties, inspections and service.

C. Contractor's Responsibilities:

1. Review Owner reviewed Shop Drawings, Product Data and samples.
2. Receive and unload products at Site; inspect for completeness or damage, jointly with Owner.
3. Provide support systems to receive Owner's equipment.
4. Protect Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.
5. Install and otherwise incorporate Owner-furnished items into the Work.
6. Repair or replace items damaged after receipt, except that damage caused by Owner's employees or agents.

1.11 WORK RESTRICTIONS

A. On-Site Work Hours:

1. Normal business working hours of 8:00 a.m. to 4:00 p.m. Monday through Friday.
2. Weekend Hours: Saturdays only from 8:00 a.m. to 4:00 p.m., if authorized by the Owner. No work shall be allowed on Sundays unless otherwise authorized by Owner.
3. Legal Holidays: No work allowed unless authorized by Owner.

B. Existing Utility Interruption:

1. Do not interrupt utilities serving facilities occupied by Owner or others without written permission by Owner.
2. Notify Owner not less than 2 days in advance of proposed utility interruptions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Methods of Measurements and Basis for Payments
 - 2. Measurement
 - 3. Unit Prices
 - 4. Schedule of Values
 - 5. Incidental Contract Items
 - 6. Applications for Payment
 - 7. Change Procedures
 - 8. Defect Assessment
 - 9. Allowances
 - 10. Alternates
 - 11. Additional Requirements

1.02 METHODS OF MEASUREMENTS AND BASIS FOR PAYMENTS

- A. All work to be performed under this contract shall be paid for at the price(s) stated in the Bid Form. Unit price payments will be based upon the measurement of actual quantities furnished and installed in accordance with the Contract Documents and accepted by Engineer, except for bid items to be paid for using plan quantities. Lump sum payments will be based upon completed and accepted items in accordance with the work specified and as shown on the Drawings.
- B. Payment for the items set forth herein, as further specified herein, shall include full compensation to be received by Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, mobilization and demobilization, utilities, coordination, taxes, materials, commissions, transportation and handling, traffic control, barricades, signs, lights, and other traffic control devices, bonds, permit fees, insurance, overhead and profit, incidentals appurtenant to the items of work being described and performing all operations as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). Such compensation shall also include payment for any loss or damages arising directly or indirectly from the work, or from any discrepancies between the actual quantities of work and those shown in the Contract Documents, or from any unforeseen difficulties, which may be encountered during the prosecution of the work until the final acceptance by Owner. Any material, equipment or operation not specifically mentioned shall be considered to be incidental to the lump sum or unit prices. Final payment will only be made for completed and accepted work.
- C. Contractor's attention is called to the fact that the contract prices set forth in the bid form establish the total price for completing the work in its entirety. Should Contractor feel that the cost of any item of work has not been established in a bid item, Contractor shall include the cost for that work in a bid item, so that Contractor's proposal for the project reflects the total price for completing the work in its entirety as specified and indicated on the drawings.

1.03 MEASUREMENT

- A. The quantities for unit price payment under this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by Engineer, unless otherwise stated in

the Bid Item Descriptions herein or on the Drawings that payment will be by plan quantity or limited to the payment limits specified or indicated. Lump sum item payment under this Contract shall be in accordance with the Schedule of Value Items as described in the Submittals Section, unless otherwise specified.

1. Clean up of the construction area is an integral part of every bid item and shall be accomplished prior to submission for payment.
- B. The following abbreviations shall apply to quantities measured:
1. AC: acre
 2. CF: cubic foot
 3. CY: cubic yard
 4. EA: each
 5. LF: lineal foot
 6. LS: lump sum
 7. SF: square foot
 8. SY: square yard
 9. TON: ton
 10. VF: vertical foot

1.04 UNIT PRICES

- A. Authority: Measurement methods are delineated in the individual specification sections or as indicated on the Drawings.
- B. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- C. Take measurements and compute quantities. The Engineer will verify measurements and quantities.
- D. Unit Quantities: Quantities and measurements indicated in the Bid Form are for contract purposes only. Quantities and measurements supplied or placed in the Work shall determine payment.
1. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.
- E. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.
- F. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit sum/price for Work which is incorporated in or made necessary by the Work.
- G. Measurement of Quantities:
1. Weigh Scales: Inspected, tested and certified by the applicable state or federal Weights and Measures department within the past year.
 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
 3. Metering Devices: Inspected, tested and certified by the applicable state or federal department within the past year.
 4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
 5. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

6. Measurement by Area: Measured by square dimension using mean length and width or radius.
7. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.05 SCHEDULE OF VALUES

- A. Unit price work will be the Schedule of Values used as the basis for reviewing Applications for Payment.
- B. For lump sum contracts, furnish a statement allocating portions of the Contract Sum to various portions of the Work which will be used as the basis for reviewing Applications for Payment.
 1. Submit preliminary Schedule of Values within 10 days after the effective date of the Agreement and before the Preconstruction Conference.
 2. At the Preconstruction Conference, the preliminary Schedule of Values will be reviewed for acceptability by Engineer.
 3. Within 10 days after the Preconstruction Conference, and before submittal of progress payments, make corrections and adjustments as necessary to obtain an acceptable Schedule of Values and resubmit to Engineer.
- C. Format and Content:
 1. Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each specification section.
 2. Include the following project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Engineer.
 - c. Engineer's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 3. Arrange the Schedule of Values per specification section with the following subdivisions, description of work and dollar values for each:
 - a. Subcontractor work.
 - b. Manufacturer or fabricator.
 - c. Supplier.
 - d. Contractor work.
 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 6. 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.
 7. 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.
 8. Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit cost allowances as a product of the unit cost multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

9. 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.

1.06 INCIDENTAL CONTRACT ITEMS

- A. The following list includes, but is not limited to, major items that are incidental to the project and will not be paid for as separate bid items. Other items may be designated as incidental under certain bid items.
 1. Dewatering and handling storm water flow during construction
 2. Temporary sheeting and shoring
 3. Excavation, verification and protection of existing utilities
 4. Construction fencing
 5. Coordination and cooperation with utility companies
 6. Coordination and cooperation with affected property owners
 7. Coordination and cooperation with the Owner
 8. Coordination and cooperation with railroad access, personnel and scheduling
 9. Protection of existing utilities and light poles
 10. Site cleanup
 11. Locating of existing utilities, potholing if necessary
 12. Monitoring weather conditions
 13. Finish grading
 14. Watering of seeded and sodded areas
 15. Repair of field tiles, if encountered
 16. Dust control measures
 17. Construction staging & phasing
 18. Working backfill to reduce moisture content
 19. Curb and pavement backfill

1.07 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as recommended by Engineer and approved by Owner.
- B. The date for each progress payment is the last day of each month, or as may be established by Owner. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 5 business days before the date for each progress payment.
- C. Requests for progress payments shall be at least 5 business days before the date established for each progress payment, but not more often than once a month. Use forms provided by Engineer for applications for payment.
- D. Application for Payment Form: EJCDC C-620 Contractor's Application for Payment.
- E. Application Preparation Procedures
 1. Contractor shall determine actual quantities and classifications of Work performed, for review and approval by Engineer.
 - a. Preliminary determinations will be reviewed with Contractor before completing Application for Payment.

- b. Contractor shall prepare the Application for Payment based on Engineer's decision on actual quantities and classifications.
 - c. Contractor shall submit 3 original copies of Application for Payment to Engineer for certification of all 3 original copies.
 - 1) If approved by Engineer, Contractor may submit one signed Application for Payment electronically in pdf file format.
 - d. ENGINEER will submit the Application for Payment with recommendation to Owner.
 - 2. For a lump sum price contract, Contractor shall prepare a preliminary determination for payment based on the approved Schedule of Values and review with Engineer before completing Application for Payment.
 - a. Submit all 3 original signed copies of Application for Payment to Engineer with signed certification within time frame agreed to at the Preconstruction Conference.
 - 1) If approved by Engineer, Contractor may submit one signed Application for Payment electronically in pdf file format.
 - b. Engineer will submit the Application for Payment with recommendation to Owner.
 - 3. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
 - a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.
 - b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.
 - c. Evidence that the materials and equipment are covered by property insurance.
 - 4. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- F. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
- 1. Schedule of Values.
 - 2. Contractor's construction schedule.
 - 3. Copies of building and other permits.
 - 4. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- G. 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.
 - a. Submittal of Record Drawings.
 - b. Completion of items specified for completion after Substantial Completion.
 - c. Assurance that unsettled claims will be settled.
 - d. Assurance that Work not complete and accepted will be completed without undue delay.
 - e. Removal of temporary facilities and services.
 - f. Removal of surplus materials, rubbish, similar elements.
 - g. Final cleaning.
 - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees and similar obligations were paid.
 - 3. Product warranties.
 - 4. Updated final statement, accounting for final changes to the Contract Sum.

5. Consent of Surety to Final Payment.
6. Final lien waivers as evidence that claims have been settled.
7. Final liquidated damages settlement statement.

1.08 CHANGE PROCEDURES

- A. Submittals: Submit name of the individual authorized to receive change documents and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on EJCDC® C942 "Field Order."
- C. Engineer may issue a Notice of Change or request for Work Change Proposal which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within 7 days.
 1. Proposal Requests are for information only. Do not consider them instructions either to stop Work in progress or to execute the proposed change.
 2. After receipt of Proposal Request, submit a quotation estimating cost adjustments to Contract Sum and Contract Time necessary to execute change.
 3. Submit response within time specified in Proposal Request.
 - 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 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 Contract Time.
- D. Contractor may propose changes by submitting a request for change to Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01 25 13.
- E. Stipulated Sum/Price Change Order: Based on Notice of Change and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Engineer.
 1. Change Order Form: EJCDC® C 941, Change Order form.
- F. Unit Price Change Order: For contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
 1. Change Order Form: EJCDC® C 941, Change Order form.
- G. Work Change Directive: Engineer may issue a Work Change Directive on EJCDC® C 940 instructing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.
 1. Documentation: Maintain detailed records on a time and material basis of work required by Work Change Directive.
 2. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to Contract.

- H. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
 - 1. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
 - 2. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
 - 3. Change Order Form: EJCDC® C 941, Change Order form.
- I. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- J. Correlation of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.

1.09 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer, it is not practical to remove and replace the Work, Engineer will direct an appropriate remedy or adjust payment.
- C. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of Engineer.
- D. The defective Work will be partially repaired to the instructions of Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of Engineer.
- E. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- F. The authority of Engineer to assess the defect and identify payment adjustment is final.
- G. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

1.10 ALLOWANCES

- A. Measurement and Payment for Allowances, if any, shall be in accordance with Section 01 21 00.

1.11 ALTERNATES

- A. Measurement and Payment for Alternates, if any, shall be in accordance with Section 01 23 00.

1.12 ADDITIONAL REQUIREMENTS

- A. Initial Application for Payment:
 - 1. Coordinate submittals as required by Section 01 33 00.

2. Applications for Payment will not be considered if copies of required submittals have not been received by Engineer.
- B. Substantial Completion:
1. Coordinate submittals as required by Sections 01 33 00 and 01 70 00.
 2. Administrative actions which must precede or coincide with submittal of Substantial Completion Application for Payment include:
 - a. Provide keys to all locks for Owner's access.
 - b. Submittal of Operation and Maintenance Manual(s)
 - c. Submittal of Contractor's Record Drawings.
 3. Following issuance of Certificate of Substantial Completion, submit Application for Payment.
 4. Applications for Payment will not be considered if copies of required submittals have not been received by Engineer.
- C. Final Payment Application:
1. Coordinate submittals as required by Sections 01 33 00 and 01 70 00.
 2. Administrative actions which must precede or coincide with submittal of final Application for Payment include:
 - a. Completion of Project requirements.
 - b. Completion of items specified for completion after Substantial Completion.
 - c. Assurance that unsettled claims will be settled.
 - d. Assurance that Work not complete and accepted will be completed without undue delay.
 - e. Removal of temporary facilities and services.
 - f. Removal of surplus materials, rubbish, similar elements.
 - g. Final cleaning.
 3. Applications for Payment will not be considered if copies of required submittals have not been received by Engineer.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 23 00
ALTERNATES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Alternates to be submitted to Owner with Bid for consideration of inclusion with Contract.
 - 2. Submittal procedures.
 - 3. Establishment of Contract Price and Time.
- B. Related Sections:
 - 1. Document 00 21 13 - Instructions to Bidders: Award of Contract
 - 2. Document 00 41 00 - Bid Form: Bid for each Alternate
 - 3. Notice of Award: Alternates accepted by Owner for incorporation into Work
 - 4. Section 01 60 00 - Product Requirements

1.02 DEFINITION

- A. Alternate: The net amount to be added to or deducted from the Base Bid Price for Work identified in Schedule of Alternates.

1.03 PROCEDURES

- A. Determine the full extent of Work affected by proposed Alternates.
- B. Coordinate related work and modify adjacent work as required to ensure that each accepted Alternate is complete and fully integrated into Work.
- C. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- D. Substitutions are permitted. Submit a request for substitution for any manufacturer not named in accordance with Section 01 60 00.
- E. Conform to Contract Documents for requirements for performance, appearance, workmanship, and materials not modified under the alternate bids.

1.04 SELECTION AND AWARD OF ALTERNATES

- A. Bids will be evaluated on the Base Bid. After selection of a Contractor, consideration will be given to alternates and Base Bid Price adjustments. Accepted alternates will be reflected in the final Contract price.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SCHEDULE OF ALTERNATES

- A. BID ALTERNATE A1 – Insulated Translucent Panels – Water Plant. The Bidder shall provide a lump sum amount to replace the north fixed windows with insulated translucent panels and replace the one operable window with an operable aluminum window. This amount is separate from the Base Bid. If the owner accepts this Bid Alternate, it will replace the lump sum amount for Aluminum Framed Windows included in the Base Bid for Division 1.

- B. BID ALTERNATE A2 – Insulated Translucent Panel – Pump Station. The Bidder shall provide a lump sum amount to replace one fixed window on the pump station with an insulated translucent panel. This amount is separate from the Base Bid. If the owner accepts this Bid Alternate, it will replace the lump sum amount for Aluminum Framed Window included in the Base Bid for Division 2.

END OF SECTION

SECTION 01 25 13
PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Administrative and procedural requirements for handling requests for substitutions.
- B. The following is not included in this Section:
 - 1. Procedural requirements governing Contractor's selection of product options (Section 01 60 00).

1.02 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment and methods of construction required by Contract Documents proposed by Contractor.
- C. The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by Owner or Engineer.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.03 SUBMITTALS

- A. Substitution Request Prior to Bid: For a Product Substitution to be considered, the following conditions must be met:
 - 1. All requests must be submitted in writing no later than 10 calendar days prior to the date for receipt of the bids.
 - 2. Submit each request for substitution (one material or product per form) on the attached "Substitution Request Form" attached at the end of this section (either duplicated from the Project Manual or available from Engineer's office). Submittals not accompanied by this form properly filled in and endorsed will be discarded without review. NO EXCEPTIONS.
 - 3. Identify any impact of the substituted product on related items.
 - 4. Approved items will be listed in addenda. Requests for substitution will be responded to at Engineer's earliest convenience.
- B. All substitutions permitted on addenda must meet or exceed requirements of the specifications including, but not limited to:
 - 1. Warranty.
 - 2. Products designated to meet LEED requirements.
- C. Substitution Request After Bid: Requests for substitution will be considered if received within 60 days after commencement of the work. Requests received more than 60 days after commencement of the work may be considered or rejected at the discretion of Engineer.
 - 1. Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for change order proposals.
 - 2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related specification section and Drawing numbers.

3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Product data, including drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d. 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 become necessary to accommodate the proposed substitution.
 - e. A statement indicating the substitution's effect on Contractor's construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall contract time.
 - f. Cost information, including a proposal of the net change, if any in the contract sum.
 - g. Certification by Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated.
 - h. Include Contractor's waiver of rights to additional payment or time, which may subsequently become necessary because of the failure of the substitution to perform adequately.

D. Substitution Conditions:

1. Contractor's substitution request will be received and considered by Engineer when one or more of the following conditions are satisfied, as determined by Engineer, otherwise requests will be returned without action except to record noncompliance with these requirements:
 - a. Extensive revisions to Contract Documents are not required.
 - b. Proposed changes are in keeping with the general intent of Contract Documents.
 - c. The request is timely, fully documented and properly submitted.
 - d. Contractors and suppliers will be expected to provide the specified product unless prior approval is received from Engineer's office in sufficient time so that all bidders can be notified through an addendum.
 - e. The specified product or method of construction cannot be provided within the contract time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
 - f. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - g. A substantial advantage is offered to Owner, in terms of cost, time, energy conservation, or other considerations of merit, after deducting offsetting responsibilities Owner may be required to bear. Additional responsibilities for Owner may include additional compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, or separate contractors, and similar considerations.
 - h. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where Contractor certifies that the substitution will overcome the incompatibility.
 - i. The specified product or method of construction cannot be coordinated with other materials, and where Contractor certifies that the proposed substitution can be coordinated.

- j. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where Contractor certifies that the proposed substitution provides the required warranty.
 - k. Where a proposed substitution involves more than one prime contractor, each contractor shall cooperate with the other contractors involved to coordinate the work, provide uniformity and consistency, and to assure compatibility of products.
- E. Limitations: Contractor's submittal and Engineer's acceptance of Shop Drawings, Product Data, or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- F. Substitution Causing Redesign: Engineer time for redesign as a result of substitution, will be charged to Owner, then deducted by Construction Change Directive from Contract Amount.
- G. Engineer's Action:
 - 1. Request Prior to Bid: If approved, substitution will be included in an addendum.
 - 2. Request After Bid:
 - a. If necessary, within one week of receipt of the request for substitution, Engineer will request additional information or documentation necessary for evaluation of the request.
 - b. Within two weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, Engineer will notify Contractor of acceptance or rejection of the proposed substitution.
 - c. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name.
 - d. Acceptance will be in the form of a change order.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: Attn: Perry Gjersvik, P.E.
pgjersvik@sehinc.com
Short Elliott Hendrickson Inc.
5414 NW 88th Street, Ste 140
Johnston, IA 50131

PROJECT: Water Treatment Facilities, Exterior Wall Repair and Repointing Project, Boone, Iowa

SECTION NO.	ARTICLE NO.	SPECIFIED PRODUCT	PROPOSED SUBSTITUTION
A.		Does the substitution affect dimensions shown on Drawings?	Yes ☐ No ☐
B.		Does the substitution affect other trades?	Yes ☐ No ☐
C.		Does the manufacturer's guarantee differ from that specified?	Yes ☐ No ☐
D.		If you indicated "Yes" to Items A, B, or C above, attach a thorough explanation on your company letterhead.	
E.		If there are other differences between proposed substitution and specified product, attach a thorough explanation on your company letterhead. If differences are not noted and acknowledged in writing by Engineer, product must comply with specification requirements.	
F.		The proposed substitution was used within the last 24 months on the following project: Project Name _____ Location _____ Engineer _____ Telephone No. _____	
G.		Has the proposed substitution been used on an SEH project within the last 12 months? Yes ☐ No ☐ If yes, which project? _____	

All questions must be answered. Incomplete forms will not be reviewed.

Submitted By: _____

Signature _____

Firm _____

Address _____

Date _____

Phone _____

E-mail _____

For Use by Design Consultant

- ☐ Not Accepted, Not Enough Information
☐ Not Accepted, Does Not Appear to be Equal
☐ Accepted ☐ Accepted as Noted
☐ Received Too Late

By _____

Date _____

Remarks _____

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Coordination by General Contractor
 - 2. Job Site Administration
 - 3. Submittals
 - 4. Field Conditions
 - 5. Preconstruction Meeting
 - 6. Progress Meetings
 - 7. Pre-installation Meetings
 - 8. Cutting and Patching
 - 9. Special Procedures

1.02 COORDINATION BY GENERAL CONTRACTOR

- A. Coordinate use of premises under direction of Owner.
- B. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
 - 1. Coordinate activities for mutual benefit and cooperate to facilitate the general progress of the Work.
 - 2. Each subcontractor shall be thoroughly familiar with all provisions governing the Work of other contractors and shall obtain from such contractors all information as may be required to coordinate Work with theirs.
 - 3. Each trade shall perform its Work in proper sequence and arrangement in relation to other activities and shall join his Work to that of others in accordance with the intent of the Drawings and specifications.
 - 4. Each trade shall give due notice and proper information for any special provisions necessary in the placing or setting of Work that may come in contact with Work of other contractors.
- C. Inspect the Contract Documents for Work of others that is inter-related, and afford other trades every reasonable opportunity for the installation of their Work. Coordinate Work of various specification sections having interdependent responsibilities.
- D. Prepare coordination drawings where off-site fabricated products and materials are by separate entities and must accurately interface. Coordination drawings shall indicate how Work, shown by separate Shop Drawings, will interface and shall indicate sequence for installation.
- E. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- F. Coordinate space requirements, supports, and installation of mechanical and electrical Work, which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- G. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

- H. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.
- I. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.03 JOB SITE ADMINISTRATION

- A. Supervise and direct the Work. Employ and maintain a full time, qualified supervisor or superintendent to act as Contractor's representative at the Site.
- B. Enforce good order and conduct among contractors, installers, and construction employees.
- C. Require installers to inspect conditions under which Work is to be performed. Installer shall report all unsatisfactory conditions in writing to Contractor. Do not proceed with Work until unsatisfactory conditions have been corrected.
- D. Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation to the extent that these instructions and recommendations are more explicit or more stringent than requirements indicated in the Contract Documents. Where manufacturer provides contradictory instructions, notify Engineer immediately and request clarifications.
- E. Recheck measurements and dimensions of the Work, as an integral step of starting each installation.
- F. Coordinate enclosure of Work with required inspections and tests, so as to minimize necessity of uncovering Work for that purpose.
- G. Where mounting heights are not indicated, mount individual units of work at industry recognized standard mounting heights for the particular application indicated. Refer questionable mounting height choices to Engineer.
- H. Supervise performance of the Work to ensure that none of the Work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- I. Clean and perform maintenance as frequently as necessary throughout construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Coordinate completion and cleanup of Work.

1.04 SUBMITTALS

- A. Provide listing of Contractor's principal staff assignments and consultants, including name, home and work addresses, and telephone numbers.
- B. Provide supervisors or superintendent's name, home and work address, and telephone numbers.
- C. Provide names, work address, telephone numbers, samples of signature, and limits of authority of each individual authorized to sign change orders, field modifications, and monthly pay requests for Contractor.

1.05 FIELD CONDITIONS

- A. Before ordering material or commencing Work, check and verify all dimensions and conditions. Notify Engineer of any omissions or discrepancies immediately.
- B. Field measurements shall be furnished in a timely manner to suppliers and fabricators who require them to complete their Work. Ascertain the requirement for such measurements at the earliest practical date and make every reasonable effort to expedite the affected Work.
- C. Conflicts: Engineer has exercised reasonable professional care to ensure there are no conflicts between the Work of the various trades. Such conflicts, however, may exist and no warranty to the contrary is made or implied.

1.06 PRECONSTRUCTION MEETING

- A. Engineer will schedule a preconstruction conference after the Contract Times start to run and before Work at the site is started.
- B. Authorized representatives of the Owner, Engineer, Contractor and its superintendent; major subcontractors; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to make binding decisions of matters relating to the Work.
- C. Agenda:
 - 1. Items of significance that could affect progress including, but not limited to:
 - a. Submittal of executed bonds and insurance certificates.
 - b. Execution of Owner-Contractor Agreement if not previously completed.
 - c. Distribution of Contract Documents.
 - d. Use of premises by Owner and Contractor:
 - 1) Owner's requirements and occupancy.
 - 2) Construction facilities provided by Owner (if any).
 - 3) Temporary utilities provided by Owner (if any).
 - 4) Use of premises office, work, and storage areas.
 - e. Security and housekeeping procedures.
 - f. Submittals:
 - 1) Final list of subcontractors, suppliers, products.
 - 2) Schedule of Values.
 - 3) Progress Schedule.
 - 4) Designation of responsible personnel:
 - a) Contractor's principal staff and consultants.
 - b) Contractor's superintendent or job foreman acting as Contractor's Site representative.
 - c) Owner's and Contractor's designated individuals authorized to sign Change Orders, field modifications, and monthly pay requests.
 - g. Procedures for processing:
 - 1) Field decisions.
 - 2) Submittals:
 - a) Shop Drawings.
 - b) Product Data.
 - c) Samples.
 - 3) Substitutions.
 - 4) Applications for Payments.
 - 5) Proposal requests.
 - 6) Change Orders.
 - 7) Contract Closeout.
 - h. Schedules:

- 1) Tentative construction schedule.
- 2) Critical Work sequencing.
- 3) Progress meetings.
- i. Procedures for testing.
- j. Procedures for maintaining Record Documents.
- k. Requirements for startup of equipment: Inspection and acceptance of equipment put into service during construction period.
- l. Equipment deliveries and priorities.
- m. Contractor responsibilities:
 - 1) Safety procedures.
 - 2) First aid.

1.07 PROGRESS MEETINGS

- A. Progress meetings at the Project site will be scheduled by the Engineer at regular intervals.
- B. In addition to representatives of Owner, Engineer, and Contractor, each subcontractor, supplier, or 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 conference shall be familiar with the Project and authorized to make binding decisions on matters relating to the Work.
- C. Items of significance will be reviewed that could affect progress.
- D. Review progress since the last meeting. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether scheduled revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
- E. Agenda:
 - 1. Items of significance that could affect progress, including topics for discussion as appropriate to current status of Project, minimally:
 - a. Approval of minutes of last meeting.
 - b. Review of Work progress.
 - c. Field observations, problems and decisions.
 - d. Identifications of problems which impede planned progress.
 - e. Review of submittal schedule and status of submittals.
 - f. Review of off-site fabrication and delivery schedules.
 - g. Maintenance of progress schedule.
 - h. Corrective measures to regain projected schedules.
 - i. Planned progress during succeeding Work period.
 - j. Coordination of projected progress.
 - k. Maintenance of quality and work standards.
 - l. Effect of proposed changes on progress schedule and coordination.
 - m. Other business relating to Work.
- F. Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule within 5 days after each meeting.

1.08 PRE-INSTALLATION MEETINGS

- A. Conduct a pre-installation meeting at the Project site at least 7 days before each construction activity that requires coordination with other construction.
- B. The 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 Engineer of scheduled meeting dates.
- C. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
 - 1. Contract Documents.
 - 2. Options.
 - 3. Related Change Orders.
 - 4. Purchases.
 - 5. Deliveries.
 - 6. Shop drawings, product data, and quality control samples.
 - 7. Review of mockups.
 - 8. Possible conflicts.
 - 9. Compatibility problems.
 - 10. Time schedules.
 - 11. Weather limitations.
 - 12. Manufacturer's recommendations.
 - 13. Warranty requirements.
 - 14. Compatibility of materials.
 - 15. Acceptability of substrates.
 - 16. Temporary facilities.
 - 17. Space and access limitations.
 - 18. Governing regulations.
 - 19. Inspecting and testing requirements.
 - 20. Required performance results.
 - 21. Recording requirements.
 - 22. Protection.
- D. Record significant discussions and agreements and disagreements of each conference and the approved schedule. Promptly distribute the record of the meeting to everyone concerned including Owner and Engineer.
- E. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

1.09 REQUEST FOR INTERPRETATION (RFI)

- A. Contractor's tool to request information.
- B. Submit on form at end of this Section or on Contractor's form approved by Engineer.

- C. If latent or unforeseen conditions require modifications to Contract, Contractor may propose changes by submitting request for a change to Engineer.
 - 1. Provide a complete description of proposed change, including a statement outlining reasons for the change and the effect of the change on the Work.
 - 2. Indicate the effect of the proposed change on Contract Sum and Contract Time.
 - 3. 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.
 - 4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 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 Contract Time.
 - 6. Comply with requirements in Section 01 25 13 if proposed change requires substitution of a product or system for product or system specified.
- D. Report to Engineer on this form any Contract Document requirements known to be in nonconformance with applicable laws, statutes, ordinances, building codes, and rules and regulations.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affect:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
- D. Fit the several parts together, to integrate with other Work.
- E. Uncover Work to install or correct ill-timed Work.
- F. Remove and replace defective and non-conforming Work.
- G. Remove samples of installed Work for testing.
- H. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- I. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- J. Cut masonry and concrete materials using masonry saw or core drill.
- K. Restore Work with new products in accordance with requirements of Contract Documents.
- L. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- M. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- N. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of the penetrated element.
- O. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

- P. Identify hazardous substances or conditions exposed during the Work to Engineer for decision or remedy.

3.02 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- H. Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring products and finishes to original or specified condition.
- I. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with a neat transition to adjacent finishes.
- J. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- K. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Engineer for review.
- L. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition; to Engineer for review.
- M. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.
- N. Patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections.
- O. Finish surfaces as specified in individual product sections.

END OF SECTION

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SECTION 01 32 16
PROGRESS SCHEDULES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Format
 - 2. Content
 - 3. Revisions to Schedules
 - 4. Submittals
- B. Related Sections:
 - 1. Section 01 11 00 - Summary of Work
 - 2. Section 01 29 10 - Applications for Payment
 - 3. Section 01 33 00 - Submittal Procedures

1.02 FORMAT

- A. Prepare schedules as a horizontal bar chart with separate bar for each major portion of Work or Operation, identifying first workday of each week.
- B. Sequence of Listings: The Table of Contents of this Project Manual. The chronological order of the start of each item of work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Minimum 11 by 17 inches. Multiples of 8-1/2 by 11 inches.

1.03 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify Work of separate stages, separate floors, and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01 11 00.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- G. Provide separate schedule of submittal dates for Shop Drawings, Product Data, and Samples, including Owner furnished products and products identified under Allowances, and dates reviewed. Submittals will be required from Engineer. Indicate decision date for selection of finishes.
- H. Indicate delivery dates for Owner furnished products and products identified under Allowances.
- I. Coordinate content with Schedule of Values.

1.04 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.

- C. Provide narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.

1.05 SUBMITTALS

- A. Submit initial schedules within 10 days after date of Notice to Proceed. After review, resubmit required revised data within 10 days.
- B. Submit revised Progress Schedule with each Application for Payment.
- C. Submit two (2) copies which will be retained by Engineer.
- D. Distribute copies of reviewed schedules to Site file, subcontractors, suppliers, and other concerned parties.
- E. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Requirements Included:
 - 1. Procedures
 - 2. Construction Progress Schedule
 - 3. Schedule of Values
 - 4. Shop Drawings
 - 5. Product Data
 - 6. Samples
 - 7. List of Proposed Subcontractors
 - 8. List of Proposed Suppliers
 - 9. Material Safety Data Sheets

1.02 PROCEDURES

- A. Electronic Submittals: Deliver submittals to Engineer via Newforma Project Center submittal process described below.
- B. Transmit each item under Engineer-accepted form.
 - 1. Identify Project, Contractor, subcontractor, major supplier.
 - 2. Identify pertinent Drawing sheet and detail number, and specification Section number.
 - 3. Identify deviations from Contract Documents.
 - 4. Provide space for Engineer and consultant review stamps.
- C. Submit initial progress schedules and schedule of values in duplicate within 10 days after date of Owner-Contractor Agreement. After review by Engineer, revise and resubmit as required.
- D. Submit revised schedules with each Application for Payment, reflecting changes since previous submittal.
- E. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- F. After Engineer review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- G. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.

1.03 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
 - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punch list, and any other document any participant wishes to make part of the project record.

2. Contractor and Engineer are required to use this service.
 3. It is Contractor's responsibility to submit documents in allowable format.
 4. Contractor, subcontractors, suppliers, and Engineer's consultants will be permitted to use the service at no extra charge.
 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Submittal Service: The selected service is:
1. Newforma Project Center. www.newforma.com
 2. The Engineer will establish and administer the Newforma Project Center electronic submittals process. The electronic submittal software charges are the responsibility of the Engineer.
 3. Training is available regarding use of the submittal software and web-based program. The Engineer will arrange the time and location for such training if desired by the Contractor.
- C. Submit .pdfs of shop drawings and product data to the Engineer using an agreed naming convention.
- D. The Electronic Document Submittal Service is not intended for color samples, color charts, or physical material samples.

1.04 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit horizontal bar chart with separate bar for each major trade or operation, identifying first work day of each week.

1.05 SCHEDULE OF VALUES

- A. Submit typed schedule on Contractor's standard form **OR** media-driven printout.
- B. Format:
1. Table of Contents of this Project Manual.
 2. Identify each line item with number and title of the major technical sections.
- C. Include in each line a directly proportional amount of Contractor's overhead and profit.
- D. Provide a sub schedule for each separate stage of Work specified.
- E. Revise schedule to list Change Orders for each application for payment submittal.

1.06 SHOP DRAWINGS

- A. Shop Drawings will not be accepted for review by Engineer until after they have been checked and approved by the Contractor as evidenced by his approval stamp and signature.
- B. Submit all Shop Drawings electronically in pdf format to the Engineer via Electronic Document Submittal Service.
- C. Submit showing system fabrication, installation drawings including plans, elevations, section details of components, and configuration between system and adjoining systems.

1.07 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options, testing compliance, warranty, and other data; supplement manufacturers' standard data to provide information unique to the Work.

- B. Submit all Product Data electronically in pdf format to the Engineer via Electronic Document Submittal Service.
- C. Submit manufacturer's printed instructions for delivery, storage, assembly, installation start-up, adjusting, finishing, and maintenance.

1.08 SAMPLES

- A. Submit full range of manufacturer's standard colors, textures, and patterns for Engineer's selection. Submit samples for selection of finishes within 21 days after date of Contract.
- B. Submit samples to illustrate functional characteristics of the product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing Work.
- C. Include identification on each sample, giving full information.
- D. Submit the number specified in respective specification section; 1 will be retained by Engineer. Reviewed samples that may be used in the Work are indicated in the technical sections.
- E. Field Samples:
 - 1. Provide field samples of finishes as required by individual technical section.
 - 2. Install sample complete and finished.
 - 3. Acceptable samples in place may be retained in completed Work.

1.09 LIST OF PROPOSED SUBCONTRACTORS

- A. Submit a list of subcontractors who will provide Work on the Project.
- B. The submitted list shall include:
 - 1. Name of Subcontractor
 - 2. Address
 - 3. Type of work to be provided
 - 4. Contact list for administrative and supervisory personnel.

1.10 LIST OF PROPOSED SUPPLIERS

- A. Submit a list of suppliers who will provide materials, equipment or components principle to the Work.
- B. The submitted list should include:
 - 1. Name of supplier.
 - 2. Address.
 - 3. Equipment, material or component to be provided.
 - 4. Contact list for administrative and supervisory personnel.

1.11 MATERIAL SAFETY DATA SHEETS

- A. Submit SDS to the Site on all products with chemical emissions and as called for in individual technical sections.

1.12 ENGINEER'S REVIEW RESPONSIBILITIES, PROCEDURES AND DEFINITIONS

- A. General
 - 1. Review of shop drawings, data, and samples will be for general conformance with the design concept and Contract Documents. They shall not be construed:
 - a. As permitting any departure from the Contract requirements
 - b. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials

- c. As approving departures from details furnished by the Engineer, except as otherwise provided herein
 - d. As approving substitutions to specified products or manufacturers.
 - 2. The Engineer does not review for verification of quantities, weights, dimensions, or means and methods.
 - 3. Partial review status will not be given to a submittal. Entire submittal shall be either acceptable or the entire submittal must be resubmitted with corrections as clarified by status definitions below.
 - 4. Submittals will be reviewed in order received unless Contractor requests a revised order of review, in writing. All submittals shall be submitted sufficiently in advance of construction requirements to provide no less than 21 calendar days for review from the time the Engineer receives them. No less than 30 calendar days will be required for major equipment that requires review by more than one engineering discipline.
- B. All submittals that have been reviewed by Engineer will have Engineer's Review Stamp affixed, initialed, and dated, indicating Engineer's review action. No submittals shall be used for construction unless they bear the initialed Engineer's Review Stamp or indicated as reviewed and found acceptable by Engineer as per the Newforma electronic review process. Possible review actions by Engineer are:
- 1. REVIEWED/NO EXCEPTIONS. Engineer's review did not detect deviations from conformance and intent of the Contract Documents. Fabrication, delivery, and installation may proceed as indicated in the submittal and in accordance with the Contract Documents.
 - 2. FURNISH AS NOTED. Engineer's review did not detect major deviations from conformance and intent of the contract documents; minor discrepancies and/or deficiencies are noted. Corrected copies are not required; however, the item(s) to be furnished are to be furnished in accordance with the Engineer's comments. If the Contractor elects to take exception to any comments, then corrected copies (with supplemental explanatory data) are to be re-submitted to the Engineer similar to a Revise and Resubmit status process.
 - 3. REVISE AND RESUBMIT. Engineer's review found major discrepancies and/or deficiencies, and corrected submittals (in their entirety) are required to determine conformance and intent to the contract documents. Make revisions noted and re-submit entire submittal for further review.
 - 4. REJECTED. Engineer's review concluded that the item(s) submitted do not meet the requirements of the "Or Equal" allowance, or a "Substitution" has been provided without proper approval process. An additional submittal cycle is required containing suitable items to determine conformance and intent of the contract documents.
- C. Resubmittals
- 1. Re-submittals will be handled in the same manner as first submittals. On re-submittals, direct specific attention, in writing on the transmittal letter and on re-submitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the Engineer, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. Make corrections to any work done because of this type revision that is not in accordance with the Contract Documents as may be required by the Engineer.
 - 2. Engineer will review all initial information for each submittal. Contractor shall reimburse Owner for the Engineer's charges for review of additional re-submittals. Contractor will be charged for review of all re-submittals over 20% of the initial submittals.
 - a. **EXAMPLE:** If the Contractor has a total of 50 initial submittals, there will be no charge for reviewing a combined total of 60 submittals and re-submittals. There will be a charge to review all submittals and re-submittals in excess of 60.
 - 3. The need for more than one re-submittal or any other delay in obtaining Engineer's review of submittals, will not entitle Contractor to extension of the contract time unless delay of the Work is the direct result of a change in the Work authorized by a Change Order or failure of Engineer to review and return any submittal to Contractor within the specified review period.

4. An assigned review status of REVISE AND RESUBMIT or REJECTED requires the original full number of submittals to be resubmitted free of the Engineers previous correction marks and review status stamp. The Engineer reserves the right to retain the same number of copies for each review cycle.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 40 00
QUALITY CONTROL REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes quality control of the installation of the work.
- B. Contractor Responsibility: These required services do not relieve Contractor of responsibility for compliance with any requirements

1.02 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. Neither the contractual relationships, duties, nor responsibilities of the parties in Contract nor those of Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.
- F. Industry Standards - "Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction," ASTM E329.
- G. IBC, Section 1704 - Special Inspections
- H. American Society for Testing and Materials (ASTM):
 - 1. C90 - Standard Specification for Loadbearing Concrete Masonry Units
 - 2. C129 - Standard Specification for Nonloadbearing Concrete Masonry Units
 - 3. C136 - Standard Method for Sieve Analysis of Fine and Coarse Aggregates
 - 4. C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete
 - 5. C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
 - 6. C270 - Standard Specification for Mortar of Unit Masonry
 - 7. C1019 - Standard Test Method for Sampling and Testing Grout
 - 8. D698 - Laboratory Compaction Using Standard Effort
 - 9. D2216 - Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
 - 10. D2922 - Density of Soil by Nuclear Methods
 - 11. D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
 - 12. D4253 and D4254 - Test Methods for Maximum Index Density of Soils using a Vibratory Table and Minimum Index Density of Soils and Calculation of Relative Density

1.03 DEFINITIONS

- A. Quality Control: Inspections, tests, related actions including reports, performed by independent agencies and governing authorities, as well as directly by Contractor.

1.04 QUALITY ASSURANCE

- A. Testing:
 - 1. Contractor shall employ and pay for services of an independent testing laboratory (Testing Agency) to perform specified inspection and testing as specified for each particular type of work.
 - 2. Employment of testing agency shall in no way relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.
- B. Testing Laboratory/Agency: Select laboratory qualified in accordance with referenced ASTM standard to acceptance of Engineer.
- C. Codes and Standards: Comply with pertinent codes, regulations, selected standards of ASTM.

1.05 RESPONSIBILITIES

- A. Contractor Responsibility:
 - 1. Contractor shall coordinate testing per the schedule included in this section. The schedule includes minimum testing requirement for the Work. Additional testing may be required and additional coordination shall be considered incidental to the Project.
 - 2. Code Compliance Testing: Quality control required by codes or ordinances, or by plan approval authority, made by legally constituted authority unless otherwise provided in Contract Documents.
 - 3. Verification of conformance of the Work within specified construction tolerances.
 - 4. Contractor's Convenience Testing.
 - 5. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring inspections and testing services.
 - 6. Provide incidental labor and facilities to:
 - 7. Provide access to Work to be tested.
 - 8. Obtain and handle samples at the Site or at source of products to be tested.
 - 9. Facilitate tests and inspections, and storage and curing of test samples.
 - 10. Coordinate with each independent agency the sequence of activities to accommodate required services with minimum delay in progress of Work and to avoid removing and replacing Work. Schedule times for quality control.
- B. Retest Responsibility:
 - 1. Where results of quality control prove unsatisfactory and do not indicate compliance of related Work with requirements of the Contract Documents, retests are responsibility of Contractor, regardless of whether the original test was Contractor's responsibility.
 - 2. Retest of Work revised or replaced by Contractor is Contractor's responsibility, where required tests were performed on original Work.
 - 3. Retesting costs will be deducted from Contract amount by Change Order.
 - 4. Provide a minimum of 2 retests for each failed test.
- C. Responsibility for Associated Services:
 - 1. Cooperate with independent agencies performing required quality control.
 - 2. Provide such auxiliary services as reasonably requested.
 - 3. These auxiliary services include, but are not necessarily limited to:
 - a. Cooperate with independent agencies performing required quality control.
 - b. Provide such auxiliary services as reasonably requested.
 - c. Contractor to notify testing agency sufficiently in advance of operations to permit assignment of personnel.

- d. Providing access to Work.
- e. Taking samples or assistance with taking samples.
- f. Delivery of samples to test laboratories.
- g. Security and protection of samples and test equipment at Site.

1.06 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on Shop Drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.07 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from the Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.08 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so by Engineer.

1.09 TESTING AND INSPECTION SERVICES

- A. The independent firm shall perform tests, inspections and other services specified in individual specification sections and as required by Engineer.
- B. Testing, inspections and source quality control may occur on or off the project site. Perform off-site testing as required by Engineer or Owner.
- C. Reports shall be submitted by the independent firm to Engineer, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- D. Coordinate and cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
 - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

- E. Testing and employment of testing Independent Testing Agency or Laboratory or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- F. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by Engineer. Payment for re-testing or re-inspection shall be by Contractor at no additional expense to Owner.
- G. Independent Testing Agency or Laboratory Responsibilities:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
 - 6. Perform additional tests required by Engineer.
 - 7. Attend preconstruction meetings and progress meetings.
- H. Independent Testing Agency or Laboratory Reports: After each test, promptly submit two copies of report to Engineer and to Contractor. When requested by Engineer, provide interpretation of test results. Include the following:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and specifications section.
 - 6. Location in the Project.
 - 7. Type of inspection or test.
 - 8. Date of test.
 - 9. Results of tests.
 - 10. Conformance with Contract Documents.
- I. Limits on Testing Authority:
 - 1. Independent Testing Agency or Laboratory or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Independent Testing Agency or Laboratory or laboratory may not approve or accept any portion of the Work.
 - 3. Independent Testing Agency or Laboratory or laboratory may not assume any duties of Contractor.
 - 4. Independent Testing Agency or Laboratory or laboratory has no authority to stop the Work.

1.10 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 10 days in advance of required observations. Observer subject to approval of Engineer.

- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 ADJUSTING

- A. Upon completion of quality control performed on Work, repair damaged Work, restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.

3.04 PROTECTION

- A. Protect Work exposed by or for quality control service activities, and protect repaired Work.

3.05 RESPONSIBILITY FOR ADJUSTING AND REPAIR

- A. Contractor's responsibility, regardless of assignment of responsibility for quality control.

3.06 TESTING AND INSPECTION

- A. See individual specification sections or Drawings for testing required.
- B. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
 - 2. Perform inspections, sampling, testing, and other services specified in individual specification sections and as required by the Engineer.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Engineer and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Engineer.
 - 6. Submit reports of all tests/inspections specified to Engineer, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:

1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs, equipment, tools, storage, and assistance as requested.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Make arrangements with testing agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Secure inspection and acceptance of subgrades and fill layers before subsequent construction is permitted.

3.07 ADDITIONAL TESTS

- A. Owner may choose to have Engineer perform certain inspection and testing activities in addition to those specified as required by the Contractor. Payment for initial Owner/Engineer inspection and testing will be by Owner. Payment for Owner/Engineer retesting required because of non-conformance to specified requirements will be charged to the Contractor by deducting inspection and testing charges from the Contract Sum.

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. This section describes the temporary facilities necessary for the execution of the work by Contractor. The Contractor, in examining the site, shall note that all construction operations and storage of equipment, materials, and tools shall be confined to the limitations of the site and additional lands acquired by the Owner, if any, as defined on the Site Plan/Civil Sheets of the Drawings.
- B. Temporary utilities and controls are incidental to the installation of the work. Provide temporary facilities and controls required for construction activities except, if any, for facilities and controls indicated as provided by the Owner.

1.02 UTILITY USE CHARGES

- A. Include cost or use charges for temporary facilities in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
 - 1. Owner's construction forces.
 - 2. Occupants of Project.
 - 3. Engineer.
 - 4. Testing agencies.
- B. Pay sewer service use charges for sewer usage (portable toilet), by all parties engaged in construction, at Project site.
- C. Pay water service use charges, whether metered or otherwise, for water used by all entities engaged in construction activities at Project Site.
- D. Pay electric power service use charges, whether metered or otherwise, for electricity used by all entities engaged in construction activities at Project Site.

1.03 QUALITY ASSURANCE

- A. Comply with industry standards and with applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
 - 1. Health and safety regulations.
 - 2. Utility company regulations.
 - 3. Police, fire department and rescue squad rules.
 - 4. Environmental protection regulations.
 - 5. NFPA 241 "Standards for Safeguarding Construction, Alterations and Demolition Operations".
 - 6. ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
 - 7. NECA Electrical Design Library "Temporary Electrical Facilities", NFPA 70, and NEMA, NECA and UL standards and regulations for temporary electric service.
- B. Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.04 COORDINATION

- A. Utility interruptions required for tie-ins:

1. Determine requirements, time constraints, etc. for installing temporary service to the Site, or to make connections to existing service.
 - a. Shall be requested by Contractor in writing to Engineer or Owner.
 - b. Shall not commence until Contractor has received written response from Engineer or Owner.
 - c. Engineer/Owner reserves the right to restrict the time and duration of interruption.
2. Arrange with utility companies for service interruption, where necessary, to make connections for temporary services.

1.05 PROJECT CONDITIONS

- A. At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.
- B. Installer of each permanent service shall 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.
- C. The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 1. Keep temporary services and facilities clean and neat.
 2. Relocate temporary services and facilities as required by progress of the Work.

1.06 DRAINAGE CONTROL

- A. Maintain excavations free of water.
 1. Grade Site to drain.
 2. Provide, operate, and maintain pumping equipment.
 3. Protect Site from puddling or running water.

1.07 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.08 EROSION AND SEDIMENT CONTROL

- A. Prevent erosion and sedimentation:
 1. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas.
 2. Minimize amount of bare soil exposed at one time.
 3. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 4. Use selective placement at construction fill and waste areas to avoid erosive surface silts or clays.
 5. Periodically inspect earthwork to detect evidence of erosion and sedimentation.
 6. Promptly apply corrective measures.

1.09 NOISE CONTROL

- A. Comply with local noise ordinances.
- B. Avoid use of tools or equipment that produce harmful noise.
- C. Restrict use of noise-making tools and equipment to hours of use that will minimize noise complaints from persons or businesses near Site.
- D. Provide noise suppression barriers or equipment used to perform the Work.

1.10 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.11 BARRIERS

- A. Provide barriers as required to:
 - 1. Prevent public entry to construction areas.
 - 2. Protect existing facilities, designated plantings and trees, and adjacent properties from damage from construction activities.
- B. Access: Provide barricades and covered walkways as required for public rights-of-way, for public access to, and emergency egress from existing buildings.

1.12 PROTECTION

- A. Shoring and Bracing:
 - 1. Provide temporary shoring, bracing, and protection as required for installation and protection of Work.
 - 2. Ensure adequacy of such items.
 - 3. Repair or replace damaged Work occasioned by inadequate temporary supports.
 - 4. Leave temporary shoring and bracing in place until permanent construction is complete to point where installed Work is properly supported.
- B. Enclosures:
 - 1. Exterior:
 - a. Provide temporary weather-tight closures of openings in exterior surfaces to:
 - 1) Provide acceptable working conditions and protection for materials.
 - 2) To allow for temporary heating.
 - 2. Interior:
 - a. Provide temporary partitions and ceilings as required to:
 - 1) Separate Work areas from Owner-occupied areas.
 - 2) Prevent penetration of dust and moisture into Owner-occupied areas.
 - 3) Prevent damage to existing areas and equipment.
 - b. Construction:
 - 1) Framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.
- C. Installed Work:
 - 1. Provide temporary protection for installed products; control traffic in immediate area to minimize damage.
 - 2. Provide protective coverings at walls, projections, jambs sills, and soffits of openings; protect finished floors and stairs from traffic, movement of heavy objects.
 - 3. Prohibit traffic and storage on waterproofed and roofed surfaces or on lawn and landscaped areas.
- D. Protection of Trees and Plants:
 - 1. All trees and other vegetation which must be removed to perform the Work shall be removed and properly disposed of by the Contractor; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the Drawings. All trees and plants not removed shall be protected against injury from construction operations by the Contractor.

2. The Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades, trimming to prevent damage from construction equipment, and installing underground facilities by hand or tunneling methods. Designated trees shall not be endangered by stockpiling excavated material or storing equipment against the trunk.
 3. When injury or removal of trees designated to be preserved cannot be avoided, or when removal and replacement is indicated on the Drawings, each tree injured beyond repair or removed shall be replaced with a similar tree of the nearest size available.
- E. Damage to Existing Property:
1. The Contractor will be held responsible for any damage to existing structures, Work, materials, or equipment because of his operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, the Owner. The Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other means necessary for such protection.
 2. The Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or personnel to or from the Work. The Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.
- F. Security:
1. Provide security program and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, and theft.
 2. Provide doors in enclosures with self-closing hardware and locks.
 3. Provide temporary locks for doors installed in Work.
- G. Fire Protection:
1. Fire extinguishers shall be non-freeze type such as A-B-C rated dry chemical of not less than 10-pound capacity.
 2. Provide and maintain in working order during entire construction period, a minimum of 1 fire extinguisher in construction area and 1 in field office.
 3. Contractors who maintain enclosed sheds on the premises shall provide and maintain, in an accessible location, a minimum of 1 non-freezing type extinguisher in each shed.
 4. Each Contractor using open flame (i.e., welding or soldering) shall have a 10-pound minimum extinguisher within closest practical distance.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide undamaged materials in serviceable conditions and suitable for use intended.
- B. Provide all required materials and equipment for temporary utilities, services, and facilities.
- C. Used materials and equipment may be used, if acceptable to Engineer.
- D. Provide only materials and equipment that are suitable for intended use and comply with appropriate standards.

2.02 EQUIPMENT

- A. Provide undamaged equipment in serviceable conditions and suitable for use intended.
- B. Provide temporary self-contained toilet units of temporary single-occupant toilet units of the chemical, aerated recirculation, or combustion type for use by all construction personnel. Units shall be properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 CONSTRUCTION WATER:

- A. Owner will pay for water used for construction purposes.
- B. Secure water necessary for construction and testing and pay service connection charges.
- C. Install water service and distribution piping of sizes and pressures adequate for construction purposes.
- D. Where available supply of potable water is inadequate, provide non-potable water for purposes other than drinking and washing.
- E. Where non-potable water is used, provide warning signs on the discharge end of each length of hose and at the shut-off nozzles.
- F. Where shut-off nozzles are used at water hose discharge, provide heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system.
- G. Trades needing a larger source of water are responsible for the source and distribution.
- H. Exercise control over usage to conserve water.
- I. Sterilize temporary water piping for potable water prior to use.
- J. Maintain distribution system to avoid damage to existing or new construction.
- K. Avoid damage to permanent plumbing at source of temporary water.

3.03 TEMPORARY ELECTRIC POWER SERVICE:

- A. Provide weatherproof grounded electric power service and distribution system of sufficient size, capacity and power characteristics for construction needs.
- B. Contractor shall pay for electricity used for construction purposes.
 - 1. Electrical service shall be provided and installed by Contractor.
 - 2. Any Trade requiring power with different characteristics than provided shall arrange and pay for access to such power.
- C. When permanent power and lighting systems are in operation, they may be used for construction purposes.
- D. Whenever an overhead floor or roof deck has been installed, install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in area of Work.
- E. Install service and grounding in compliance with NFPA 70. Include necessary meters, transformers, overload protected disconnect, and main distribution switch gear.
- F. Connect temporary service to local electric power company main as directed by electric company officials.
- G. Install temporary service with an automatic ground-fault interrupter feature, activated from circuits of the system.
- H. Install circuits of adequate size and proper characteristics for each use.
 - 1. Run wiring overhead and rise vertically where wiring will be least exposed to damage from construction operations.

2. Install rigid steel conduit or equivalent raceways for wiring that must be exposed on grade, floors, decks, or other areas of possible damage or abuse.
- I. Provide identification/warning signs at power outlets that are other than 110 to 120 volt power.
- J. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110 to 120 volt plugs into higher voltage outlets.
- K. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for plug-in connection of power tools and equipment.
- L. Use only grounded extension cords.
 1. Use "hard-service" cords where exposed to abrasion and traffic.
 2. Use single lengths or waterproof connectors to connect separate lengths of electric cords.

3.04 TEMPORARY LIGHTING:

- A. Install local switching of temporary lighting, spaced to allow lighting to be turned off in patterns to conserve energy and retain light suitable for work-in-progress, access traffic, security check, and Project lock-up.
- B. Provide not less than one 200-watt incandescent lamp per 1,000 square feet of floor area, uniformly distributed, for general construction lighting, or equivalent illumination of a similar nature.
 1. In corridors and similar traffic areas, provide not less than one 100-watt incandescent lamp every 50 feet.
 2. In stairways and at ladder runs, locate not less than one 100-watt incandescent lamp for illuminating each landing and flight.
- C. Install and operate temporary lighting that will fulfill security and protection requirements, without the necessity of operating entire temporary lighting system.
- D. Provide general service incandescent lamps of wattage required for adequate illumination.
- E. Protect lamps with guard cages or tempered glass enclosures.

3.05 TEMPORARY HEAT AND VENTILATION:

- A. Provide temporary heat for performance of the Work, curing or drying of recently installed work, or protection of work-in-place from adverse effects of elements.
- B. Provide temporary heating units, tested and labeled by UL, FM, or other recognized trade association related to the fuel being consumed.
- C. Select units known to be safe and without deleterious effect upon work-in-place or being installed.
 1. Except where conditions make it necessary to use another system, and where use of the permanent heating system is available and authorized by Engineer, provide properly vented self-contained liquid propane gas or fuel oil heaters with individual space thermostatic controls for temporary heat.
 2. Do not use open burning or salamander type heating units unless authorized by Engineer.
- D. Coordinate ventilation requirements to produce indicated ambient condition required, to prevent accumulations of dust, fumes, vapors or gases, and to minimize consumption of fuel or energy.
- E. Coordinate use of existing facilities with Owner.
- F. Temporary heating and ventilation required by Work under Contract shall be provided and paid by Contractor requiring same.
- G. Extend and supplement with temporary units as required to maintain specified conditions for construction operations, and to protect materials and finishes from damage due to temperature or humidity.
- H. After Enclosure:

1. Owner will allow installation and use of permanent heating system for temporary heat after building is weather-tight and concrete floor slabs have been poured.
2. Cost of temporary heat after enclosure shall be borne by Owner.
 - a. Contractor shall install new filters at time of Substantial Completion.
- I. Maintain a minimum temperature of 50 degrees in permanently enclosed portions of the structures and areas where finished Work has been installed.

3.06 TEMPORARY SANITARY FACILITIES FOR USER BY CONTRACTOR(S):

- A. Provide for toilets, wash facilities and drinking water fixtures in compliance with regulations and health codes for type, number, location, operation and maintenance of fixtures and facilities.
- B. Provide toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each facility, and provide covered waste containers for used materials.
- C. Install separate self-contained toilet units for male and female personnel shielded to ensure privacy.
- D. Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition.
 1. Dispose of drainage properly.
 2. Supply cleaning compounds appropriate for each condition.
 3. Include safety showers, eyewash fountains and similar facilities for the convenience, safety and sanitation of personnel.
- E. Provide drinking water fountains or containerized tap-dispenser bottled-drinking water units, complete with paper cup supplies. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 degrees Fahrenheit (7 to 13 degrees Celsius).

3.07 TEMPORARY SANITARY SEWER SERVICE:

- A. During construction, maintain flow in sanitary sewers and force mains on a continuous basis until service from newly constructed mains can be restored.
- B. Provide pumps, portable generators, hoses and related items appurtenant to the Work.
- C. When necessary to pump sewage overnight, provide an operator to stay with the pumping operation until construction resumes the next day.
- D. Sewer service lines to individual users may be disconnected for a period not to exceed 4 hours in any one day.
- E. Operate temporary service in a safe and efficient manner, do not overload or allow unsanitary conditions, public nuisances, or hazardous conditions to develop or persist on the Site.

3.08 STORM SEWERS AND DRAINAGE:

- A. Where storm sewers are available, provide temporary connections to remove effluent that can be discharged lawfully.
- B. If storm sewers are not available, provide containers to remove and dispose of effluent off-site in a lawful manner.
- C. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways.
- D. Connect temporary storm sewers as directed by sewer utility officials.
- E. Maintain temporary storm sewers and facilities in a clean, sanitary condition. Following heavy use, promptly restore sewers and facilities to normal conditions.

3.09 STORMWATER CONTROLS:

- A. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of stormwater from heavy rains.

- B. Provide erosion control facilities required to prevent eroded soil from leaving the Site in accordance with local, state and federal requirements.

3.10 TEMPORARY SUPPORT FACILITIES

A. Temporary Paving:

1. Construct and maintain temporary roads and paving to support indicated loadings, if any, and to withstand exposure to traffic during the construction period.
2. Locate temporary paving for roads, storage areas and parking where same permanent facilities will be located, or obtain authorization from the Contracting Officer's Representative for proposed temporary paving not located at permanent paving locations.
 - a. Comply with Division 2 sections applicable to paving for construction and maintenance of temporary paving.
 - b. Coordinate temporary paving development with subgrade grading, compaction, installation and stabilization of subbase, and installation of permanent paving.
 - c. Install temporary paving to minimize the need to rework installations and result in permanent roads and paved areas without damage or deterioration when occupied.
 - d. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration and supervision.
 - e. Coordinate with weather conditions to avoid unsatisfactory results.

B. Dewatering Facilities and Drains:

1. Comply with dewatering requirements of applicable Division 2 sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities.
2. Where feasible, use same facilities provided for the construction activities.
3. Maintain site, excavation and construction free of water.

C. Temporary Enclosures:

1. Provide temporary enclosures for protection of construction, in progress or completed, from exposure, inclement weather, other construction operations and similar conditions.
2. Where heat is needed and the building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions or unacceptable effects.
3. Install tarpaulins securely with incombustible framing. Close openings of 25 square feet. (2.3 square m.) or less with plywood or similar materials.
4. Close openings through floor or roof decks and other horizontal surfaces with load-bearing wood-framed construction.
5. Where enclosure exceeds 100 square feet. (9.2 square m.) in area, use UL labeled fire-retardant-treated wood and plywood for framing and sheathing.

D. Temporary Lifts and Hoists: Provide facilities for hoisting materials and personnel.

E. Collection and Disposal of Waste:

1. Collect waste from construction areas and elsewhere daily. Enforce requirements strictly and dispose of material lawfully.
2. Comply with NFPA 241 for removal of combustible waste material and debris.
3. Do not hold waste materials more than 7 days during periods when the ambient temperature remains continuously less than 80 degrees Fahrenheit (27 degrees Celsius), or more than 3 days when the temperature exceeds or is expected to rise above 80 degrees Fahrenheit (27 degrees Celsius).

4. Handle and properly containerize hazardous, dangerous or unsanitary waste materials separately from other waste.
- F. Rodent and Pest Control:
1. Retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches and other pests.
 2. Employ this service to perform extermination and control procedures at regular intervals so the project will be free of pests and their residue at completion.
 3. Perform control operations lawfully, using environmentally safe materials.
- G. Temporary Stairs:
1. Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
 2. When permanent stairs are available, cover finishes with protective coverings to result in undamaged conditions at project completion.

3.11 TEMPORARY PROTECTION FACILITIES

- A. Temporary Fire Protection
1. Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of types needed to protect against reasonably predictable and controlled fire losses.
 2. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".
 3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher at or near each access route exit or entrance, including stairwells on each floor.
 4. Store combustible materials in containers in fire-safe locations.
 5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities and access routes.
 6. Prohibit smoking in hazardous fire-exposure areas.
 7. Provide supervision of welding operations, combustion-type temporary heating units and other sources of fire ignition.
- B. Barricades, Warning Signs, and Lights:
1. Comply with standards and code requirements for erecting structurally adequate barricades.
 2. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard involved.
 3. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- C. Enclosure Fence:
1. When excavation begins, install an enclosure fence with lockable entrance gates to prevent people and animals from easily entering the site, except by the entrance gates.
 2. Locate where indicated or, if not indicated, enclose the entire site or the portion determined sufficient to accommodate construction operations.
 3. Provide open-mesh chain link fencing with posts set in a compacted mixture of gravel and earth.
 4. Provide 8 feet (2.5 m) high plywood fence framed with four nominal 2-by-4-inch (50-by-100-mm) wood rails, and preservative-treated wood posts spaced not more than 8 feet (2.5 m) apart.
 5. Provide either open-mesh chain link fencing with posts set in a compacted mixture of gravel and earth, or provide 8 feet (2.5 m) high plywood fence framed with four nominal 2-by-4 inch (50-by-100 mm) wood rails and preservative-treated wood posts spaced not more than 8 feet (2.5 m) apart.

D. Security Enclosure and Lockup:

1. Install substantial temporary enclosure of partially completed areas of construction.
2. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
3. Provide a secure lockup for valuable stored materials and equipment.
4. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

E. Environmental Protection:

1. Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result.
2. Avoid using tools and equipment that produce harmful noise.
3. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons near the site.

3.12 OPERATION, TERMINATION, AND REMOVAL

A. Supervision:

1. Enforce strict discipline in use of temporary facilities.
2. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance:

1. Maintain facilities in good operating condition until removal.
2. Protect from damage by freezing temperatures and similar elements.
3. 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.
4. Prevent water-filled piping from freezing.
5. Maintain markers for underground lines.
6. Protect underground lines from damage during excavation operations.

C. Termination and Removal:

1. Unless the Owner requests that a temporary facility be maintained longer, each temporary facility shall be removed when the need for its service has ended and can be replaced by authorized use of a permanent facility.
2. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility.
3. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
4. Materials and facilities that constitute temporary facilities are the property of the Contractor, except the Government reserves the right to take possession of project identification signs.
5. Remove temporary paving not intended for or acceptable for integration into permanent paving.
 - a. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for subsoil or fill in the area.
 - b. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns.

- c. Repair or replace street paving, curbs, and sidewalks at temporary entrances, in accordance with the requirements of the governing authority.
- 6. Prior to project completion, replace clean and restore permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

3.13 SITE CLEANING

- A. Keep Site neat, clean, free of debris.
- B. Prevent papers, cardboard or other debris from blowing around Site or onto adjacent property.
- C. Contractor shall provide and pay for dumpsters for collection of trash.
- D. Control accumulation of waste materials and rubbish. Collect and dispose of all trash from the Site at regular intervals.
- E. Separate and recycle applicable materials.

END OF SECTION

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SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

1.02 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, which is current as of the date of the Contract Documents.
 - b. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the work.
 - c. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.03 MATERIALS - QUALITY ASSURANCE

- A. It is the intent of these specifications to procure a quality product by an established manufacturer of the latest design. All components of systems shall be engineered for long, continuous, uninterrupted service. The cost of the equipment shall include all royalties and costs arising from patents and licenses associated with furnishing the specified equipment.
- B. All materials shall be designed to withstand stresses encountered in continuous operation, fabrication and erection. All equipment shall be of corrosion-resistant materials or shall be suitably protected by the supplier with corrosion-resistant industrial coatings. Provisions shall be made for ease of lubrication, adjustment and replacement of parts.
- C. Material for which no detailed specifications are given shall:
 - 1. Meet the particular industry standard for the material used.
 - 2. Meet the specifications of ASTM, ANSI or SAE for metals and plastics for the use intended.
 - 3. Not be used unless it has previously been used for a like purpose for a sufficient length of time in the field or under field-simulated laboratory conditions to demonstrate its successful use.
- D. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Engineer to determine the most important product qualities to consider before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing products that possess these qualities, to the fullest extent possible.
 - 2. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.04 PRODUCT REQUIREMENTS

- A. Minimum Requirements: Comply with specifications and referenced standards.
- B. Product Provision: Provide products complete with all accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and for the intended use and effect.
- C. Components: Items required to be supplied in quantity within a specification section shall be the same and shall be interchangeable.
- D. Compatibility of Options: When Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- E. Existing Products: Do not use materials and equipment removed from existing premises, except as specifically required or permitted by Contract Documents.
- F. Nameplates:
 - 1. Except for required labels and operating data, do not attach or imprint manufacturer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
 - 2. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on an accessible surface that is not conspicuous.
 - 3. Equipment Nameplates:
 - a. Provide permanent nameplate on each item of service-connected or power-operated equipment.
 - b. Locate on an easily accessible surface that is inconspicuous in occupied spaces.
 - c. Provide the following information and other essential operating data on nameplate:
 - 1) Name of product and manufacturer.
 - 2) Model and serial number.
 - 3) Capacity.
 - 4) Speed.
 - 5) Ratings.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - 1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Provide equipment and personnel to handle products by methods that avoid soiling or damage.
 - 4. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 5. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that quantities are correct, products are undamaged, and properly protected. Inform the Engineer or Owner before the inspection occurs, so that they may participate in the inspection if so desired.
 - 6. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units. Seals and labels shall be intact and legible.

7. Store products in accordance with manufacturer's instructions. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
8. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.
9. Arrange for fabricated items or products stored outside to be placed on sloped supports above the ground. Items subject to deterioration shall be covered by weather proof sheet covering which is ventilated to prevent condensation.
10. Store loose granular materials on solid surfaces which are well drained and prevent contamination by foreign matter.
11. Arrange for periodic inspection of stored materials to insure that materials remain undamaged and are maintained under required conditions.
12. All shipment, delivery and storage charges shall be at the expense of the contractor.

PART 2 PRODUCTS

2.01 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 2. Semi-proprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers, provide 1 of the products indicated. No substitutions will be permitted.
 - a. Where Specifications specify products or manufacturers by name, accompanied by the term "or equal" or "or approved equal," comply with the Contract Document provisions concerning "Substitutions" to obtain approval for use of an unnamed product.
 3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 - b. General overall performance of a product is implied where the product is specified for a specific application.
 5. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
 6. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.

- a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "Substitutions" for selection of a matching product in another product category.
- 7. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Engineer will select the color, pattern, and texture from the product line selected.
- 8. Allowances: Refer to individual Specification Sections and "Allowances" provisions in Division 1 for allowances that control product selection and for procedures required for processing such selections.

PART 3 EXECUTION

3.01 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 - 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

3.02 FIELD QUALITY CONTROL

- A. Qualifications of Manufacturers Field Personnel
 - 1. Personnel shall be authorized by the manufacturer to erect start-up and initiate warranty of the equipment provided.
 - 2. Personnel shall come to the site with the required tools and electrical instruments and shall have full knowledge of electrical controls pertaining to the equipment and control panels furnished.
 - 3. Failure to provide personnel with full qualifications shall be cause for service trip to be disqualified as part of the requirements and may because for reimbursement for costs incurred by the Owner due to services required for a qualified start-up inspection.

SECTION 01 73 29
CUTTING AND PATCHING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Procedures for administration of cutting and patching of existing structures and buildings.
 - a. Submittals.
 - b. Quality assurance.
 - 2. Materials.
 - 3. Examination: Site conditions.
 - 4. Preparation:
 - a. Temporary Support.
 - b. Protection.
 - 5. Construction:
 - a. Special techniques.
 - b. Interface with others.
 - 6. Cleaning.
- B. Related Sections:
 - 1. Section 01 33 00 - Submittal Procedures
 - 2. Individual Specification Sections inferred by Cutting and Patching required.

1.02 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Schedules:
 - 1. Initial Schedule:
 - a. 5 days prior to proposed start of work, submit to Engineer schedule of work involving cutting or patching.
 - 2. Utility Schedule:
 - a. Include with initial schedule the following utility information:
 - 1) Which utilities will be disturbed or affected, including those that will be relocated or temporarily out-of-service.
 - 2) Length of time service will be disrupted.
 - 3. Revised Schedules: Submit 6 copies of updated schedules not less than once per week.
- C. Structural Elements: Where cutting and patching involves addition to reinforcement to structural elements, submit 6 copies of Shop Drawings including all details and structural calculations showing how reinforcement is integrated with the original structure.

1.03 QUALITY ASSURANCE

A. Qualifications:

1. Personnel: Employ skilled workers.

B. Regulatory Requirements:

1. Structural Work Limitations:

- a. Do not cut and patch structural elements in manner to reduce load-carrying capacity or load-deflection ratio. Obtain acceptance of cutting and patching proposal before cutting and patching following structural elements:

- 1) Foundation construction.
- 2) Bearing walls.
- 3) Structural concrete.
- 4) Structural steel.
- 5) Lintels.
- 6) Structural decking.
- 7) Miscellaneous structural metals.
- 8) Equipment supports.

b. Operational and Safety Limitations:

- 1) Do not cut and patch operating elements or safety related components in manner to reduce their capacity to perform as intended, or result in increased maintenance or decreased operational life and safety. Obtain acceptance of cutting and patching proposal before cutting operating elements or safety related systems.

2) Visual Requirements:

- a) Do not cut and patch construction exposed on exterior or in occupied spaces in manner to, in Engineer's opinion, reduce structure's/building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace work cut and patched in visually unsatisfactory manner. If possible, retain project contractors to patch following categories of exposed work, otherwise engage other recognized experienced, specialized firms including, but not limited to:

- (1) Special concrete finishes.
- (2) Masonry.
- (3) Stucco and plaster.
- (4) Acoustical ceilings.
- (5) Ceramic tile.
- (6) Flooring.
- (7) Roofing.

- C. Preinstallation Meetings: Before proceeding, meet at Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures, resolve potential conflicts before proceeding.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Identical to existing materials. If not available or not usable where exposed surfaces are involved, match existing adjacent surfaces to fullest extent possible with regard to visual effect. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Conditions: Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. If unsafe or unsatisfactory conditions are encountered, correct before proceeding.

3.02 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection:
 - 1. Prevent damage to existing construction. Protect portions of project that might be exposed during work from adverse weather conditions.
 - 2. Avoid interference with use of or free passage to adjoining areas.
 - 3. Take necessary precautions to avoid cutting existing pipe, conduit, ductwork.

3.03 CONSTRUCTION

- A. Special Techniques:
 - 1. Cutting:
 - a. General:
 - 1) Use methods least likely to damage elements to be retained or adjoining construction. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2) Equipment:
 - a) Hand or small power tools designed for sawing or grinding. For concrete and masonry, use cutting machine such as carborundum saw or diamond core drill.
 - 3) Existing finished surfaces: Avoid marring; cut or drill from exposed or finished side into concealed surfaces.
 - 4) Excavating and Backfilling: Comply with requirements of applicable Sections of Division 31.
 - 5) Utility services:
 - a) Where services are shown or required to be removed, relocated or abandoned, bypass before cutting.
 - b) Cut off pipe or conduit in walls or partitions to be removed.
 - c) Cap, valve or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture, other foreign matter after by-passing and cutting.
 - b. Patching:
 - 1) Seams: Durable, invisible as possible.
 - 2) Exposed finishes:
 - a) Restore, extend finish restoration into retained adjoining construction in manner to eliminate evidence of patching and refinishing.
 - b) Where finished areas extend into others, patch and repair floor and wall surfaces in new space to provide even surface of uniform color and appearance. Remove existing floor and all coverings, replace with new materials, if necessary to achieve uniform color and appearance.

- c) Where patching occurs in smooth painted surface, extend final paint coat over entire unbroken area containing patch, after patched area has received primer and second coat.
 - d) Patch, repair, rehang existing ceilings as necessary to provide even plane surface of uniform appearance.
- B. Interface with Others: Cut to provide for installation of other components or performance of the reconstruction activities and subsequent fitting and patching required to restore surfaces to original condition.

3.04 CLEANING

- A. Thoroughly clean areas, spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty, similar items. Thoroughly clean piping, conduit, similar features before painting or other finishing is applied. Restore damaged pipe covering to original condition.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Administrative and procedural requirements for contract closeout, including:
 - 1. Submittals.
 - 2. Inspection procedures.
 - 3. Warranties.
 - 4. Record document submittals.
 - 5. Final cleaning.
 - 6. Pest control.
- B. Related Sections:
 - 1. Section 01 78 23 - Operation and Maintenance Data
 - 2. Specific requirements for individual units of work are included in appropriate technical sections

1.02 SUBSTANTIAL COMPLETION

- A. Complete the following before requesting Engineer's inspection for certification of Substantial Completion for each phase of work. List items that are incomplete in 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. Obtain, submit releases enabling Owner unrestricted use of the Work and access to services and utilities.
 - 3. Regulatory requirements:
 - a. Where required, obtain occupancy permits, operating certificates, similar releases.
 - b. Obtain elevator inspection from State Inspector.
 - 4. Bonding and insurance:
 - a. Consent of Surety to Reduction In or Partial Release of Retainage (if Performance Bond provided).
 - b. Advise Owner of pending insurance change-over-requirements (if Builder's Risk Insurance is provided by Contractor).
- B. Inspection Procedures:
 - 1. When prerequisites are complete, submit request in writing to Engineer stating that all requirements are satisfied, and requesting inspection.
 - 2. Upon receipt of Contractor's request for inspection, Engineer will either proceed with inspection or advise Contractor of unfilled prerequisites.
 - 3. Following initial inspection, Engineer will either prepare Certificate of Substantial Completion, or advise Contractor of work which must be performed before certificate will be issued. Engineer will repeat inspection when requested and when assured that work has been substantially completed.
 - 4. Results of completed inspection will form the basis of requirements for Final Acceptance.

1.03 FINAL ACCEPTANCE

- A. Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submittals:
 - a. Certificate of Substantial Completion.
 - b. Consent of Surety (if Performance Bond provided).
 - 1) To Partial Release of Retainage.
 - 2) To Final Payment.
 - c. Assurance that unsettled claims will be settled.
 - d. Proof that fees and similar obligations have been paid.
 - e. Evidence of final, continuing insurance coverage complying with insurance requirements.
 - f. Notarized certification of compliance with wage rate requirements, if required by Funding Agency.
 - g. Certified copy of Engineer's final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by Engineer.
 2. Warranties: Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications, and other similar documents.
 3. Operation and Maintenance manuals:
 - 1) Organize operating, maintenance data into suitable sets of manageable size.
 - 2) Bind into individual heavy-duty 2-inch, 3-ring vinyl-covered binders with pocket folders, each set of data, marked with appropriate identification on both front and spine of each binder.
 - 3) Include:
 - a) Emergency instructions.
 - b) Spare parts listing.
 - c) Copies of warranties.
 - d) Wiring diagrams.
 - e) Recommended "turnaround" cycles.
 - f) Inspection procedures.
 - g) Shop Drawings and Product Data.
 4. Miscellaneous Record Submittals:
 - a. Refer to other sections of specifications for requirements of miscellaneous record keeping and submittals in connection with actual performance of work.
 - b. Complete miscellaneous records, place in good order, properly identified and bound or filed, ready for continued use and reference.
 5. Records:
 - a. Test/adjust/balance records.
 - b. Startup performance reports.
- B. Record Drawings: Submit to Engineer a set of record prints marked to show "as-built" conditions for work of contract.

C. Adjusting:

1. Repair and restore marred exposed finishes.
2. Touch up of painting of marred surfaces.
3. Complete final cleaning requirements.

D. Final Payment Request:

1. Include certificates of insurance for products and completed operations where required.
2. Updated final statement, accounting for final additional changes to Contract Sum.
3. Final liquidated damages settlement statement, acceptable to Owner.

E. Re-inspection Procedure:

1. Engineer will re-inspect work upon receipt of notice that work, including punch list items resulting from earlier inspections, has been completed, except for items whose completion has been delayed because of circumstances that are acceptable to Engineer.
2. Engineer will either prepare a certificate of final acceptance, or will advise Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
3. If necessary, re-inspection procedure will be repeated.

1.04 TRANSFER OF SITE TO OWNER

- A. Deliver tools, spare parts, extra materials and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
- B. Change door locks to Owner's access. Advise Owner's personnel of changeover in security provisions.
- C. Advise Owner of changeover in heat and other utilities.
- D. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

1.05 OPERATING AND MAINTENANCE INSTRUCTIONS/DEMONSTRATIONS

- A. Arrange for each installer of operating equipment and other work requiring regular or continuing maintenance, to meet at Site with Owner's personnel to provide necessary basic instruction in proper operation and maintenance of entire work. Where installers are not experienced in required procedures, include instruction by manufacturer's representatives.
- B. Provide detailed review of following items:
 1. Maintenance manuals.
 2. Record documents.
 3. Spare parts and materials.
 4. Tools.
 5. Lubricants.
 6. Fuels.
 7. Identification systems.
 8. Control sequences.
 9. Hazards.
 10. Cleaning materials and procedures.
 11. Warranties, bonds, maintenance agreements similar continuing commitments.
- C. As part of this instruction for operating equipment, demonstrate following procedures:
 1. Start-up.
 2. Shut-down.

3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.
- D. Provide a video tape of above procedures.

PART 2 PRODUCTS

2.01 CLEANING AGENTS

- A. Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned.
- B. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 EXECUTION

3.01 FINAL CLEANING

- A. Provide final cleaning, following manufacturer's written instructions.
- B. Conduct cleaning and waste-removal operations to comply with local laws and ordinances, and federal and local environmental and antipollution regulations.
- C. Employ experienced workers or professional cleaners for final cleaning.
- D. Comply with safety standards for cleaning.
 1. Do not burn waste materials.
 2. Do not bury debris or excess materials on Owner's property.
 3. Do not discharge volatile, harmful, or dangerous materials into drainage systems.
 4. Remove waste materials from Site and dispose of lawfully.
- E. Clean Site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- F. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.
 1. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 2. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 3. Remove tools, construction equipment, machinery, and surplus material from Site.
 4. Remove snow and ice to provide safe access to building.
 5. 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.
 6. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 7. Sweep concrete floors broom clean in unoccupied spaces.
 8. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.

9. 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.
10. Remove labels that are not permanent.
11. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
12. Replace parts subject to unusual operating conditions.
13. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
14. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
15. Clean ducts, blowers, and coils if units were operated without filters during construction.
16. 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.

END OF SECTION

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SECTION 01 78 37
PRODUCT WARRANTIES

PART 1 GENERAL

1.01 SUMMARY

- A. Requirements include administrative and procedural requirements for:
 - 1. Warranties
 - 2. Warranty submittals
- B. Related Sections:
 - 1. Document 00 72 00 - General Conditions
 - 2. Section 01 33 00 - Submittal Procedures
 - 3. Section 01 77 00 - Closeout Procedures
 - 4. Individual Technical Sections

1.02 DEFINITIONS

- A. Standard Product Warranties: Preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to Owner.
- B. Special Warranties: Written warranties required by, or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for Owner.

1.03 WARRANTY REQUIREMENTS

- A. Separate Prime Contracts:
 - 1. Each prime Contractor is responsible for warranties related to its own contract. Each Contractor shall warrant their work for labor and material for 1-year minimum. This warranty shall include material purchased directly by Owner and installed by Contractor. Warranty requirements noted in individual sections may exceed this 1-year minimum; if it does, the warranty shall apply for the stipulated time for both material and labor.
- B. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- E. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on the Work that incorporates the products.
- F. Owner's Recourse: Written warranties made to Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights or remedies.
 - 1. Rejection of Warranties: Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

- G. Right of Refusal: Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.04 SUBMITTALS

A. Warranty Commencement:

1. Submit duplicate, notarized copies of written warranties to Engineer prior to the date certified for Substantial Completion. Engineer's Certificate of Substantial Completion shall be the commencement date for warranties.
2. When a designated portion of the Work is completed and occupied or used by Owner, by separate agreement with Contractor during the construction period, submit properly executed warranties to Engineer within 15 days of completion of that designated portion of the Work.
3. For items of Work delayed beyond the date of Substantial Completion, provide updated submittal within 10 days of acceptance by Owner, listing date of acceptance as start of warranty period.

B. Special Warranty:

1. When a special warranty is required to be executed by Contractor, or Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to Owner through Engineer for approval prior to final execution.
 - a. Execute and assemble documents from subcontractors, suppliers, and manufacturers.
 - b. Refer to individual sections of Divisions 2 through 46 for specific content requirements, and particular requirements for submittal of special warranties.

C. Form of Submittal:

1. At final completion compile 2 copies of each required warranty and bond properly executed by Contractor, subcontractor, supplier, or manufacturer.
2. Organize the warranty documents into an orderly sequence based on the Table of Contents of the Project Manual.
3. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-inch by 11-inch paper.
 - a. Identify each binder on the front and the spine with the typed or printed title "Warranties and Bonds," the project title or name, and the name of Contractor.
 - b. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 04 01 20
UNIT MASONRY RESTORATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Repair and replace damaged masonry.
 - 2. Repoint cracked mortar joints.
 - 3. Cut new expansion joints and control joints.
- B. Related Sections:
 - 1. Section 07 92 00 - Joint Sealants

1.02 REFERENCES

- A. ASTM:
 - 1. C144 - Aggregates for Masonry Mortar
 - 2. C150 - Portland Cement
 - 3. C207 - Hydrated Lime for Masonry

1.03 SUBMITTALS

- A. Product Data: Manufacturer's technical data for each product. Include recommendations for application and use. Include test reports and certifications substantiating that products comply with requirements. If alternate methods, materials are proposed for any phase of work, provide written description, including evidence of successful use on other comparable projects, and program of testing to demonstrate effectiveness for use on this project.
- B. Samples: Submit, for verification purposes, prior to mock-up erection, samples of each new exposed masonry material to be used for replacing existing materials. Include full range of colors, colors and textures to be expected in completed work:
 - 1. For masonry units, provide straps or panels containing at least 4 units.
 - 2. For each type of mortar for pointing and masonry rebuilding and repair, submit 6-inch long by 1/2-inch wide sample strips of mortar set in aluminum or plastic channels.
- C. Mock-ups: Prior to start of general masonry restoration, prepare following sample panels on building where directed by Engineer. Obtain Engineer's acceptance of visual qualities before proceeding with work. Retain acceptable panels in undisturbed condition, suitably marked, during construction as standard for judging completed work:
 - 1. Cleaning: Demonstrate materials, methods to be used for cleaning each type of masonry surface, conditions on panels of approximately 25 square feet in area. Test adjacent non-masonry materials for possible reaction with cleaning materials. Allow waiting period of at least 7 calendar days after completion of cleaning to permit study of panels for negative reactions.
 - 2. Repointing: Prepare 2 separate sample areas of approximately 3 feet high by 6 feet wide for each type of repointing required, one for demonstrating methods and quality of work expected in removal of mortar from joints, other for demonstrating quality of materials and work expected in pointing mortar joints.

1.04 QUALITY ASSURANCE

- A. Qualifications of Restoration Specialist: Firm with at least 5 years successful experience in comparable masonry restoration projects, employing personnel skilled in restoration processes and operations indicated.
- B. Source of Materials: Obtain materials from single source for each type material to ensure match of quality, color, pattern, texture.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Protection:
 - 1. Protection: Protect materials before, during, after installation. Protect installed work, materials of other trades.
 - 2. Damages resulting from work: Immediately repair or replace as necessary to acceptance of Engineer at no additional cost to Owner.
- B. Packing and Delivery:
 - 1. Carefully pack, handle, ship masonry units, accessories strapped together in suitable packs or pallets or in heavy cartons. Unload and handle to prevent chipping and breakage.
 - 2. Deliver other materials to site in manufacturer's original unopened containers and packaging, bearing labels as to type, names of products and manufacturers.
- C. Protection:
 - 1. Protect masonry restoration materials during storage and construction from wetting by rain, snow, ground water, and from staining or intermixture with earth or other types of materials.
 - 2. Protect grout, mortar other materials from deterioration by moisture and temperature. Store in dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.
 - 3. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Immediately remove grout and mortar in contact with exposed masonry and other surfaces. Protect sills, ledges, and projections from mortar droppings.

1.06 PROJECT CONDITIONS

- A. Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.

1.07 JOB CONDITIONS

- A. Environmental Conditions: Clean masonry surfaces only when air temperatures are 40 degrees F (4 degrees C) and above and will remain so until masonry has dried out, but for not less than seven days after completion of cleaning. Do not repoint mortar joints or repair masonry unless air temperatures are between 40 degrees F and 80 degrees F (27 degrees C) and will remain so for at least 48 hours after completion of work.
- B. Sequencing/Scheduling: Perform masonry restoration work for entire building as described in Section 01 11 00. Complete before window replacing and roofing work commences. Perform in following sequence:
 - 1. Repair existing masonry including replacing existing masonry with new masonry materials.
 - 2. Rake-out existing mortar from joints indicated to be repointed.
 - 3. Repoint existing mortar joints of masonry indicated to be restored.
 - 4. Cut new control joints.
 - 5. Clean existing masonry surfaces.

6. Seal control joints.

PART 2 PRODUCTS

2.01 FACE BRICK

- A. Concrete masonry units shall be selected to match size, appearance, color, and texture of existing original concrete masonry. Provide units for corners or special ground, cut, or sawed shapes where required to complete masonry restoration work.

2.02 MORTAR MATERIALS

- A. Portland Cement: ASTM C150, Type I.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Aggregate for Mortar: ASTM C144, unless otherwise indicated.
- D. Colored Mortar Aggregate: Natural or manufactured sand selected to produce mortar color to match existing mortar to remain, in size, texture, gradation as closely as possible.
- E. Colored Mortar Pigment: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with record of satisfactory performance in masonry mortars.
- F. Water: Clean, free of oils, acids, alkalis, organic matter.

2.03 CLEANING MATERIALS AND EQUIPMENT

- A. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts, organic matter.
- B. Brushes: Fiber bristle only.
- C. Acid Cleaners: Manufacturer's standard strength acidic masonry restoration cleaner composed of hydrofluoric acid blended with other acids including trace of phosphoric acid and combined with special wetting systems and inhibitors. One of the following:
 1. Diedrich 101 Masonry Restorer, Diedrich Chemicals.
 2. Sure Klean Restoration Cleaner, Prosoco, Inc.
 3. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.04 MORTAR MIXES

- A. General Requirements: Measure cementitious and aggregate material in dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix in clean mechanical batch mixer.
- B. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding water. Then mix again adding only enough water to produce damp, unworkable mix that will retain its form when pressed into ball. Maintain in this condition for 1 to 2 hours. Add remaining water in small portions until desired consistency is reached. Use within 30 minutes of final mixing; do not retemper or use partially hardened material. Do not use admixtures of any kind in mortar, unless otherwise indicated.
- C. Colored Mortar: Produce mortar of color required by use of selected ingredients. Do not adjust proportions without Engineer's acceptance. If colored mortar pigments are accepted do not exceed pigment-to-cement ratio of 1:10 by weight.
- D. Mortar Proportions: Pointing and rebuilding mortar for concrete masonry: 1 part portland cement, two parts lime, 6 parts colored mortar aggregate. Add colored mortar pigment to produce mortar colors to match existing as accepted by Engineer.

2.05 MASONRY SEALER

- A. Clear Penetrating Water Repellent Silane Sealer for Concrete Masonry, minimum 40% solids
- B. Acceptable Products:
 - 1. Protectosil Chem-Trete PB VOC
 - 2. Vexcon Chemicals Certi-Vex Penseal 244 40%
 - 3. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

PART 3 EXECUTION

3.01 CONCRETE BLOCK MASONRY REMOVAL AND REBUILDING

- A. Extent of Work: Face shell removal and replacement is required in various locations throughout areas designated for repointing on Drawings.
- B. Block Face Shell Removal: Carefully remove by hand at required locations any blocks which are damaged, spalled, or deteriorated:
 - 1. Remove any masonry unit face shell with open crack exceeding 1/32 inch in width.
 - 2. Cut out full units from joint to joint and in manner to permit replacement with full size units.
 - 3. Support and protect masonry indicated to remain which surrounds removal area.
 - 4. Clean remaining blocks at edges of removal areas by removing mortar, dust, and loose debris in preparation for rebuilding.
- C. Block Face Shell Rebuilding:
 - 1. Install new color and texture matched concrete masonry units to replace removed face shells. Fit replacement units into bonding and coursing pattern of existing block. If cutting is required, use motor driven saw with diamond blade designed to cut masonry with clean, sharp unchipped edges.
 - 2. Lay replacement units with completely filled bed, head, collar joints. Butter ends with sufficient mortar to fill head joints and shove into place.
 - 3. Use wetting methods that ensure that units are nearly saturated but surface dry when laid.
 - 4. Maintain joint width for replacement units to match existing.
 - 5. Tool exposed mortar joints in repaired areas to match joints of surrounding existing masonry work.

3.02 CLEANING

- A. Preparation: Remove large mortar particles by hand with wooden paddles and non-metallic scrape hoes or chisels. Test cleaning methods on sample wall panel. Protect adjacent stone, non-masonry surfaces from contact with cleaner by covering with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
- B. General: Proceed with cleaning in orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Use only those cleaning methods indicated for each masonry material and location. Perform each cleaning method indicated in manner which results in uniform coverage of surfaces, including corners, moldings, interstices, which produces even effect without streaking or damage to masonry surfaces. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting.
- C. Chemical Cleaner Application Methods: Apply to masonry surfaces complying with chemical manufacturer's recommendations using brush or spray application methods, at Contractor's option, unless otherwise indicated. Do not allow chemicals to remain on surface for periods longer than indicated or recommended by manufacturer.
- D. Reapplication of Chemical Cleaners: Do not apply chemical cleaners to same masonry surfaces more than twice. If additional cleaning is required, use steam wash.

3.03 SEALING MASONRY

- A. Apply specified sealer in strict accordance with manufacturer's recommendations.

END OF SECTION

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SECTION 07 21 29
SPRAYED INSULATION

PART 1 GENERAL

1.01 SUMMARY

- A. Provide seamless sprayed-in-place 2-component polyurethane foam (PUF) building envelope insulation system, including:
 - 1. Thermal barrier.
 - 2. Primer.
 - 3. Accessory items.
- B. Related Sections:
 - 1. Section 07 41 13 – Metal Wall Panels
 - 2. Section 07 92 00 – Joint Sealant

1.02 REFERENCE

- A. ASTM:
 - 1. D5469 - Application of New Spray-Applied Polyurethane Foam
 - 2. E96 - Water Vapor Transmission

1.03 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data: Submit manufacturer's current Product Data including specifications, MSDS, handling, storage and installation instructions, and maintenance and cleaning recommendations.
- C. Quality Assurance/Control Submittals:
 - 1. Test Reports: From independent testing laboratories indicating compliance of materials with the performance requirements.

1.04 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide materials made of components, with uniform texture and color or blend, furnished by 1 manufacturer for each different product required.
- B. Qualifications:
 - 1. Manufacturer: 5 years experience in the manufacture of foamed-in-place insulation, with 6 projects of similar size, scope and type of which 3 have been in successful use for 3 years or longer.
 - 2. Contractor: 3 years experience in the installation of foamed-in-place insulation.
 - 3. Installers: For actual installation of sprayed insulation, use personnel skilled in work required, completely familiar with manufacturer's recommended methods of installation, thoroughly familiar with requirements of work.
- C. Certifications:
 - 1. Provide certification of the installer from the manufacturer of spray insulation.
 - 2. Provide certification of the installer by Air Barrier Association of America (ABAA).

1.05 WARRANTY

- A. Provide manufacturer's limited lifetime warranty to repair or replace defective product.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Acceptable Manufacturers: Subject to compliance with specified requirements, acceptable manufacturers and products are:
1. CertaSpray by Certainteed, www.certainteed.com/insulation
 2. Heatlok Soy 200 Plus by Demilec www.demilec.com
 3. WallTite by BASF www.basf.com/urethanechemicals
 4. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Polyurethane Foam:
1. 2-component system made by combining an isocyanate (A) component with a polyol (B) resin component, possessing the following physical characteristics:
 - a. Dust-free.
 - b. Contains no ozone depletion chemicals, no formaldehyde, no asbestos.
 - c. Passes established off-gassing tests.
 - d. Will not cause corrosion when in contact with steel.

Closed Cell Type		
Properties	ASTM Test	US Units
Density (sprayed-in-place)	D1622	1.5-3.0 lbs/ft ³
Compressive Strength	D1621	15 lb/in ² (minimum)
R-Value per inch	C177, C236, C518	6.2° F ft ² hr/Btu average aged value
Closed Cell Content	D2856	90% (minimum)
Permeance	E96	Less than 0.08 at 2-inches thick (class II vapor retarder)
Flame Spread Index (FSI)	E84	25 or less
Smoke	E84	450 or less, smoke developed rating
Water Absorption (percent by volume)	D2842	1.0 - 2.0

- B. 15-minute-rated Thermal Barriers:
1. Compatibility: Thermal barrier must have an ICC ES ESR Certification indicating thermal barrier is approved when applied over spray foam insulation.
 2. Install in strict accordance with manufacturers written instructions.
 3. Material: Waterbased, non-toxic, resinous material that can be spray, brushed or roller applied.
 4. Thickness: As recommended by manufacturer to achieve thermal barrier.
 5. Product: FlameSeal-TB by Flame Seal Products, Inc.

- C. Substrate Primers (if required): Select for the substrate to be primed and be compatible with spray polyurethane foam and as recommended by manufacturer.
 - 1. Wood: chlorinated rubber, modified alkyds, others as approved by spray polyurethane manufacturer.
 - 2. Steel: modified alkyds, epoxy, acrylics, others as approved by spray polyurethane manufacturer.
 - 3. Galvanized: vinyl copolymer, "wash primer," modified alkyds, others as approved by spray polyurethane manufacturer.
 - 4. Concrete/Masonry: chlorinated rubber, vinyl copolymer acrylic, asphaltic, other as approved by spray polyurethane manufacturer.
- D. Other materials not specifically described but required for complete, proper installation of sprayed insulation, subject to acceptance of Architect.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades: Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.
- B. Verification of Conditions: Verify that sprayed insulation may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies: Immediately notify Architect in writing. Do not proceed with installation in areas of discrepancy until fully resolved. Commencement of installation signifies acceptance of surface conditions.

3.02 PREPARATION

- A. Protect installed work and materials of other trades.
- B. Provide suitable coverings to prevent overspray from coming into contact with unintended fixtures and surfaces.
- C. Sequence application so as to take into consideration substrate preparation, proper cure times, and inter-coat adhesion.
- D. Substrate Preparation: Surfaces free of loose scale, rust, weathering, chalking paint, dirt, petroleum-based grease and oil, or other contaminants that would impair bonding.

3.03 INSTALLATION

- A. Comply with manufacturer's Product Data, including product technical bulletin installation instructions and details and ASTM D5469.
- B. Primer:
 - 1. Achieve minimum thickness of dry mils.
 - 2. Cure: 24 hours or as recommended by manufacturer of spray polyurethane foam.
- C. Spray Polyurethane Foam:
 - 1. Mix components A and B in strict accordance with manufacturer's instructions.
 - 2. Follow manufacturer's guidelines for temperature, humidity, and other atmospheric conditions.
 - 3. Spray in minimum 1/2-inch-thick passes (lifts) to achieve specified R-value.
 - 4. Complete full thickness of spray polyurethane foam to be applied within any given area in 1 day.
- D. Thermal Barrier:
 - 1. Provide in following locations:
 - a. Installations of sprayed insulation exposed to interior of building and NOT covered by minimum 1/2-inch thick gypsum board.

2. Cover interior surface of the spray polyurethane foam with a 15-minute rated thermal barrier.
3. Apply thermal barrier in accordance with manufacturer guidelines.

3.04 CLEANING

- A. Site: Do not allow accumulation of scraps, debris arising from Work of this Section. Maintain premises in neat, orderly condition.
- B. System:
 1. Remove temporary covering and other provisions made to minimize soiling of other work.
 2. Promptly clean surfaces not to receive spray insulation; repair surfaces stained, marred or otherwise damaged during Work.
 3. When Work is completed, remove unused materials, containers, equipment, and debris.

3.05 WASTE MANAGEMENT

- A. Comply with manufacturer's guidelines and regulatory agencies for proper disposal of waste materials and containers.

3.06 PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer to ensure work is without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 07 27 00
AIR BARRIERS

PART 1 GENERAL

1.01 SUMMARY

A. Provide:

1. Fluid-applied membrane air barriers.
2. Air barrier accessories.

B. Related Sections:

1. Section 07 21 29 - Sprayed Insulation
2. Section 07 92 00 - Joint Sealants
3. Section 08 43 13 - Aluminum-Framed Storefront
4. Section 08 45 00 – Translucent Wall and Roof Assemblies
5. Section 09 29 00 - Gypsum Board (exterior sheathing)

1.02 REFERENCES

A. ASTM:

1. C 836 Standard Specification for High Solids, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course
2. ASTM C1193 Guide for Use of Joint Sealants
3. ASTM D412 Standard Test Methods for Rubber Properties in Tension
4. ASTM D570 Test Method for Water Absorption of Plastics
5. ASTM D903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
6. ASTM D1004 Test Method for Initial Tear Resistance of Plastic Film and Sheeting
7. ASTM D1876 Test Method for Peel Resistance of Adhesives
8. ASTM D1938 Test Method for Tear Propagation Resistance of Plastic Film and Sheeting
9. ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
10. ASTM D4258 Practice for Surface Cleaning Concrete for Coating
11. ASTM D4263 Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
12. ASTM E96 Test Methods for Water Vapor Transmission of Materials

- 13. ASTM E154 Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
- 14. ASTM E1186 Practice for Air Leakage Site Detection in Building Envelopes and Air Retarder Systems
- 15. ASTM E2178 Standard Test Method for Air Permeance of Building Materials
- 16. ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
- 17. NFPA 285 Standard Test Method of determining the flammability characteristics of a exterior, non-load bearing wall assembly

1.03 SYSTEM DESCRIPTION

A. Design Requirements:

- 1. Provide a continuous air barrier system.
- 2. Minimize condensation within assembly.
- 3. Drain water directly to exterior where likely to penetrate components in the wall assembly.
- 4. Join air barrier in an airtight and flexible manner to the air barrier material of adjacent systems, allowing for the relative movement of systems due to thermal and moisture variations and creep. Make connection between:
 - a. Foundation and walls.
 - b. Walls and windows or doors.
 - c. Different wall systems.
 - d. Wall and roof.
 - e. Wall and roof over unconditioned space.
 - f. Walls, floor, and roof across construction, control and expansion joints.
 - g. Walls, floors, and roof to utility, pipe, and duct penetrations.

B. Performance Requirements:

- 1. Fire Resistive Air Barrier: Flame spread 19 and smoke developed 44 per ASTM E84.
- 2. Freeze/Thaw Resistance: ICBO Method with no visible effects of cracking, checking, delamination, or erosion at magnification of 5.
- 3. Meet ASTM E2357 for entire air barrier assembly.

1.04 SUBMITTALS

A. Refer to Section 01 33 00.

- #### **B. Product Data:** Submit manufacturer's current Product Data including specifications, handling, storage and installation instructions, and maintenance and cleaning recommendations.

- C. Shop Drawings: Show locations and extent of air barrier. Include details for substrate joints and cracks, counterflashing strip, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction. Show a continuous plane of air tightness throughout the building envelope.
- D. Quality Assurance/Control Submittals:
 - 1. Test Reports: Submit documentation from an approved independent testing laboratory certifying that air leakage and vapor permeance rates, including primary membrane and transition sheets, exceed the requirements of the state energy code.
 - 2. Certificates:
 - a. Manufacturer's ISO certification.
 - b. Product: Certifying compatibility of air barrier and accessory materials with Project materials that connect to or that come in contact with air barrier, signed by product manufacturer.
 - c. Certifications: Provide to Engineer, certification of installer from manufacturer of air barrier.
- E. Maintenance Manual: Provide to Owner, maintenance and warranty data in "Maintenance Manual" at Maintenance Demonstration at Substantial Completion.

1.05 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide air barriers and components furnished by one manufacturer as coordinated assemblies.
- B. Qualifications:
 - 1. Manufacturer: 5 years experience in the manufacture of air barriers, with 6 projects of similar size, scope and type of which 3 have been in successful use for 3 years or longer. ISO certified.
 - 2. Contractor: 3 years experience in the installation of air barrier.
 - 3. Applicator: Provide written approval by manufacturer.
- C. Regulatory Requirements: Verify compliance of fluid-applied air barrier materials with applicable code via an evaluation report.
- D. Preinstallation Meetings: Installer and manufacturer's technical representative shall meet with Architect prior to the start of installation.

1.06 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Apply air barrier within the range of ambient and substrate temperatures recommended by air barrier manufacturer. Protect substrates from environmental conditions that affect performance of air barrier. Do not apply air barrier to a wet substrate or during snow, rain, fog, or mist.
- B. Existing Conditions: Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.

1.07 WARRANTY

- A. Provide manufacturer's standard 5-year warranty.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Fluid-Applied Membranes:

1. Air Barriers:

- a. Standard of Quality: Design is based on products as provided by Polyguard Products, Inc., www.polyguard.com
- b. Other Acceptable Manufacturers: Subject to compliance with specified requirements, acceptable manufacturers and products are:
 - 1) GCP Applied Technologies, Costal Construction Products; www.coastalone.com
 - 2) Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 FLUID-APPLIED MEMBRANE

A. Air Barrier: Acrylic, Vapor Permeable (Used on exterior wall systems that include an interior vapor barrier or closed-cell sprayed insulation):

1. Fluid applied single-component liquid that cures to form a monolithic, fully bonded membrane.

2. Characteristics:

- a. Air Permeance: 0.00037 cfm/sq. ft. under 1.57 psf pressure differential (ASTM E2178).
- b. Air Leakage: Continuous air barrier system not to exceed 0.002 cfm/sq. ft. under 1.57 psf pressure differential (ASTM E2357).
- c. Vapor Permeance: 14 perms (ASTM E96, method B).
- d. Peel Adhesion: 100 psi average (ASTM D4541).
- e. Fire Propagation: NFPA 285 Compliant.
- f. Product: Airluk Flex VP-40

B. Transition and Wall Flashing Membrane and sealants: As recommended by Air Barrier Membrane manufacturer.

C. Primer: As recommended by Air Barrier Membrane manufacturer.

D. Other Materials: Materials not specifically described but required for complete, proper installation of air barrier, subject to acceptance of Engineer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Work of Other Trades: Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.

- B. Verification of Conditions: Verify that air barrier system may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies: Immediately notify Architect in writing. Do not proceed with installation in areas of discrepancy until fully resolved. Commencement of installation signifies acceptance of surface conditions.

3.02 PREPARATION

A. Protection:

1. Protect installed work and materials of other trades.
2. Protect air barrier from exposure to UV light and harmful weather exposure. Remove and replace air barrier exposed to these conditions for more than 30 days.
3. Apply within manufacturer's recommended application temperature ranges.

B. Surface Preparation:

1. Refer to manufacturer's literature for requirements for preparation of substrates. Surfaces shall be sound and free of voids, spalled areas, loose aggregate and sharp protrusions. Remove contaminants such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris. Use repair materials and methods that are acceptable to manufacturer of the fluid-applied waterproofing.
2. Exterior sheathing panels: Ensure that the boards are sufficiently stabilized with corners and edges fastened with appropriate screws. Pre-treat all board joints with 2-3 inch wide, reinforced self-adhesive tape or fiberglass mesh style wallboard tape. Gaps greater than 1/4 inches should be filled with mastic or caulk, allowing sufficient time to fully cure before application of the tape and fluid applied membrane.

3.03 INSTALLATION

A. Seal joints with tape or sealant.

B. Primer:

1. Apply primer at rate recommended by manufacturer.
2. Apply primer to all areas to receive transition or air barrier membrane sheet and through-wall flashing membrane.
3. Prime concealed perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Fill gaps with foam sealant.
4. Primed surfaces not covered by transition membrane or through-wall flashing membrane during same working day must be re-primed.

C. Transition Sheet/Strips:

1. Position self-adhered transition membrane and remove protective film. Press firmly into place.
2. Ensure minimum 2-inch overlap at all end and side laps.
3. Promptly roll all laps with a counter top roller to effect seal.

4. Repair punctures, voids, and deficient lapped seams in transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches beyond repaired areas in strip direction.
 5. Ensure preparatory work is complete prior to installing air barrier.
 6. Ensure continuity of air barrier with roofing membrane.
- D. Through-wall Flashing Membrane (Self-Adhering):
1. Align and position the leading edge of membrane with the front horizontal edge of foundation walls or self angles.
 2. Partially remove protective film and roll membrane over surface and up vertically.
 3. Press firmly into place.
 4. Ensure minimum 2-inch overlap at all end and side laps.
 5. Promptly roll all laps and membrane to effect the seal.
 6. Ensure membrane extends fully to exterior face of exterior masonry veneer. Trim off excess as directed by manufacturer's representative.
 7. Apply membrane along the base of masonry veneer walls, over windows, doors, and all other wall openings.
 8. Membrane shall form continuous flashing and shall extend a minimum of 8 inches up the back-up wall.
- E. Air Barrier (vapor permeable) Installation:
1. Apply air barrier membrane to achieve a continuous air barrier according to air barrier manufacturer's written instructions.
 2. Apply air barrier membrane within manufacturer's recommended application temperature ranges.
 3. Apply a continuous unbroken air barrier to substrates according to the following minimum thickness. Apply membrane in full contact around protrusions such as masonry ties.
 4. Vapor-Permeable Membrane Air Barrier: 60-mil wet film thickness.
 5. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air barrier components.

3.04 FIELD QUALITY CONTROL

- A. Testing Agency: Owner may engage a qualified testing agency to perform tests and inspections and prepare test reports.
- B. Inspections:
1. Continuity of air barrier system has been achieved throughout the building envelope with no gaps or holes.
 2. Continuous structural support of air barrier system has been provided.
 3. Masonry and concrete surfaces are smooth, clean, and free of cavities, protrusions, and mortar droppings.

4. Site conditions for application temperature and dryness of substrates have been maintained.
5. Maximum exposure time of materials to UV deterioration has not been exceeded.
6. Surfaces have been primed.
7. Laps in sheet materials have complied with the minimum requirements and have been shingled in the correct direction (or mastic applied on exposed edges), with no fishmouths.
8. Termination mastic has been applied on cut edges.
9. Air barrier has been firmly adhered to substrate.
10. Compatible materials have been used.
11. Transitions at changes in direction and structural support at gaps have been provided.
12. Connections between assemblies have complied with requirements for cleanliness, preparation and priming of surfaces, structural support, integrity, and continuity of seal.
13. All penetrations have been sealed.

3.05 REPAIR/RESTORATION

- A. Repair punctures, voids, and deficient lapped seams. Slit and flatten fishmouths and blisters. Patch with air barrier sheet extending 6 inches beyond repaired areas in all directions.
- B. Use materials, procedures recommended or furnished by manufacturer.
- C. Remove and replace tested deficient air barrier components and retest.

3.06 CLEANING

- A. Site:
 1. Do not allow accumulation of scraps, debris arising from work of this section. Remove empty containers, rags, and rubbish daily from site.
 2. Maintain premises in neat, orderly condition.
- B. System:
 1. Remove temporary covering and other provisions made to minimize soiling of other work.
 2. Clean spills, stains, and soiling from adjacent construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.

3.07 DEMONSTRATION

- A. General Requirements: Provide DVD video of demonstrations to Owner.
- B. Maintenance Instructions: Manufacturer's representative to schedule and attend meeting with Owner's representatives to explain:
 1. Maintenance and Care Instructions.

2. Recommended Maintenance Program.
3. Warranty Requirements.

3.08 PROTECTION

- A. Protect air barrier from exposure to UV light and harmful weather exposure.
- B. Protect air barrier from contact with creosote, uncured coal-tar products, TPO, EPDM, flexible PVC membranes, and sealants not approved by air barrier manufacturer.
- C. Provide final protection and maintain conditions, in a manner acceptable to manufacturer to ensure work is without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 07 41 13
METAL WALL PANELS

PART 1 GENERAL

1.01 SUMMARY

- A. Provide:
 - 1. Exposed fastener siding panels.
 - 2. Flashings and trim.
 - 3. Miscellaneous accessories including, but not limited to:
 - a. Gaskets.
 - b. Panel clips.
 - c. Fasteners.
- B. Related Sections:
 - 1. Section 07 62 00 – Sheet Metal Flashing and Trim
 - 2. Section 07 92 00 – Joint Sealants
 - 3. Section 08 43 13 – Aluminum-Framed Storefront
 - 4. Section 08 45 00 – Translucent Wall and Roof Assemblies

1.02 REFERENCES

- A. ASTM:
 - 1. ASTM A 653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A 792 – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
 - 3. ASTM A 1011 – Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
 - 4. ASTM D 2244 – Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
 - 5. ASTM D 4214 – Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
 - 6. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Underwriters Laboratories (UL):
 - 1. UL 263 - Fire Tests of Building Construction and Materials.
- C. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA): "Architectural Sheet Metal Manual."

1.03 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data: Manufacturer's current product specifications, standard details, certified product test results, installation instructions, general recommendations, as applicable to materials and finishes for each component and for total system of preformed panels.

- C. Samples:
 - 1. Manufacturer's standard color samples.
 - 2. Three weeks (minimum) prior to fabrication/delivery, 2 copies, 12 inches square, of each exposed finish material, including joint.
- D. Shop Drawings:
 - 1. Small-scale layouts of panels on walls and columns, large-scale details of edge conditions, joints, corners, custom profiles, supports, anchorages, trim flashings, closures, special details including side laps and end laps if any.
 - 2. Distinguish between factory and field assembly work.
 - 3. Coordination Drawings of wall plans for metal panels, coordinating penetrations and wall-mounted items.

1.04 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide materials made of components with uniform texture and color or blend, furnished by 1 manufacturer unless indicated otherwise.
- B. Qualifications:
 - 1. Manufacturer: 5 years' experience in the manufacture of metal wall panels.
 - 2. Contractor: 3 years' experience in the installation of metal wall panels.
 - 3. Testing and Inspection Agency: ASTM E119, acceptable to authorities having jurisdiction.
- C. Regulatory Requirements:
 - 1. Fire-Resistance Ratings:
 - a. Combustion characteristics: ASTM E136.
 - b. Comply with UL "Fire Resistance Directory".
 - c. Identify panels with markings of testing and inspecting agency.
 - d. Surface-burning characteristics:
 - 1) Flame spread index: 25 or less.
 - 2) Smoke-developed index: 450 or less.
 - 2. Meet IBC code requirements adopted by state in which project is located.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect metal panels from damage (including rust) during shipment, storage, and construction.
- B. Stack on platforms or pallets, covered with suitable weather-tight and ventilated covering. Ensure dryness.

1.06 PROJECT CONDITIONS

- A. Existing Conditions:
 - 1. Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.
 - 2. Allow for trimming panel units where final dimensions cannot be established prior to fabrication.

1.07 COORDINATION

- A. Coordinate metal panel assemblies with adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.08 WARRANTY

- A. Special Exposed Panel Finish Warranty: Manufacturer's standard form PVDF Fluorocarbon System Warranty for film integrity, chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period.
 - 1. Deterioration shall include but is not limited to:
 - a. Color fading of 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. 2. Warranty Period: Film integrity for 45 years and chalk and fade rating for 35 years, and perforation for 25 years from date of Substantial Completion.
 - 3. Manufacturer's warranty may exclude surface deterioration due to physical damage and exposure to salt air environments.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Wall Panels: Standard of Quality: Design is based on PBU Wall Panel as manufactured by MBCI, www.MBCI.com
 - 1. Other Acceptable Manufacturers: Subject to compliance with requirements, acceptable manufacturers and products are:
 - a. Metal Sales Manufacturing Corporation www.metalsales.us.com
 - b. Firestone Metal Products www.unaclad.com
 - c. Berridge Manufacturing, San Antonio, TX www.berridge.com
 - d. Centria www.centria.com
 - e. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Exterior Metal Wall Panels:
 - 1. Panel Material: Zinc-coated steel sheet, ASTM A 653 G90 coating designation, structural quality, Grade 50 Steel
 - 2. Thickness: 26 guage minimum.
 - 3. Panel Width: 36-inches.
 - 4. Rib Height: ¾- inches.
 - 5. Attachment: Exposed direct fasteners.
 - 6. Rib Configuration: Trapezoidal.
 - 7. Finish: PVDF (Kynar 500) on exposed surfaces.
 - a. Color: As selected by Architect from manufactures standard color options.
 - 8. Product: PBU-Panel as manufactured by MBCI.

2.03 FABRICATION

- A. General:
 - 1. Fabricate panels to sizes on Drawings.
 - 2. Fabricate and finish panels, accessories, at factory to greatest extent possible by manufacturer's standard procedures and processes, as required to fulfill indicated performance requirements which have been demonstrated by factory testing.

3. Form panels to specified dimensions with tolerances to accommodate thermal expansion and contraction between panels and structural members.
4. Fabricate panel joints with captive gaskets or separator strips, which provide tight seal and prevent metal-to-metal contact in manner to minimize noise from movements within panel system.
5. Condensation: Fabricate panels for control of condensation, including vapor inclusion of seals and provisions for breathing, venting, weeping, and draining.
6. Comply with indicated profiles and dimensional requirements, and structural requirements.
7. Flashing and Trim:
 - a. J channel and all closure trim indicated or required for complete weather tight system.
 - b. Materials shall be of same material and color as the wall and louver panels.
 - c. Locations as shown on Drawings or otherwise required to make building watertight.
8. Accessories: Including but not limited to:
 - a. Gaskets: As provided by metal panel manufacturer.
 - b. Fasteners:
 - 1) Screw type.
 - 2) As recommended by panel manufacturer.
 - 3) Finish: Match color of metal wall panels.
 - c. Joint sealers: As recommended by panel manufacturer or, if not specified, see Section 07 92 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades: Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.
- B. Verification of Conditions: Verify that metal panels may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies:
 1. Immediately notify Architect in writing.
 2. Do not proceed with installation in areas of discrepancy until fully resolved.
 3. Commencement of installation signifies acceptance of surface conditions.

3.02 PREPARATION

- A. Protect installed work and materials of other trades.
- B. Apply bituminous coating or other permanent separation materials on concealed panel surfaces where panels would otherwise be in direct contact with substrate materials which are incompatible or could result in corrosion or deterioration of either material or finishes.

3.03 INSTALLATION

- A. Wall Panels:
 1. Comply with panel fabricator's and material manufacturers' instructions for installation, as applicable to project conditions and supporting substrates.
 2. Field cutting by torch is not permitted.
 3. Anchor panels and other components of work securely in place, with provisions for thermal/structural movement.

- a. Install panels with recommended fasteners.
 - b. Separate dissimilar metals with bituminous paint, PVC shims, or separation tape/membrane wherever 2 dissimilar metals come in contact.
- B. Accessories
 - 1. Joint Sealers:
 - a. Install gaskets, joint fillers, sealants where indicated and where required for weatherproof performance of panel systems.
 - b. Provide types of gaskets, sealants/fillers indicated or, if not otherwise indicated, types recommended by panel manufacturer.

3.04 FIELD QUALITY CONTROL

- A. Installation Tolerances: Shim and align panel units within installed tolerance of 1/4 inch in 20 feet on level/plumb/slope and location/line as indicated, within 1/8 inch offset of adjoining faces and of alignment of matching profiles.
- B. Owner may engage a qualified independent testing and inspecting agency to perform inspections and prepare reports.
- C. Engage a factory-authorized service representative to inspect completed metal panel installation, including accessories, and provide written report.
- D. Remove and replace metal panels that inspections indicate do not comply with specified requirements.
- E. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.05 CLEANING AND PROTECTION

- A. Replace panels, other components of work that have been damaged or have deteriorated beyond successful repair by means of finish touch-up or similar minor repair procedures.
- B. Cleaning:
 - 1. Remove temporary protective coverings and strippable films, if any, as each panel is installed.
 - 2. Upon completion of panel installation, clean finished surfaces as recommended by panel manufacturer.
 - 3. Maintain clean condition during construction.
- C. Protection: Maintain conditions in a manner acceptable to manufacturer to ensure work is without damage or deterioration at time of Substantial Completion.

END OF SECTION

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SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SUMMARY

- A. Provide sheet metal flashing and trim for:
 - 1. Parapet cap flashings.
 - 2. Metal counter flashing and base flashing.
 - 3. Exterior wall flashing and expansion joints.
 - 4. Roof flashing and accessories.
 - 5. Exposed metal trim.
 - 6. Reglets.
 - 7. Sheet metal accessories including, but not limited to:
 - a. Joint sealants for sheet metal flashing.
 - b. Water barrier membrane.
 - c. Fasteners.
 - 8. Section 07 41 13 - Metal Wall Panels
 - 9. Section 07 92 00 - Joint Sealants
 - 10. Section 08 43 13 – Aluminum-Framed Storefront
 - 11. Section 08 45 00 – Translucent Wall and Roof Assemblies

1.02 REFERENCES

- A. ASTM:
 - 1. A167 - Stainless and Heat Resistant Chromium Nickel Steel Plate, Sheet
 - 2. A653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Coated (Galvannealed) by the Hot-Dip Process
 - 3. A853 - Steel Wire, Carbon
 - 4. B32 - Specifications for Solder Metal
 - 5. B101 - Lead Coated Copper Sheet and Strip
 - 6. B209 - Aluminum Sheet and Plate
 - 7. B370 - Copper Sheet and Strip
 - 8. C920 - Elastomeric Joint Sealants
 - 9. D522 - Mandrel Test for Organic Coatings, Formability
 - 10. D1970 - Self-Adhering Polymer Modified Bituminous Sheet Materials
 - 11. D2244 - Color Tolerances
 - 12. D2794 - Impact Resistance
 - 13. D4214 - Evaluation of Degree of Chalking
 - 14. E111 - Modulus Testing, Elasticity

- 15. E228 - Test for Thermal Expansion
- 16. G90 - Performing Accelerated Weathering of Non-Metallic Materials

B. SMACNA: *Architectural Sheet Metal Manual*

1.03 SYSTEM DESCRIPTION

- A. Design Requirements: Provide watertight metal copings on entire roof perimeter.
- B. Performance Requirements:
 - 1. Sheet metal flashing and trim shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing.
 - 2. Low Sloped Roofs: Design to resist uplift pressure calculated according to ANSI/SPRI ES 1.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data: Submit manufacturer's current Product Data including specifications, handling, storage and installation instructions, and maintenance recommendations.
- C. Shop Drawings: Include layout, profiles, methods of joining, and anchorage details.
- D. Samples:
 - 1. Color: Submit manufacturer's standard color samples with Product Data and Shop Drawings.
 - 2. Samples of sheet metal flashing, trim, and accessory items in specified finish, showing full range of variations expected.

1.05 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide sheet metal flashing and trim units made of components of standard construction furnished by 1 manufacturer as coordinated assemblies.
- B. Qualifications:
 - 1. Manufacturer: 5 years' experience in the manufacture of sheet metal flashing and trim.
 - 2. Contractor: 3 years' experience in the installation of sheet metal flashing and trim.
 - 3. Personnel: For actual installation of sheet metal flashing and trim, use personnel skilled in work required, completely familiar with manufacturer's recommended methods of installation, thoroughly familiar with requirements of work.
- C. Regulatory Agencies:
 - 1. Meet UL requirements for fire resistance of roof covering materials and impact resistance.
 - 2. Meet wind/uplift resistance of ANSI/SPRI ES 1 per IBC.
- D. Preinstallation Meetings: Installer and manufacturer's technical representative shall meet with Architect prior to the start of installation.

1.06 PROJECT CONDITIONS

- A. Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.

1.07 COORDINATION

- A. Furnish metal base flashings, gravel stops, other work required to be built into roofing and flashing promptly so roofing operations may be carried on continuously to completion without delay.

1.08 WARRANTIES

- A. Manufacturer: Non-prorated 20-year written warranty covering fade, chalking and film integrity including labor and material through the 20th year.

B. Contractor:

1. Sheet metal system and related flashing shall be warranted in writing stipulating that Contractor agrees to maintain metal flashing system in a watertight condition for a period of 5 years at the Contractor's own expense.
2. Warranty shall cover any condition caused by defective material and the installation and ordinary wear and tear.
3. Warranty does not cover damage due to natural disaster not covered by insurance, accidents, misuse or vandalism.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Flashing and Trim:

1. Standard of Quality: Design is based on *UnaClad*, Firestone Metal Products www.unaclad.com
2. Other Acceptable Manufacturers: Subject to compliance with requirements, acceptable manufacturers and products are:
 - a. Berridge Manufacturing, Houston, TX www.berridge.com
 - b. W.P. Hickman Company, Asheville, NC www.wph.com
 - c. PacClad, Elk Grove Village, IL www.pac-clad.com
 - d. *ColorKlad* by Ryerson, Minneapolis, MN www.ryerson.com
 - e. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

B. Manufactured Products:

1. Standard of Quality: Design is based on Metal Era, Inc, Waukesha WI www.metalera.com
2. Other Acceptable Manufacturers: Subject to compliance with requirements, acceptable manufacturers and products are:
 - a. W.P. Hickman Company, Asheville, NC www.wph.com
 - b. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

C. Water Barrier Membrane: Standard of Quality: Design is based on CCW WIP 300HT by Carlisle Coatings and Waterproofing www.carlisle-ccw.com

1. Other Acceptable Manufacturers: Subject to compliance with requirements, acceptable manufacturers and products are:
 - a. *Ice and Water Shield*, Grace Company www.grace.com
 - b. *Winterguard*, CertainTeed, Valley Forge, PA www.certainteed.com
 - c. Polyguard Inc., Ennis, TX www.polyguardproducts.com
 - d. *Rainproof TM* by Protecto Wrap Co., Denver, CO www.protectowrap.com
 - e. *Deck Guard* by Polyguard Products, Ennis, TX www.polyguardproducts.com
 - f. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

A. Sheet Metal:

1. Verify recycled content from manufacturer.
2. Performance Requirements:
 - a. Color Change: ASTM D2244, Not greater than 5 NBS color units.
 - b. Chalking: 8 or better, ASTM D4214.

- c. Minimum yield: ASTM A853.
- d. Formability: ASTM D522.
- e. M.O.E.: ASTM E111.
- f. COTE: ASTM E228.
- g. Impact resistance: ASTM D2794, 70 inch/pound, no tape pick-off.
- 3. Galvanized Steel:
 - a. Standard open hearth copper bearing steel with "*Paint-Grip*" galvanized coating.
 - b. 24 gage minimum. For use as keepers or when otherwise covered.
 - c. Pre-painted sheets of hot-dipped galvanized steel of commercial weight and quality, ASTM A653, G90.
 - d. Painted side shall be covered with a factory applied strippable film.
 - e. Apply washcoat of 0.3 to 0.4 mil dry film thickness to unpainted side.
 - f. Gages: As indicated on Drawings. Where not indicated, minimum gages:
 - g. Facias, coping, and other roof edge flashing exposed view with an exposed vertical face of 8 inch or less: 24 gage.
 - h. Hook strips and keepers: 24 gage.
 - i. All other sheet metal work: 24 gage.
- 4. Stainless Steel: ASTM A167, AISI 302/304, No. 2D finish, temper as required for forming and performance; 0.015 inch thick (28 gage), except as otherwise indicated.

2.03 SHEET METAL ACCESSORIES

- A. Nails and Fasteners:
 - 1. Galvanized nails and cadmium-plated screws and washers in connection with galvanized iron and steel, which will not stain, produce electrolytic reaction or be detrimental to complete installation.
 - 2. Same metal as sheet metal flashing or recommended by sheet metal manufacturer. Avoid noncompatible or dissimilar metals due to risk of galvanic corrosion.
 - 3. Match finish of exposed heads with material being fastened.
- B. Solder: ASTM B32.
 - 1. Copper: Grade Sn50, 50 percent lead, 50 percent tin solder, commercial soldering flux.
 - 2. Lead-coated copper: Grade Sn60, 60 percent in and 40 percent lead.
 - 3. Stainless steel: Grade Sn60 with acid flux of type recommended by stainless steel sheet manufacturer.
 - 4. Zinc: 60 percent lead and 40 percent tin with low antimony.
- C. Joint Sealant: Elastomeric 20-year silicone, per ASTM C920, Type S, Grade NS, Class 50 **OR** See Section 07 92 00.
- D. Adhesives: Recommended by flashing sheet metal manufacturer for waterproof and weather-resistant seaming and adhesive application of flashing sheet metal.
- E. Other Materials: Other materials not specifically described but required for complete, proper installation of sheet metal and flashing, subject to acceptance of Architect.

2.04 MANUFACTURED PRODUCTS

- A. Reglets:
 - 1. Factory-mitered and welded corners and junctions.

2. Material:
 - a. Stainless steel.

2.05 WATER BARRIER MEMBRANE

- A. Cold-applied Self-adhering Membrane:
 1. High-strength polyethylene film coated on 1 side with a thick layer of adhesive consistency rubberized asphalt.
 2. Membrane to be able to withstand temperature of 200 degrees F without adhesive degradation.
 3. ASTM D1970.
 4. Thickness: 0.004 inch.
 5. Provide complete with manufacturer's recommended primer.

2.06 FABRICATION

- A. General Requirements:
 1. Comply with SMACNA's "Architectural Sheet Metal Manual."
 2. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 3. Fabricate with strippable film in place.
 4. Accurately form with brakes, straight, true, and sharp; plain surfaces free from warps and buckles and tool marks.
 5. Fabricate nonmoving seams with flat-lock seams. Where joint movement is necessary, provide 1-inch-deep interlocking hooked flanges, filled with mastic sealant.
 6. Tin edges to be seamed, form seams, and solder.
 7. Match profiles exactly at connections.
 8. Exposed edges to be beaded or returned for strength and appearance.
 9. Allow for expansion and contraction.
- B. Reinforcement: Provide ribs, cleats, and reinforcement necessary to make sections rigid and substantial.
- C. Seams, Joints:
 1. Locate joints of roof edges, other sheet metal work exposed to view with respect to control joints, other architectural features as indicated on Drawings or as directed by Architect.
 2. Overlap in direction of flow.
 3. Use concealed cover plates.
 4. Where appearance is not a factor, fabricate in 8 or 10-foot lengths.
 5. Design field joints to permit expansion.
 6. Use joint covers or lapped joints with "s" clips; do not solder.
 7. Locate field joints at least 12 inches, no more than 3 feet, from actual corner.
 8. Provide 4-inch-wide flanges for setting on built-up asphalt roofing system membrane with concealment by composition stripping.
 9. Fabricate gravel stops and aggregate divider strips with 1 inch high standing leg of folded sheet metal, notched from top with deep "V" notches.
- D. Penetration Sleeves: Fabricate with minimum 8-inch-high stack, of diameter 1 inch larger than penetrating element.

E. Soldering:

1. Pre-tin edges of sheet metal to be soldered with solder on both sides, width of pre-tinning at least 1-1/2 inches.
2. Solder slowly with well-heated coppers to thoroughly heat sheets and completely sweat solder through full width of seam. Use ample solder.
3. Show at least 1 inch evenly flowed solder at seams.
4. Wherever possible solder work in flat position.
5. Solder seams with a slope greater than 45 degree a second time.

2.07 FINISHES

- A. Coating System: 2-coat system of organic coating on the face side consisting of fluorocarbon base top coat applied over quality matched primer with white wash coat applied to back side for additional protection.
1. Colors: colors will be selected by Architect from standard range of smooth finishes.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades:
1. Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.
 2. Coordinate Work with interfacing and adjoining Work, for proper sequencing of each installation.
 3. Ensure best possible weather resistance, durability of Work, and protection of materials and finishes.
- B. Verification of Conditions: Verify that flashing and sheet metal may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies: Immediately notify Architect. Do not proceed with installation in areas of discrepancy until fully resolved.

3.02 METAL PROTECTION

- A. Do not place dissimilar metals in contact nor in position where drainage will occur across them.
- B. 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 fabricator or manufacturers of dissimilar metals.
- C. Water Barrier Membrane:
1. Install as recommended by manufacturer at locations indicated on Drawings.
 2. Use of primer is required.

3.03 INSTALLATION

- A. General:
1. Apply fabrication instructions of this Section to field installation.
 2. Install with strippable film in place.
 3. Install work neatly and anchor securely.
 4. Overlap seams in direction of flow and slope all horizontal surfaces for drainage.
 5. Join parts with rivets or sheet metal screws where necessary for strength or stiffness.
 6. Whenever possible, secure metal by means of clips or cleats without nailing through metal, in no case shall nails, rivets, or screws be exposed on outside of facias, copings, etc.

7. Secure metal flashings at roof edges according to ANSI/SPRI ES 1 Loss Prevention Data Sheet 1-49 for wind zone of Project.
 8. Equipment support flashing: Coordinate with roofing and equipment installation. Weld or seal flashing to equipment support member.
 9. Finished work to be water, weather tight.
- B. Expansion Provisions:
1. Provide for thermal expansion of exposed flashing and trim.
 2. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner of intersection.
 3. Where lapped or bayonet-type 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 elastomeric sealant concealed within joints.
- C. Joint Sealants: Apply wherever required to ensure watertight installation of sheet metal flashing after removing protective film.

3.04 ADJUSTING

- A. Replace or repair sheet metal flashing and trims that have been damaged or deteriorated beyond successful repair by finish touching or similar repair procedures.

3.05 CLEAN UP

- A. Immediately after completing work, remove strippable film.
- B. Clean sheet metal surfaces with mild soap and water to be suitable to receive specified finishes.
- C. Remove substances that might cause corrosion of metal or deterioration of finishes.

3.06 PROTECTION

- A. Provide final protection and maintain conditions to ensure flashing and trim are without damage or deterioration other than natural weathering at the time of Substantial Completion.

END OF SECTION

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SECTION 07 92 00
JOINT SEALANTS

PART 1 GENERAL

1.01 SUMMARY

- A. Provide sealant and backup materials:
 - 1. Exterior construction joints.
 - 2. Interior joints.
- B. Related Sections:
 - 1. Section 07 41 13 – Metal Wall Panels
 - 2. Section 08 43 13 - Aluminum-Framed Storefront
 - 3. Section 08 45 00 – Translucent Wall and Roof Assemblies
 - 4. Section 07 62 00 – Sheet Metal Flashing and Trim

1.02 REFERENCES

- A. ASTM:
 - 1. C834 - Latex Sealants
 - 2. C919 - Use of Sealants in Acoustical Applications
 - 3. C920 - Elastomeric Joint Sealants
 - 4. C1021 - Laboratories Engaged in Testing Sealants
 - 5. C1193 - Standard Guide for Use of Sealants
 - 6. C1521 - Evaluation of Adhesion of Installed Weatherproofing Sealant Joints
 - 7. E119 - Fire Tests of Building Construction and Materials
 - 8. E548 - Evaluation and Assessment of Analytical Chemical Laboratories
- B. Sealant, Waterproofing, and Restoration Institute (SWRI)

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Environmental Requirements:
 - 1. Avoid indoor use of sealants that may contribute to indoor air quality problems, including the following:
 - a. Butyl rubber.
 - b. Solvent-based acrylic.
 - c. Neoprene.
 - d. Styrene butadiene rubber.
 - e. Nitrile.
 - f. Methylene chloride or chlorinated hydrocarbons.
 - g. Products containing bactericides and fungicides classified as phenol mercury acetates, phenol phenates, or phenol formaldehyde.

- h. Provide acrylic latex or silicone sealants with less than 50 g/l VOCs.
- i. Provide polyurethane products with less than 200 g/l VOCs.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data:
 - 1. Submit manufacturer's current Product Data including specifications, handling, storage and installation instructions, and maintenance recommendations.
 - 2. Provide Product Data on manufacturer's adhesion and stain testing.
- C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Color Samples: Submit manufacturer's standard color samples with Product Data and Shop Drawings.
- E. Environmental Submittals:
 - 1. Submit manufacturer's product data for adhesives and sealants, including printed statement of VOC content.
- F. SWRI Validation Certificate: For each elastomeric sealant specified to be validated by SWRI's Sealant Validation Program.
- G. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- H. Field Test Report Log: For each elastomeric sealant application.

1.05 QUALITY ASSURANCE

- A. Provide joint sealants units made of components of standard construction furnished by 1 manufacturer as coordinated assemblies.
- B. Qualifications:
 - 1. Manufacturer: 5 years experience in the manufacture of joint sealants.
 - 2. Contractor: 3 years experience in the installation of joint sealants.
 - 3. Personnel: For actual installation of joint sealants, use personnel skilled in work required, completely familiar with manufacturer's recommended methods of installation, thoroughly familiar with requirements of work.
- C. Regulatory Requirements:
 - 1. Silicone Sealants: Certified by Sealant, Waterproofing, and Restoration Institute (SWRI).
- D. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:
 - 1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
 - 2. Conduct field tests for each application indicated below:
 - a. Each type of elastomeric sealant and joint substrate indicated.
 - b. Each type of nonelastomeric sealant and joint substrate indicated.
 - 3. Notify Architect 7 days in advance of dates and times when test joints will be erected.
 - 4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.

5. Method below is the first of 4 test methods recommended in Appendix X1.1 in ASTM C1193. Revise if one of the other three test methods is more appropriate for Project joint conditions.
 - a. Test method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193.
 - b. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 6. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
 7. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.
- E. Preinstallation Meetings: The caulk installers, manufacturer's technical representative and Architect shall meet prior to the start of installation if requested.

1.06 PROJECT CONDITIONS

- A. Environmental Requirements:
1. Below 40 degrees F ambient temperature, refer to manufacturer's recommendations.
 2. Ensure joint substrates are dry and frost-free.
 3. Remove contaminants from joint substrate capable of interfering with adhesion.

1.07 WARRANTY

- A. Provide manufacturer's 5-year standard material warranty.
- B. Include coverage for replacement of sealant materials which fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Joint Sealants:
1. Standard of Quality: Design is based on products of Tremco, Beachwood, OH www.tremcosealants.com, unless noted otherwise.
 2. Other Acceptable Manufacturers: Subject to compliance with requirements, acceptable manufacturers and products are:
 - a. Sonneborn by BASF, www.basfbuildingsystems.com
 - b. Manufacturer of comparable products submitted in compliance with Section 01 25 13.
 - 1) VOC content may be cause for rejection of comparable products submitted.
- B. Backer Rod/Backup Filler Materials:
1. Acceptable Manufacturers; subject to compliance with requirements, acceptable manufacturers and products are:
 - a. Exterior Joints: Non-absorbent; *Sof-Rod* by Nomaco www.nomaco.com
 - b. Interior Joints: Open-cell, *Den-verfoam* by Backer Rod Manufacturing and Supply www.bayindustries.com/backerrod
 - c. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Do not use materials stored longer than their maximum recommended shelf life.

B. Exterior Construction Joint Sealant:

1. Silyl-terminated Polyether Sealant (MS polymer):
 - a. Low-modulus, high-movement, nonsag, fast-curing.
 - b. ASTM C920.
 - c. Type and grade: S (single component) and NS (nonsag).
 - d. Use: NT, M, A and O.
 - e. Class: 100/50 for vertical joints.
 - f. Product:
 - 1) *Sonolastic Masterseal NP 150* by BASF.

C. Exterior Concealed Joints Under Thresholds: 1-part butyl rubber caulk conforming to FS TT-S-001657, Type 1.

D. Aluminum, Sheet Metal, Glass, Glazing and Storefront Joint Sealants:

1. Silyl-terminated Polyether Sealant:
 - a. Low-modulus, high-movement, nonsag, fast-curing.
 - b. ASTM C920.
 - c. Type and grade: S (single component) and NS (nonsag).
 - d. Use: NT, M, A and O.
 - e. Class: 100/50 for vertical joints.
 - f. Product:
 - 1) *Sonolastic Masterseal NP 150* by BASF.

E. Interior Joint Sealants:

1. Interior Dry Areas: Fast setting acrylic latex sealant meeting ASTM C834, Type P, Grade NF.
 - a. Product: *Tremflex 834*, by Tremco.
 - b. Maximum VOC content: 42 grams per liter.
2. Interior Wet Areas: 1-part mildew-resistant silicone rubber conforming to ASTM C920, Type S, Grade NS.
 - a. Product: *Tremsil 200* by Tremco.

F. Backup Filler Materials: Non-oily, non-staining, non-gassing, back-up filler or other filler completely compatible with sealant, approved by sealant manufacturer.

G. Other Materials: Other materials not specifically described but required for complete, proper installation of joint sealants, subject to acceptance of Architect.

H. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction and field tests.

I. 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.

2.03 EQUIPMENT

- A. Must be specifically recommended for use by manufacturer of sealant being installed.

2.04 FINISHES

- A. Exterior: Selected by Architect from manufacturer's standard colors.

- B. Interior: Match paint color or adjoining substrate color.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades: Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.
- B. Verification of Conditions: Verify that joint sealants may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies: Immediately notify Architect. Do not proceed with installation in areas of discrepancy until fully resolved. Commencement of installation signifies acceptance of surface conditions.

3.02 PREPARATION

- A. Surfaces to be Caulked: Verify that surfaces are sound, thoroughly dry, clean, free of oil, grease, laitance, rust, and other foreign material that would prevent proper adhesion, and that concrete and mortar are thoroughly cured.
- B. Masonry and Concrete Cleaning: Complete before surface preparation is begun.
 - 1. Prepare joints and surfaces to receive sealants according to sealant manufacturer instructions.
 - 2. Rake and clean out joints to full depth and width.
 - 3. Clean concrete, masonry, other porous materials by brushing, grinding, other mechanical means, to provide sound, clean surface.
 - 4. Remove dust, dirt, loose particles resulting from mechanical cleaning by vacuuming or blowing out joints with compressed air.
- C. Clean glass, metal, and non-porous surfaces.
- D. Remove protective coatings on metal using solvent that leaves no residue.
 - 1. Use clean white cloths or lintless paper towels to apply solvent, and wipe surfaces dry with dry cloths or paper towels.
 - 2. Do not allow solvent to air dry without wiping.
- E. Mask joints as necessary to protect adjacent surfaces.
 - 1. Apply masking tape in continuous strips and carefully align with edge of joint.
 - 2. Remove masking immediately after joints have been sealed and tooled.

3.03 BACK-UP MATERIALS

- A. Verify compatibility of filler material with sealant before installation.
- B. Install appropriate size backer rod directly into the control joint, larger than joint per manufacturer's recommendations, and in manner to provide concave sealant profile.
- 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. Where joint depth does not permit installation of backer rod, install adhesive-backed polyethylene bond-breaker tape along entire back of joint to prevent 3-sided adhesion of joint sealant.

- E. Use filler about 1/3 to 1/2 wider than width of joint so filler exerts sufficient pressure to provide substantial resistance to displacement.

3.04 SEALANT PRIMER

- A. Prime all joints. Do not allow primer to get outside of joints.
- B. Apply as recommended by manufacturer of sealant.
- C. Prime and seal on same workday.

3.05 APPLICATION OF SEALANT

- A. Apply strictly according to manufacturer's instructions, using nozzle of sufficient size to fill joint completely.
- B. Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.
- D. 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.
 - 4. Install joint sealant to all joints except those that allow moisture to drain.
 - 5. Caulk wide joints with three passes.
 - 6. Run a bead at each inside corner, fill joint with third pass.
- E. Tool joints immediately after application of material to ensure full contact with adjacent surfaces.
- F. Strike off excess material. Finished bead is to be flush with adjoining surfaces, unless otherwise indicated on Drawings.

3.06 INSTALLATION OF PREFORMED FOAM SEALANTS

- A. Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, producing seal continuity at ends, turns, and intersections of joints.
- B. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in compliance with sealant manufacturer's written instructions.

3.07 CURING

- A. Allow minimum 7 days for full cure.
- B. Do adhesion testing after 7 days.
- C. Painting Sealant:
 - 1. Allow 7 days to cure before applying paint.
 - 2. Match sealant to paint colors.

3.08 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
 - 1. Extent of Testing: Test completed elastomeric sealant joints as follows:
 - a. Perform 10 tests for the first 1,000 feet of joint length for each type of elastomeric sealant and joint substrate.

- b. Perform 1 test for each 1,000 feet of joint length thereafter or 1 test per each floor per elevation.
2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab or Method B, Exposed Surface Finish Hand Pull Tab or Method C, Field-Applied Sealant Joint Hand Pull Flap or Method D, Water Immersion in Appendix X1 in ASTM C1193, as appropriate for type of joint-sealant application indicated.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; do this by extending cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field-adhesion-test log.
4. Inspect tested joints and report on the following:
 - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
 - b. Whether sealants filled joint cavities and are free of voids.
 - c. Whether sealant dimensions and configurations comply with specified requirements.
5. 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.
6. 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.

3.09 ADJUSTING

- A. Non-compliant Work: Allow inspections of Work and assist in testing requested by manufacturer's representative and Architect. Remove adjacent Work until location is reached where installation was performed properly.
- B. Remove and replace uncured sealant.

3.10 CLEAN UP

- A. Remove masking, excess material, smears as work progresses.
- B. Leave adjacent surfaces clean and free of sealant and primer.

3.11 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.
- B. If damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

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SECTION 08 43 13
ALUMINUM-FRAMED STOREFRONT

PART 1 GENERAL

1.01 SUMMARY

- A. Provide:
 - 1. Framing System:
 - a. Storefront-type framing system.
- B. The following is not included in this section:
 - 1. Glazing (Section 08 80 00).
- C. Related Sections:
 - 1. Section 07 92 00 - Joint Sealants
 - 2. Section 08 80 00 - Glazing

1.02 REFERENCES

- A. AAMA:
 - 1. 501 - Test Methods for Exterior Walls
 - 2. 611 - Anodized Architectural Aluminum
 - 3. 1503.1 - Voluntary test method for thermal transmittance and condensation resistance of window, doors, and glazed wall sections
 - 4. 2604 - High Performance Organic Coatings on Aluminum
- B. ADA - U.S. Architectural and Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)"
- C. ASTM:
 - 1. A36 - Carbon Structural Steel
 - 2. A123 - Zinc Coatings on Iron and Steel Products
 - 3. A153 - Zinc Coatings on Iron and Steel Hardware
 - 4. A240 - Chromium and Chromium-Nickel Stainless Steel Plate
 - 5. A1011 - Steel, Sheet and Strip, Hot Rolled, Carbon, Structural, High Strength Low Alloy and High Strength Low Alloy with Improved Formability
 - 6. B209 - Aluminum and Aluminum Alloy Sheet and Plate
 - 7. B221 - Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire Profiles, and Tubes
 - 8. B429 - Aluminum Alloy Extruded Structural Pipe and Tube
 - 9. C1401, Appendix X2 - Destructive Test Method A to test Structural Sealant Compatibility and Adhesion
 - 10. E84 - Surface Burning Characteristics
 - 11. E90 - Test for Sound Insulation of Building Facades
 - 12. E283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
 - 13. E330 - Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Wall by Static Air Pressure Difference

14. E331 - Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
15. E413 - Rating Sound Insulation
16. E699 - Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluation of Building Components
17. E783 - Field Measurement of Air Leakage Thru Installed Exterior Windows and Doors
18. E1105 - Water Penetration of Windows, Skylights, Doors, Curtain Walls
19. E1332 - Test for Outdoor-Indoor Transmissions

1.03 DEFINITIONS

- A. CFM: Cubic feet per minute.
- B. PSF: Pounds per square foot.

1.04 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide system, including anchorage, capable of withstanding, without failure, the effects of the following:
 1. Structural Performance: Maximum deflection of 1/175 span, safety factor of 1.65, able to resist following loads (applied and/or combined in accordance with International Building Code and ASTM E330):
 - a. 30 PSF live load (horizontal projection, including snow load, etc.) plus dead load.
 - b. 30 PSF wind-load (vertical projection, including uplift and shape factors as required) plus dead load.
 - c. Thermal load of approximately 100 degrees from ambient temperature.
 2. Air Infiltration: Maximum air leakage through fixed glazing and framing areas of 0.06 cfm/square foot of fixed wall area when tested according to ASTM E283 at a minimum static-air-pressure difference of 6.24 lbf/square foot.
 3. Water Penetration Under Static Pressure: No evidence of 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 6.24 lbf/square foot.
 4. Water Penetration under Dynamic Pressure: No evidence of 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/square foot.
 5. Maximum Water Leakage: Per AAMA 501.1, no uncontrolled water penetrating systems or appearing on systems' normally exposed interior surfaces from sources other than condensation. Water controlled by flashing and gutters that is drained to exterior and cannot damage adjacent materials or finishes is not considered water leakage.
 6. Condensation Resistance: Where framing systems are "thermal-break" construction, provide units tested for thermal performance in accordance with AAMA 1503.1 showing condensation resistance factor (CRF) of not less than 63.
 7. Thermal Transmittance: Provide framing systems that have an overall U-value of not more than 0.50 BTU/(hour by square feet by degrees F) at 15 mph exterior wind velocity when tested in accordance with AAMA 1503.

1.05 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data: Material descriptions, finishes for each type of product indicated, and recommendations for maintenance and cleaning of exterior surfaces.

- C. Shop Drawings by manufacturer for each aluminum storefront system required, including:
 - 1. Layout and installation details, including relationship and attachments to adjacent work.
 - 2. Elevations at 1/4-inch scale.
 - 3. Dimensions of individual components and profiles.
 - 4. Detail sections of typical composite members.
 - 5. Anchors and reinforcement.
 - 6. Glazing details.
 - 7. Structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 8. Include details of provisions for system expansion and contraction and for draining moisture occurring within the system to the interior.
- D. Samples:
 - 1. Finish/Color Initial Selection: For units with factory-applied color finishes.
 - 2. Finish/Color Verification: For each type of exposed finish required, in manufacturer's standard sizes.
 - 3. Fabrication: Of each vertical-to-horizontal intersection of systems, made from 12-inch lengths of full-size components and showing details of the following:
 - a. Joinery.
 - b. Anchorage.
 - c. Expansion provisions.
 - d. Glazing.
 - e. Flashing and drainage.
- E. Quality Assurance Submittals:
 - 1. Test Reports: Provide certified test reports from a qualified independent testing laboratory showing that the entrance and storefront systems comply with the specified test characteristics.
 - 2. Preconstruction Sealant Test Reports: For structural-sealant-glazed systems, compatibility and adhesion test reports from sealant manufacturer indicating that materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with sealants. Include sealant manufacturer's interpretation of test results and recommendations for primers and substrate preparation needed to obtain adhesion.
 - a. Product test reports based on evaluation of comprehensive tests performed by a qualified testing agency for aluminum-framed systems.
 - 3. Field quality-control test and inspection reports.
 - 4. Certificates: Welding certificates.

1.06 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain aluminum entrances and storefront systems from 1 source and from a single manufacturer.
- B. Qualifications:
 - 1. Manufacturer: Provide entrances and storefront produced by a manufacturer with not less than 5 years successful experience in the fabrication of assemblies of the type and quality required.
 - 2. Installer: Entrances and storefront shall be installed by a firm that has not less than 5 years successful experience in the installation of systems similar to those required, and is acceptable to manufacturer.

3. Testing Agency: An independent agency qualified according to ASTM E699 for testing indicated.
 4. Welding: Qualify procedures and personnel according to AWS D1.2, "Structural Welding Code-Aluminum."
- C. Preinstallation Meetings: Conduct conference at Site to comply with requirements of Section 01 31 19.

1.07 PROJECT CONDITIONS

- A. Field Measurements:
1. Check openings by field measurement before fabrication to ensure proper fitting of work; show measurements on final Shop Drawings.
 2. Coordinate fabrication schedule with construction progress to avoid delay in the work.
 3. Where necessary, proceed with fabrication without field measurements, and coordinate fabrication tolerances to ensure proper fit.
- B. Storage and Protection:
1. Protect installed materials from damage by adjacent work.
 2. Protect against scratching and falling debris or equipment.
 3. Damages resulting from work: Immediately repair or replace as necessary to acceptance of Architect at no additional cost to Owner.
- C. Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.

1.08 WARRANTY

- A. Provide manufacturer's standard warranty of material and workmanship, including reglazing, to repair or replace defective units at no cost to Owner.
- B. Failures: Include, but are not limited to:
1. Structural failures including, but not limited to, excessive deflection.
 2. Noise or vibration caused by thermal movements.
 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 4. Adhesive or cohesive sealant failures.
 5. Water leakage through fixed glazing and framing areas.
 6. Failure of operating components to function properly.
- C. Finish warranty agreeing to repair or replace components on which finish fails:
1. Class I anodized finish: Provide manufacturer's 2-year warranty.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Aluminum-Framed Storefront (Heavy Commercial Grade):
1. Standard of Quality: Design is based on Trifab 601T Framing System as manufactured by Kawneer Company, Inc, Norcross, GA www.kawneer.com
 2. Other Acceptable Manufacturers: Subject to compliance with specified requirements, acceptable manufacturers and products are:
 - a. EFCO Corporation, Monett, MO www.efcocorp.com
 - b. CMI Architectural Products, Inc., Minneapolis, MN www.cmiarch.com
 - c. Tubelite, Reed City, MI www.tubeliteinc.com

- d. Member of AAMA, manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated:
 - 1. Sheet and Plate: ASTM B209.
 - 2. Extruded Bars, Rods, Profiles, Tubes: ASTM B221.
 - 3. Extruded Structural Pipe and Tubes: ASTM B429.
 - 4. Structural Profiles: ASTM B308.
 - 5. Welding Rods and Bare Electrodes: AWS A5.10.
- B. Carbon Steel Reinforcement:
 - 1. Provide manufacturer's standard corrosion-resistant primer complying with SSPC-PS Guide No. 12.00, applied immediately after surface preparation and pretreatment.
 - 2. Structural Shapes, Plates, Bars: ASTM A36.
 - 3. Cold-rolled Sheet and Strip: ASTM A1008/A1008M.
 - 4. Hot-rolled Sheet and Strip: ASTM A1011/A1011M.

2.03 FRAMING SYSTEM COMPONENTS

- A. Framing Systems:
 - 1. Exterior windows/frames: Thermally broken design – Trifab 601T Framing System.
 - a. Frame size: 6-inch by 2-inch frames.
- B. Framing Members:
 - 1. Extruded aluminum of thickness required and reinforced as required to support imposed loads.
 - 2. Construction:
 - a. Poured and debridged: Composite assemblies of 2 separate extruded-aluminum components permanently bonded by an elastomeric material of low thermal conductance.
- C. Fasteners:
 - 1. Corrosion-resistant, nonstaining, nonbleeding.
 - 2. Compatible with adjacent materials.
 - 3. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 - 4. Exposed Fasteners: Except where unavoidable for application of hardware, do not use exposed fasteners.
 - 5. Use exposed fasteners with countersunk Phillips screw heads, finished to match framing system.
 - 6. Reinforcement: Where fasteners screw-anchor into aluminum less than 0.125-inch thick, reinforce the interior with aluminum or nonmagnetic stainless steel to receive screw threads, or provide standard noncorrosive pressed-in splined grommet nuts.
- D. Brackets and Reinforcements: Where feasible, provide high-strength aluminum brackets and reinforcements with nonstaining, nonferrous shims for aligning system components; otherwise provide nonmagnetic stainless steel or hot-dip galvanized steel complying with ASTM A123.
- E. Flashing:
 - 1. Concealed Flashing: Provide 26-gage minimum dead-soft stainless steel, or 0.026-inch minimum extruded aluminum of alloy and type selected by manufacturer for compatibility with other components.

2. Form flashing to create pan at sills capable of containing water from entering the building and will drain to the exterior.
3. Exposed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials. Form from sheet aluminum finished to match framing and of sufficient thickness to maintain a flat appearance without visible deflection.

2.04 GLAZING SYSTEM

- A. Glazing: See Section 08 80 00.
- B. Weatherseal Sealant:
 1. Comply with ASTM C920, Type S, Grade NS, Class 25, uses NT, G, A, and O.
 2. Neutral-curing silicone formulation.
 3. Compatible with structural sealant and other system components with which it comes in contact.
 4. Recommended by structural- and weatherseal-sealant and aluminum-framed system manufacturers for this use.
 5. Color: Matching structural sealant.
- C. Glazing Plane: Front Set.
- D. Glazing Gaskets: Manufacturer's standard compression types, replaceable, molded or extruded, that maintain uniform pressure and watertight seal.
- E. Spaces and Setting Blocks: Manufacturer's standard elastomeric types.
- F. Bond-Breaker Tape: Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.

2.05 ACCESSORIES

- A. Joint Sealants at perimeter of aluminum-framed systems: See Section 07 92 00.

2.06 FABRICATION

- A. Storefront Framing System:
 1. Fabricate aluminum entrance and storefront components to designs, sizes and thicknesses indicated and to comply with indicated standards.
 2. See Drawings for variable dimensions, with maximum and minimum dimensions required to achieve design requirements and coordination with other work.
 3. Provide for flush glazing storefront from the exterior on all sides without projecting stops.
 4. Shop-fabricate and preassemble frame components where possible.
 5. Form aluminum shapes before finishing.
 6. Provide storefront frame sections without exposed seams.
 7. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
 8. Fabricate components for assembly using shear-block system or screw-spine system or head-and-sill receptor system with shear blocks at intermediate horizontal members. Supplier choice.
 9. Perform fabrication operations, including cutting, fitting, welding forming, drilling and grinding of metal work to prevent damage to exposed finish surfaces.
 10. Reinforcing: Install reinforcing as required for performance requirements, sag resistance and rigidity.
 11. Do not drill and tap for surface-mounted hardware items until time of installation at Site.
 12. 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. Means to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.
 - d. Physical and thermal isolation of glazing from framing members.
 - e. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 - f. Provisions for field replacement of glazing from exterior.
 - g. Fasteners, anchors, and connection devices that are concealed from view to greatest extent
- B. Dissimilar Metals: Separate dissimilar metals with zinc chromate primer, bituminous paint, or other separator that will prevent corrosion.
- C. Continuity: Maintain accurate relation of planes and angles, with hairline fit of contacting members.
 - 1. Mullion Configurations:
 - a. Provide pockets at the inside glazing face to receive resilient elastomeric glazing.
 - b. Mullions and horizontals shall be one piece.
 - c. Make provisions to drain moisture accumulation to the exterior.
 - 2. Thermal-Break Construction:
 - a. Fabricate storefront framing system with integrally concealed, low conductance thermal barrier, located between exterior materials and exposed interior members to eliminate direct metal-to-metal contact.
 - b. Use manufacturer's standard construction that has been in use for similar projects.
- D. Preparation for Delivery:
 - 1. Disassemble components only as necessary for shipment and installation.
 - 2. Clearly mark components to identify their locations in Project according to Shop Drawings.

2.07 FINISHES

- A. Comply with NAAMM "Metal Finishes Manual" for recommendations relative to application and designations of finishes:
 - 1. Finish designations prefixed by "AA" conform to the system established by the Aluminum Association for designating aluminum finishes.
 - 2. Color Anodized Finish: Provide AA 10C21A44, Class 1 (non-specular as fabricated mechanical finish; chemical etch, medium matte; minimum thickness 0.7 mil), integrally or electrolytically deposited colored anodic coating.
 - a. Color:
 - 1) Dark Bronze.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades: Prior to commencing work, carefully inspect, with Installer present, and verify that work is complete to point where this installation may properly commence.
- B. Verification of Conditions: Verify that aluminum-framed storefront may be installed in accordance with original design, installation tolerances, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies:
 - 1. Immediately notify Architect.

2. Do not proceed with installation in areas of discrepancy until fully resolved.
3. Commencement of installation signifies acceptance of surface conditions.

3.02 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. Seal joints watertight, unless otherwise indicated.
6. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.
7. Install components plumb and true in alignment with established lines and grades, without warp or rack.

B. Metal Protection:

1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape or 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. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration.
4. Paint dissimilar metals where drainage from them passes over aluminum.
5. Paint wood or similar absorptive material in contact with aluminum and exposed to the elements or otherwise subject to wetting, with 2 coats of aluminum house paint. Seal joints between the materials with sealant.

C. Sealant:

1. Set continuous sill members and flashing in full bed of sealant as indicated, or with joint fillers or gaskets as indicated to provide weather tight construction. Comply with requirements of Division 7 for sealants, fillers, and gaskets.
2. Prepare surfaces that will contact structural sealant according to sealant manufacturer's written instructions to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.
3. Install weatherseal sealant according to Section 07 92 00 and according to sealant manufacturer's written instructions to produce weatherproof joints. Install joint filler behind sealant as recommended by sealant manufacturer.

- D. Glazing: Refer to Section 08 80 00 for installation of glass and other panels indicated to be glazed into framing, and not pre-glazed by manufacturer.

3.03 FIELD QUALITY CONTROL

A. Construction Tolerances: Install aluminum entrance and storefront systems to comply with the following tolerances:

1. Variation from Plane: Do not exceed 1/8 inch in 12 feet of length or 1/4 inch in any total length.
2. Offset from Alignment: The maximum offset from true alignment between two identical members abutting end to end in line shall not exceed 1/16 inch.

3. Diagonal Measurements: The maximum difference in diagonal measurements shall not exceed 1/8 inch.
4. Offset at Corners: The maximum out-of-plane offset at corners shall not exceed 1/32 inch.
- B. Testing Agency: Owner may engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare field reports.
- C. Do not proceed with installation of the next area until test results for previously completed areas show compliance with requirements.
- D. Testing to include:
 1. Destructive Test Method A for structural-sealant compatibility and adhesion, ASTM C1401.
 2. Structural sealant glazing inspection, ASTM C1401.
 3. Air infiltration, ASTM E783.
 4. Water penetration, ASTM E1105.
 5. Water Spray Test: Before installation of interior finishes has begun, a minimum area of 75 feet by 1 story of aluminum-framed systems designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.
- E. Repair or remove work where test results and inspections indicate that it does not comply with specified requirements.
- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.04 ADJUSTING

- A. Adjust operating hardware to function properly, for smooth operation without binding, and for weather tight closure.

3.05 CLEANING

- A. Clean the completed system, inside and out, promptly after installation, exercising care to avoid damage to coatings.
- B. Clean glass surfaces after installation, complying with requirements contained in Section 08 80 00 for cleaning and maintenance. Remove excess glazing and sealant compounds, dirt and other substances from aluminum surfaces.

3.06 PROTECTION

- A. Institute protective measures required throughout the remainder of the construction period to ensure that aluminum storefronts will be without damage or deterioration, other than normal weathering, at time of acceptance.

END OF SECTION

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SECTION 08 45 00
TRANSLUCENT WALL AND ROOF ASSEMBLIES

PART 1 GENERAL

1.01 SUMMARY

- A. Provide:
 - 1. Translucent panels.
 - 2. Structural grid.
 - 3. Battens and perimeter closure system including flashings.
 - 4. Translucent insulated plastic wall and skylight system accessories including, but not limited to:
 - a. Sealing tape.
 - b. Fasteners.
 - c. Insulation.
- B. Related Sections:
 - 1. Section 07 92 00 - Joint Sealants

1.02 REFERENCES

- A. AAMA:
 - 1. 1503 - Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections
 - 2. 2604 - High Performance Organic Coatings on Aluminum Extrusions and Panels
- B. ASTM:
 - 1. C297 - Test for Tensile Strength of Sandwich Construction
 - 2. D635 - Rate and Extent of Burning
 - 3. D1002 - Test for Shear Strength of Single Lap Joint Adhesively-Bonded Metal
 - 4. D1037 - Properties of Wood-Base Fiber and Particle Panel Materials
 - 5. D1183 - Resistance of Adhesives to Aging
 - 6. D2244 - Color Tolerances and Differences
 - 7. E84 - Surface Burning Characteristics
 - 8. E108 - Fire Tests of Roof Coverings

1.03 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. The translucent insulated panel system shall consist of factory prefabricated flat and/or curved sandwich panels including installation by experienced contractor.
 - 2. Manufacturer shall be responsible for the design, configuration and fabrication of the translucent wall and skylight system.
- B. Performance Requirements: Design to withstand 25 psf wind load and a 20 psf live load.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00.

- B. Product Data: Submit manufacturer's current Product Data including specifications, handling, storage and installation instructions, and maintenance recommendations.
- C. Shop Drawings:
 - 1. Submit Shop Drawings showing system fabrication, installation drawings, including plans, elevations, sections, details of components, joint locations and configurations within system and between system and adjoining system.
 - 2. Show details of fabrication and installation of panels, battens and closures.
- D. Samples:
 - 1. Initial Color Selection: Submit manufacturer's standard color samples showing the full range of colors available for factory-finished aluminum.
 - a. When requested, submit samples of each exposed finish required, in same thickness and material indicated for the work and in size indicated below. If finishes involve normal color variations, include sample sets consisting of two or more units showing the full range of variations expected.
 - 1) Sandwich Panels: 14" x 28" Units.
 - 2) Factory Finished Aluminum: 5" long sections
 - 2. Submit Installer Certificate, signed by installer, certifying compliance with manufacturer's requirements.
- E. Quality Assurance/Control Submittals:
 - 1. Test Reports: Certified by independent testing organization for each type and class of panel system. Reports shall verify that the materials will meet all performance requirements of this specification. Test reports required include:
 - a. ASTM E84: Flame Spread and Smoke Development
 - b. ASTM D635: Burn Extent
 - c. ASTM D2244: Color Difference
 - d. ASTM C297, ASTM D1002: Bond Strength
 - e. ASTM D1037: Accelerated Aging
 - f. ASTM E108: Class "A" Roof System
- F. Maintenance Manual: Provide to Owner maintenance and warranty data in "Maintenance Manual" at Maintenance Demonstration at Substantial Completion.

1.05 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide translucent insulated wall and skylight system units made of components of standard construction furnished by 1 manufacturer as coordinated assemblies.
- B. Qualifications:
 - 1. Manufacturer:
 - a. 10 years' experience in the manufacture of translucent insulated wall and skylight system, with 6 projects of similar size, scope and type of which 3 have been in successful use for 5 years or longer.
 - b. Manufacturer must be listed by a recognized building code authority such as ICBO, which requires quality control inspections by an approved agency.
 - 2. Contractor: 3 years' experience in the installation of translucent insulated wall and skylight system.
 - 3. Personnel: For actual installation of translucent insulated wall and skylight system, use personnel skilled in work required, completely familiar with manufacturer's recommended methods of installation, thoroughly familiar with requirements of work.

- C. Certifications: Provide to Engineer, certification of installer from manufacturer of translucent insulated wall system.
- D. Regulatory Requirements:
 - 1. Insulated wall and skylight system must be listed by the ICC Evaluation Service (ICC-ES) which requires quality control inspections and fire, structural, and water infiltration testing of sandwich panel systems by an approved agency.
 - 2. Quality control inspections and required testing shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components, and production sandwich panels for conformance with "Acceptance Criteria for Sandwich Panels" as regulated by the ICC-ES.
- E. Preinstallation Meetings: Installer and manufacturer's technical representative shall meet prior to the start of installation.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store panels according to manufacturer's recommendations.
- B. Store panels on long edge, several inches above the ground, blocked and under cover to prevent warping.

1.07 PROJECT CONDITIONS

- A. Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.

1.08 WARRANTY

- A. Provide manufacturer's 10-year limited warranty covering color stability, delamination, and fiber bloom.
- B. Installer shall warrant system against water leakage and weather tightness for 10 years.
- C. Warranties shall be provided in writing.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Standard of Quality: Design is based on products of Kalwall Corporation, Manchester, NH www.kalwall.com
- B. Other Acceptable Manufacturers: Subject to compliance with specified requirements, acceptable manufacturers and products are:
 - 1. Major Industries, Wausau, WI
 - 2. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Face Sheets:
 - 1. Glass fiber reinforced thermoset resins by insulated panel system fabricator for architectural use.
 - 2. Thermoplastic polycarbonate or acrylic faces are not acceptable.
 - 3. The exterior face shall have a permanent glass erosion barrier to provide maximum long term resistance to reinforcing fiber exposure. Plastic film overlays or coatings are not acceptable
 - 4. The exterior face shall have a self-cleaning thermoset acrylic urethane surface molecularly bonded under factory controlled conditions, and fully field restorable if worn or damaged. Tedlar film is not acceptable.
 - 5. Flammability:
 - a. The interior face sheet shall have a flame spread rating no greater than 50 and smoke developed no greater than 250 when tested in accordance with ASTM E84.

- b. Burn extent by ASTM D635 shall be no greater than 1 inch.
 - c. Faces shall not deform, deflect or drip when subject to fire or flame.
- 6. Weatherability: The full thickness of the exterior face shall not change color more than 3.0 Adams Units (Delta E by ASTM D2244) after 5 years outdoor South Florida weathering at 7 degrees facing south, determined by the average of at least 3 white samples without a protective film or coating to insure maximum, long term stability.
- 7. Appearance:
 - a. Face sheets shall be uniform in color to prevent splotchy appearance.
 - b. Faces shall be completely free of ridges and wrinkles that prevent proper surface contact in bonding to the aluminum grid core.
 - c. Clusters of air bubbles/pinholes that collect dirt and moisture will not be acceptable.
- 8. Strength: The exterior face sheet shall be uniform in strength and repel an impact equal to 70 foot pounds without fracture or tear in accordance with SPI Shatter Resistance Test.
- B. Structural I-Beam Grid:
 - 1. Thermally broken.
 - 2. Provide for mechanical interlocking of muntin-mullion and perimeter to prevent high and low intersections which do not allow full bonding surface to contact with face material.
 - 3. Width: No less than 7/16 inch.
 - 4. Machined to tolerances of not greater than plus or minus 0.002 inch.
- C. Battens and Perimeter Closure System:
 - 1. Extruded 6063-T6 and 6063-T5 aluminum screw clamp-tight closure system.
 - 2. Curved closure system may be roll formed.
 - 3. Thermal break perimeter systems shall be factory prefabricated with perimeter closures factory sealed to panels.
 - 4. "U" = 0.50 or less.
 - 5. Fasteners: 300 series stainless steel screws (excluding final fasteners to the building).
 - 6. Flexible Sealing Tape: Manufacturer's standard pre-applied to closure system at the factory under controlled conditions.
- D. Laminate Adhesives:
 - 1. Heat and pressure resin type engineered for structural sandwich panel use.
 - 2. Adhesive shall pass testing requirements specified by ICBO "Acceptance Criteria for Sandwich Panel Adhesive"
 - 3. Minimum Strength:
 - a. 750 PSI tensile strength by ASTM C297 after 2 exposures to 6 cycles each of the aging conditions prescribed by ASTM D1037.
 - b. 500 PSI shear strength average of 5 exposures per ASTM D1002:
 - 1) 50 percent relative humidity at 73 degrees F: 540 PSI.
 - 2) Accelerated aging by ASTM D1183 at room temperature: 800 PSI.
 - 3) 182 degrees F: 100 PSI.
 - 4) 500 hour oxygen bomb by ASTM D572: 1400 PSI.
- E. Condensation Drip Flashing:
 - 1. Include manufacturer's condensation flashing at sill of translucent wall panel.

2. Drain flashing to exterior.
 3. Color: Match finish and color of aluminum frame assemblies.
- F. Other Materials: Other materials not specifically described but required for complete, proper installation of translucent insulated wall and skylight system, subject to acceptance of Engineer.

2.03 FABRICATION

- A. Panels:
1. Sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking thermally broken aluminum I-beams.
 2. Adhesive bonding line to be straight, cover the entire width of the I-beam, and have a neat, sharp edge.
 3. Thickness: 2-3/4 inches.
 4. Insulation: U factor within a range of 0.23 to 0.29 thermally broken.
 5. Light Transmission: Within a range of 20 to 26 percent.
 6. Solar Heat Gain Coefficient: 0.31.
 7. Thermally Broken Panels:
 - a. Minimum Condensation Resistance Factor of 80 as measured by AAMA 1503 on the bond line.
 - b. Minimum CRF of 90 at center of grid cell.
 8. Grid Pattern: 12 inches by 24 inches nominal Reverse Shoji and symmetrical about the horizontal centerline of each panel.
 9. To insure bonding strength, white spots at intersections of muntins and mullions shall not exceed 4 for each 40 square feet of panel, nor shall they be more than 3/64-inch in width.
- B. Provide aluminum interior trim and exterior sill trim per Drawings.

2.04 FINISHES

- A. Frames:
1. Comply with NAAMM "Metal Finishes Manual" for recommendations relative to application and designations of finishes:
 - a. Finish designations prefixed by "AA" conform to the system established by the Aluminum Association for designating aluminum finishes.
 - 1) AAMA 2604 painted finish containing 70% PVDF.
 - 2) Color: Dark Bronze.
- B. Face Sheets:
1. Uniform in appearance.
 2. Color:
 - a. Exterior face sheets: Smooth finish, 0.70-inch thick, Crystal in color.
 - b. Interior face sheets: Smooth finish, 0.45-inch thick, White in color.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades: Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.

- B. Verification of Conditions: Verify that system may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
- C. Discrepancies:
 - 1. Immediately notify Engineer in writing.
 - 2. Do not proceed with installation in areas of discrepancy until fully resolved.
 - 3. Commencement of installation signifies acceptance of surface conditions.

3.02 PREPARATION

- A. Protection: Protect installed work and materials of other trades.
- B. Metal Protection:
 - 1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or apply sealant or tape recommended by manufacturer for this purpose.
 - 2. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint or method recommended by manufacturer.
 - 3. Where aluminum will contact pressure-treated wood, separate dissimilar materials by methods recommended by manufacturer.

3.03 INSTALLATION

- A. Install translucent panel system in strict accordance with approved Shop Drawings as supplied by manufacturer.
- B. Anchor component parts securely in place by permanent mechanical attachment system and to accommodate thermal and mechanical movements.
- C. Set sill and curb members in a full bed of sealant compound, or with joint fillers or gaskets to provide weather-tight construction.
- D. Install joint sealants at perimeter joints and within panel system in accordance with manufacturer's installation instructions.
- E. Clean aluminum before sealants are applied.

3.04 FIELD QUALITY CONTROL

- A. Water Test: Test according to procedures in AAMA 501.
- B. After other trades have completed work on adjacent material, carefully inspect translucent panel installation and touch up marred finishes, but replace units that cannot be restored to factory-finished appearance.

3.05 ADJUSTING

- A. Make adjustments necessary to ensure proper installation and weather-tight conditions.

3.06 CLEANING

- A. Site: Do not allow accumulation of scraps, debris arising from work of this section. Maintain premises in neat, orderly condition.
- B. System: Clean inside and outside of system surfaces using materials and methods recommended by manufacturer.

3.07 DEMONSTRATION

- A. Maintenance Instructions: Manufacturer's representative to schedule and attend meeting with Owner's representatives to explain:
 - 1. Maintenance and Care Instructions.
 - 2. Recommended Maintenance Program.
 - 3. Warranty Requirements.

END OF SECTION

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SECTION 08 80 00

GLAZING

PART 1 GENERAL

1.01 SUMMARY

- A. Provide:
 - 1. Primary glass products:
 - a. Clear float.
 - 2. Heat-treated glass products:
 - a. Tempered.
 - b. Heat-strengthened.
 - 3. Sealed insulating glass units.
 - 4. High performance coatings (Low "E").
 - 5. Glass and glazing accessories.
- B. Related Sections:
 - 1. Section 08 43 13 - Aluminum-Framed Storefront

1.02 REFERENCES

- A. ASTM:
 - 1. C542 - Lock-Strip Gaskets
 - 2. C716 - Installation of Lock-Strip Gaskets
 - 3. C920 - Elastomeric Joint Sealants
 - 4. C1021 - Testing of Sealants
 - 5. C1036 - Flat Glass
 - 6. C1048 - Heat-Treated Flat Glass
 - 7. C1087 - Sealant Compatibility for Glazing Systems
 - 8. E774 - Sealed Insulating Glass Units
- B. FGMA - Glazing Manual
- C. IGMA TM-3000 - Glazing Guidelines for Sealed Insulating Glass Units
- D. U.S. Consumer Product Safety Commission, 16 CFR 1201 - Safety Standard for Architectural Glazing Materials

1.03 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. 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:
 - a. Defective manufacture, fabrication, and installation.
 - b. Failure of sealants or gaskets to remain watertight and airtight.
 - c. Deterioration of glazing materials.
 - d. Other defects in construction

B. Performance Requirements:

1. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:
 - a. For monolithic-glass lites, properties are based on units with lites of thickness indicated.
 - b. For laminated-glass lites, properties are based on products of construction indicated.
 - c. For insulating-glass units, properties are based on units with lites 6.0 mm thick and a nominal 1/2-inch-wide interspace.
 - d. Center-of-glass values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:
 - 1) U-factors: NFRC 100 expressed as Btu/square foot times height times degree F.
 - 2) Solar heat gain coefficient: NFRC 200.
2. Solar Optical Properties: NFRC 300.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data: Submit manufacturer's current Product Data including specifications, handling, storage and installation instructions, and maintenance recommendations.
- C. Shop Drawings: Submit Shop Drawings for each type of glass showing system fabrication, installation drawings, including plans, elevations, sections, details of components, joint locations and configurations within system and between system and adjoining system.
- D. Samples: Submit manufacturer's standard color samples with Product Data and Shop Drawings.
- E. Certifications: Provide manufacturer's product certificate that products furnished comply with requirements.
- F. Test Reports:
 1. Preconstruction Adhesion and Compatibility Test Report: Provide from glazing sealant manufacturer indicating glazing sealants were tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.

1.05 QUALITY ASSURANCE

- A. One Source Responsibility: Provide glass and glazing units made of components of standard construction furnished by 1 manufacturer as coordinated assemblies.
- B. Qualifications:
 1. Manufacturer: 5 years' experience in the manufacture of glass and glazing.
 2. Contractor: 3 years' experience in the installation of glass and glazing.
 3. Personnel: For actual installation of glass and glazing, use personnel skilled in work required, completely familiar with manufacturer's recommended methods of installation, thoroughly familiar with requirements of Work.
- C. Regulatory Requirements:
 1. Consumer Products Safety Commission: Glazing shall comply with 16 CFR Part 1201: Safety Standard for Architectural Glazing Materials
 2. Insulating glass shall be certified under IGMA-approved program.
- D. Testing:
 1. Glass Product Testing: Obtain from a qualified testing agency based on testing glass products.

2. Sealant Product Testing: Obtain from a qualified testing agency based on testing current sealant formulations within a 36-month period.
 - a. ASTM: Glazing for rated assemblies shall be identical to those tested per ASTM E152 or E153.

1.06 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.

1.07 PROJECT CONDITIONS

- A. 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.
- B. Do not install liquid glazing sealants when ambient and substrate temperature conditions are below 40 degrees F.

1.08 WARRANTY

- A. Provide 10-year written warranty, beginning at date of substantial completion, covering labor, materials for replacement of spontaneous failure of all tempered glass used on Project.
- B. For any glass requiring replacement under this warranty, provide a new minimum 5-year warranty commencing at date of acceptance of replacement glass by Owner and Architect.
- C. Hermetically sealed insulating glass: Submit written warranty agreeing to replace units which fail to maintain hermetic seal of air space, deteriorate, or otherwise fail to perform as required within 10 years after date of Substantial Completion as a result of failure of materials or workmanship.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Glass: Subject to compliance with requirements, acceptable fabricators and products are:
 1. Cardinal Glass, Northfield, MN www.cardinalcorp.com
 2. Oldcastle Glass Wausau, WI www.oldcastleglass.com
 3. Viracon, Owatonna, MN www.viracon.com
 4. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Primary Glass Products:
 1. Annealed Float Glass:
 - a. ASTM C1036, Type I (transparent glass, flat).
 - b. Quality Q3 (glazing select).
 - c. Class: See schedules in Part 3.
- B. Heat-Treated Glass Products:
 1. ASTM C1048; Type I (transparent flat glass).
 2. Quality Q3 (glazing select).
 3. Tempered Glass: Provide tempered float glass meeting requirements of:
 - a. CPSC 16 CFR 1201, category 2.
 - b. ANSI 297.1, Class A.

C. Glass Types:

1. Insulating, Tempered, Exterior Glass Units:

- a. General: preassembled units consisting of dual-sealed lites of glass separated by a dehydrated interspace.
- b. Composition: 1-inch-thick, Low-E argon filled insulating glass.
- c. Edge condition: organic sealed edges.
- d. Tempered glass (16 CFR 1201, Class II both lites).
- e. Glazing: 2 panels, 1/4-inch-thick, clear heat strengthened (HS) each.
- f. Coating: Low-E on #2 surface.
- g. U-value (winter): 0.31 or better.
- h. U-value (summer): 0.29 or better.
- i. SHGC: 0.28 or better.
- j. Product: Design is based on VE1-40 glass as manufactured by Viracon.

D. Accessories: Glazing accessories, other material not specifically called for, to be new, first quality of respective kinds, subject to approval of Architect.

1. Sealant:

- a. Acid-curing silicone.
- b. Compatible with other sealants and other materials they will contact.
- c. *G.E. 1200 SCS Series* or as recommended by glazing manufacturer.

2. Glazing Tape:

- a. 1/8 inch at interior lites in hollow metal frames or as recommended by glazing manufacturer.
- b. Nonstaining and nonmigrating in contact with nonporous surfaces.
- c. Product: GE Glazing Tape or as recommended by glazing manufacturer.

3. Glazing Gaskets:

- a. Neoprene glazing gaskets of profiles indicated.
- b. Manufactured from virgin neoprene compounded to meet physical properties of ASTM C542.
- c. Provide gaskets and zipper lock strips with premolded corners (cut strips of gasket material not acceptable).
- d. Products: Standard Products Company, F. H. Maloney, or equal product accepted in advance by Architect.

4. Aluminum Extrusions:

- a. 6063-T5 alloy aluminum extrusions for glazing gasket frame sections.
- b. Finish architectural Class I anodic coating AA-M12 C22 A42-black.

5. Setting Blocks:

- a. Neoprene with Shore, Type A hardness of 80 to 90 durometer.
- b. Not less than 3 inches long nor more than 8 inches long; length such that loading is 15 psi.
- c. Full width of rabbet where possible.

6. Spacer Blocks:

- a. Elastomeric continuous extrusion or neoprene with Shore, Type A hardness of 40 to 50 durometer.

- b. 1 inch to 3 inches long.
- 7. Other Materials: Other materials not specifically described but required for complete, proper installation of glass and glazing, subject to acceptance of Architect.

2.03 FABRICATION

- A. Fabricate glass to sizes required for glazing openings, with edge clearances and tolerances complying with glass manufacturer's recommendations.
- B. Provide thickness indicated or, if not indicated, as recommended by glass manufacturer for application indicated.
- C. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites in a manner that produces square edges with slight kerfs at junctions with outdoor and indoor faces.
- D. Grind smooth and polish exposed glass edges and corners.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Work of Other Trades: Prior to commencing work, carefully inspect and verify that Work is complete to point where this installation may properly commence.
- B. Verification of Conditions:
 - 1. Verify that glazing may be done in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.
 - 2. Examine for compliance:
 - a. Manufacturing and installation tolerances, including those for size, squareness, and offsets and corners.
 - b. Presence and functioning of weep system.
 - c. Minimum required face or edge clearances.
 - d. Effective sealing between joints of glass-framing members.
- C. Discrepancies: Immediately notify Architect. Do not proceed with installation in areas of discrepancy until fully resolved.

3.02 PREPARATION

- A. Protect installed work and materials of other trades.
- B. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.
- C. Protect glass edges from damage during handling and installation. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

3.03 INSTALLATION

- A. Glazing:
 - 1. Install in accordance with referenced standards.
 - 2. Set glass in true plane, tight, straight, with proper, adequate clearance.
 - 3. Install glazing from interior only. No exterior glazing permitted.
 - 4. Locate setting blocks at quarter points of sill; set in sealant if heel or toe bead is required.
 - 5. Install aluminum gasket frames in bed of acoustic sealant.
 - 6. Install spacers inside and out except where preshimmed tape or glazing gaskets are to be used.
 - 7. Firmly anchor to prevent rattling and looseness.

8. Cleanly cut edges, do not nip or seam.
9. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel.
10. Do not leave voids in glazing channels except as specifically indicated or recommended by glass manufacturer.
 - a. Force sealant into channel to eliminate voids.
 - b. Tool exposed surfaces to slightly wash away from joint.
 - c. Trim and clean promptly.
 - d. Do not allow sealant to close weeps of aluminum framing.

3.04 CLEANING AND PROTECTION

- A. Site:
 1. Do not allow accumulation of scraps, debris arising from Work of this Section.
 2. Maintain premises in neat, orderly condition.
 3. Separate and recycle float glass, tempered glass, plastic materials, and corrugated cardboard.
- B. Glass and Glazing:
 1. Correct imperfections and replace glass damaged during construction period.
 2. Leave labels on glass until it has been inspected and approved. Remove non-permanent labels immediately thereafter.
 3. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass.
 4. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter.
 5. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction for buildup of dirt, scum, alkaline deposits, or stains. Remove as recommended by glass manufacturer.
 6. Wash glass on both exposed surfaces not more than 4 days before date scheduled for Substantial Completion inspection. Wash glass as recommended by glass manufacturer.

END OF SECTION

SECTION 09 29 00
GYPSUM BOARD

PART 1 GENERAL

1.01 SUMMARY

- A. Provide:
 - 1. Exterior Gypsum sheathing:
 - a. Glass-fiber surfaced.
 - 2. Joint treatment.
 - 3. Drywall accessories including, but not limited to:
 - a. Fasteners.
- B. Related Sections:
 - 1. Section 07 21 29 - Sprayed Insulation
 - 2. Section 07 27 00 - Air Barriers
 - 3. Section 07 41 13 – Metal Wall Panels

1.02 REFERENCES

- A. ASTM:
 - 1. C1002 - Standard for Steel Self-Piercing Tapping Screws for Application of Gypsum Panels
 - 2. C1177 - Glass Mat Gypsum Substrate for Use as Sheathing
 - 3. E84 - Surface Burning Characteristics of Building Materials
 - 4. E119 - Fire Tests of Building Construction Materials

1.03 SUBMITTALS

- A. Refer to Section 01 33 00.
- B. Product Data: Submit manufacturer's current Product Data including specifications, handling, storage and installation instructions, and maintenance recommendations.
- C. Samples:
 - 1. Trim Accessories: Provide full size sample in 12-inch-long length for each trim accessory.

1.04 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide drywall systems units made of components of standard construction furnished by one manufacturer as coordinated assemblies.
- B. Qualifications:
 - 1. Manufacturer: 5 years experience in the manufacture of drywall systems.
 - 2. Contractor: 3 years experience in the installation of drywall systems.
 - 3. Personnel: For actual installation of drywall systems, use personnel skilled in work required, completely familiar with manufacturer's recommended methods of installation, thoroughly familiar with requirements of work.
- C. Regulatory Requirements:
 - 1. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assembly indicated according to ASTM E119 by an independent testing agency.

1.05 STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes.
- B. Stack panels flat to prevent sagging.

1.06 PROJECT CONDITIONS

- A. Environmental Conditions:
 - 1. Joint Treatment: Control heating, ventilating during finishing operations to ensure maintenance of 55 degrees F minimum temperature.
 - 2. Comply with ASTM C840 or manufacturer's recommendations, whichever are more stringent.
 - 3. Existing Conditions: Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.
- B. Do not install panels that are wet, show moisture damage, or are mold damaged.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Exterior Gypsum Sheathing Board: Subject to compliance with specified requirements, acceptable manufacturers and products are:
 - 1. Georgia-Pacific, Atlanta, GA www.gp.com
 - 2. United States Gypsum, Chicago, IL www.usg.com
 - 3. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. Exterior Gypsum Sheathing:
 - 1. Glass-Mat Surfaced Gypsum Sheathing
 - a. Noncombustible gypsum incorporating a water-resistant material.
 - b. Meet ASTM C1177.
 - c. Surfaced on face and back with inorganic glass fiber mats and alkali-resistant coating.
 - d. Resistant to delamination, deterioration due to weather, and mold and mildew.
 - e. Noncombustible; comply with ASTM E84.
 - f. Product:
 - 1) *DensGlass Gold* by G-P Gypsum Corporation, Atlanta, GA.
 - 2) *Aqua Tough Gypsum Sheathing*.
- B. Joint Tape:
 - 1. Exterior Gypsum Sheathing
 - a. 2-inch wide fiberglass mesh tape.
 - b. Rapid setting.
 - c. Cement based.
 - d. Mold and moisture resistant.
 - e. Meets ASTM D3272 and 3274.

C. Drywall Accessories:

1. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
2. Thermal Insulation: See Section 07 21 29.
3. Air Barrier: See section 07 27 00.
4. Fasteners:
 - a. Comply with ASTM C1002.
 - b. Metal Studs, Furring Strips: *USG Type S* bugle head screws of lengths required.
 - c. Cementitious Backer Board: Screws specifically designed and recommended by manufacturer for application of cementitious backer board.
 - d. Other Fasteners: Screws, clips, fasteners specifically designed for application of gypsum drywall panels.
5. Other Materials: Not specifically described but required for complete, proper installation of gypsum drywall, to be selected by installer subject to acceptance of Architect.

PART 3 EXECUTION

3.01 EXAMINATION

A. Work of Other Trades:

1. Prior to commencing work, carefully inspect and verify that work is complete to point where this installation may properly commence.
2. Examine areas and substrates, with installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.

B. Verification of Conditions: Verify that gypsum drywall may be installed in accordance with original design, pertinent codes and regulations, and pertinent portions of referenced standards.

C. Examine panels before installation. Do not install panels that are wet, moisture damaged, or mold damaged.

1. Indications of damage include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications of mold damage include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

D. Discrepancies: Immediately notify Architect. Do not proceed with installation in areas of discrepancy until fully resolved.

3.02 PREPARATION

A. Protection: Protect installed work and materials of other trades.

3.03 INSTALLATION

A. Exterior Glass Mat Gypsum Sheathing:

1. Install according to specified manufacturer's guidelines and applicable code requirements and Gypsum Association GA-253.
2. Do not use as a base for nailing or mechanical fastening.
3. Protect from excessive moisture.
4. Surfaces to receive sheathing should not vary more than 1/4 inch from the plane of faces of adjacent members.
5. Do not laminate to masonry surfaces; use furring strips or framing spaced at manufacturer's specifications.

6. End Joints: Offset. Install snugly and install flashing around all openings.
7. Edge Joints: Locate parallel to and with vertical orientations on framing.
8. Install with 1/4-inch open space where panels abut other construction or structural penetrations.
9. Attach to framing with screws spaced 4 inches on center at perimeter for racking shear resistance, or 8 inches where not required.
10. Metal Framing: Attach with screws spaced 8 inches on center at perimeter and along intermediate framing.
11. Fasteners:
 - a. Corrosion-resistant screws.
 - b. Tight against and flush with surface of sheathing.
 - c. Do not countersink.
 - d. Locate minimum of 3/8 inch from edges and ends of sheathing panels

3.04 TAPING AND FINISHING

A. Exterior Gypsum Sheathing Board:

1. Seal sheathing joints according to sheathing manufacturer's written instructions.
 - a. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel silicone emulsion sealant to embed entire face of tape in sealant. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.
2. Coordinate with Air Barrier (section 07 27 00) Manufacturer for proper sealing of panel joints and openings.

END OF SECTION

SECTION 09 91 00
PAINTING

PART 1 GENERAL

1.01 SUMMARY

- A. Provide:
 - 1. Paint:
 - a. Interior Substrates:
 - 1) Concrete masonry units.
- B. Perform the following:
 - 1. Surface preparation, priming, and finish coats for exposed surfaces and items including bare and primed mechanical and electrical equipment as scheduled or considered standard practice.
 - 2. In remodeled areas, paint items or areas indicated on the Drawings.
- C. Do not paint the following:
 - 1. Prefinished items, except as noted.
 - 2. Concealed spaces, except as noted.
 - 3. Labels:
 - a. Code requirements such as UL, FM.
 - b. Equipment name, identification, performance rating, or nomenclature plates.
- D. Related Sections:
 - 1. Section 04 01 20 - Unit Masonry Restoration

1.02 REFERENCES

- A. ASTM:
 - 1. D16 - Standard Definitions of Terms
 - 2. D3450 - Washability of Interior Architectural Coatings
- B. Master Painters Institute (MPI): www.paintinfo.com
 - 1. Evaluation of Exterior Systems
 - 2. Evaluation of Interior Systems
 - 3. Surface Preparation
- C. Painting and Decorating Contractors of America (PDCA) P5 - Sample Procedures for Paint and Other Decorative Coating Systems
- D. Society for Protective Coatings (SSPC):
 - 1. SP 1 - Solvent Cleaning
 - 2. SP 13 - Surface Preparation of Concrete

1.03 DEFINITIONS

- A. DFT: Dry Film Thickness
- B. Minimum VS: Minimum Volume Solids

- C. Paint: Any “decorative, protective, or otherwise functional coating applied to a substrate. This substrate may be another coat of paint.” The Paint Handbook, by Guy E. Weismantel.
- D. Sheen: Standard coating terms defined in ASTM D16 apply.
- E. VOC: Volatile Organic Compound

1.04 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer’s current Product Data including specifications, handling, storage and installation instructions, and maintenance recommendations.
- B. Samples:
 - 1. Color Selection:
 - a. Submit manufacturer’s standard color drawdowns with Product Data for initial selection.

1.05 QUALITY ASSURANCE

- A. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
- B. Qualifications:
 - 1. Manufacturer: 5 years experience in the manufacture of coating systems.
 - 2. Applicator: 3 years experience in commercial application of coating systems.
- C. Regulatory Requirements:
 - 1. Paint, stain, and wood preservative finishes and related materials are regarded as hazardous products and are subject to regulations for disposal.
 - 2. Products shall comply with the United States Clean Air Act for maximum VOC content.
 - 3. requirements and authorities having jurisdiction for flame spread and smoke developed ratings of paints and coatings.
 - 4. Conform to requirements of local authorities having jurisdiction in regard to the storage, mixing, application, and disposal of all paint and related waste materials.
 - 5. All materials, preparation, and workmanship shall conform to requirements of the latest edition of the Architectural Paint Specification Manual by MPI.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 degrees F.
- B. Maintain containers in clean condition, free of foreign materials and residue.
- C. Remove rags and waste from storage areas daily.
- D. Containers shall bear the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer’s stock number and date of manufacture.
 - 4. Volume solids, pigment, sheen, and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.

1.07 ENVIRONMENTAL/PROJECT REQUIREMENTS

A. Job Conditions:

1. Paint: Apply only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 degrees F and 95 degrees F.
2. Do not apply paint in snow, rain, fog, or mist, when the relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.
3. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.08 MAINTENANCE

- A. Provide set of properly labeled drawdowns for future reorder of paint.
- B. Provide not less than 1 quart for each paint and color used on site for Owner touch-up.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Paint:

1. Standard of Quality: Design is based on products of Sherwin-Williams Company (S-W), except as noted.
2. Other Acceptable Manufacturers: Subject to compliance with requirements, acceptable manufacturers are:
 - a. Glidden Professional/Devoe Coatings
 - b. PPG Industries, Pittsburgh Paints www.ppg.com
 - c. Diamond Vogel www.diamondvogel.com
 - d. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS GENERAL

- A. Material Compatibility: Provide blockfillers, primers, finish coat materials and related materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality:
 1. Provide manufacturer's best quality trade sale paint material of the various coating types specified.
 2. Paint containers not displaying manufacturer's product identification will not be acceptable.
 3. Paint shall be ready-mixed and pre-tinted.
 4. Colors: As selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Test existing finishes (if any) for lead before sanding, scraping, or removing. If lead is present, notify Architect.
- B. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work. Maximum acceptable moisture content of substrates:
 1. Concrete: 12 percent.
 2. Masonry (CMU): 12 percent.

- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Coordination of Work:
 - 1. Steel surfaces with less than 1.0 meter clear working access may necessitate applying material to inaccessible surfaces prior to erection of the finished steel members, either at the point of fabrication or on-site.
 - 2. Review other sections in which primers are provided to ensure compatibility of total systems for various substrates.
 - 3. On request of Architect, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 4. Notify Architect of problems anticipated using the materials specified.
 - 5. Commencement of installation signifies acceptance of surface conditions.
- E. Factory-Primed Materials:
 - 1. Supplier shall disclose to the general contractor and to the painting contractor any pre-treatment and temporary coatings which have been applied.
 - 2. Manufacturer/supplier shall provide certification that the specified surface preparation and priming has been performed.
 - 3. Galvanized Metal:
 - a. Remove pre-treatment and temporary coatings at no extra cost to painting contractor.

3.02 PROTECTION

- A. Protect work of other trades and property of Owner against paint damage and overspray.

3.03 SURFACE PREPARATION

- A. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted.
 - 1. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
 - 2. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning General:
 - 1. Clean substrates of dust, dirt, grease, mildew, or other substances that could impair the bond of the various coatings according to manufacturer's written instructions for each particular substrate condition and as specified.
 - 2. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
 - 3. Provide barrier coats over incompatible primers or remove and re-prime.
- C. Cementitious Substrates:
 - 1. Comply with SSPC-SP13.
 - 2. Prepare concrete, concrete masonry block surfaces to be painted.
 - 3. Determine alkalinity and moisture content of surfaces by performing appropriate tests.
 - a. Perform pH test prior to application of coating system to ensure pH is within acceptable levels.
 - b. If surfaces are sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application.

- c. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
4. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents.
5. Roughen as required to remove glaze.
6. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
7. Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
8. Flush the floor with clean water to remove acid, neutralize with ammonia, and rinse.
9. Allow to dry and vacuum before painting.

3.04 PAINT PREPARATION

A. Mixing:

1. Carefully mix and prepare paint materials in accordance with manufacturer's directions.
2. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
3. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material.
4. Remove film and, if necessary, strain material before using.
5. Filter metallic (aluminum) paint slowly through a 55 mesh screen.
6. Use only thinners approved by the paint manufacturer, and only within recommended limits.

B. Tinting:

1. Prime tint metallic surfaces gray.

3.05 APPLICATION

A. General:

1. Apply paint in accordance with manufacturer's directions.
2. Use applicators and techniques best suited for substrate and type of material being applied.
3. Do not use heat guns with lead-based paints.
4. Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

B. Multiple Coats:

1. The number of coats and film thickness required is the same regardless of the application method.
2. Do not apply succeeding coats until the previous coat has cured as recommended by manufacturer.
3. Do not recoat until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure and where application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
4. Sand between applications where sanding is required to produce an even smooth surface in accordance with manufacturer's directions.

C. Tolerances:

1. Match approved samples for color, texture, and coverage.
2. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance.

3. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
- D. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate. Provide a total dry film thickness (DFT) of the entire system as recommended by manufacturer.
- E. Extent of Work:
1. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection.
 2. Paint surfaces behind movable equipment and furniture and wall-mounted items same as similar exposed surfaces.
 3. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
 4. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint.
 5. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 6. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.
 7. Finish exterior doors on tops, bottoms, and side edges same as exterior faces.
 8. Sand lightly between each succeeding enamel or varnish coat.
- F. Blockfillers: Apply blockfillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- G. Prime Coats:
1. Before application of finish coats, apply a prime coat of material as recommended by manufacturer to material that is required to be painted or finished and has not been prime coated by others.
 2. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
- H. Pigmented (Opaque) Finishes:
1. Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage.
 2. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

3.06 CLEANING, ADJUSTING, AND PROTECTION

- A. At the end of each workday, remove empty cans, rags, rubbish, wash water, solvents, and other discarded paint materials from the Site.
- B. Do not clean painting equipment with free draining water. Retain cleaning water and filter out sediments to reduce contaminants entering waterways, drain systems, or into the ground.
- C. Clean glass and paint-spattered surfaces by washing and scraping, using care not to scratch or damage adjacent finished surfaces.
- D. Remove, refinish, or repaint Work not in compliance with specified requirements.
- E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.
- F. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.07 INTERIOR PAINT SCHEDULE

A. Cast-in-Place and Concrete Masonry Units:

1. Walls:

a. Blockfiller:

- 1) Minimum DFT: 8.0 mils minimum.
- 2) Minimum VS: 50 percent.
- 3) S-W: Heavy Duty Block Filler B42W00150

b. Low luster Waterbased Epoxy:

- 1) 2 finish coats.
- 2) Minimum DFT: 4.0 mils minimum per coat.
- 3) Minimum VS: 42 percent.
- 4) S-W: Pro-Industrial Hi-Bild WB Epoxy B71-100

END OF SECTION

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CONSTRUCTION DRAWINGS FOR

WATER TREATMENT FACILITIES

EXTERIOR WALL REPAIR AND

REPOINTING PROJECT

FOR THE CITY OF

BOONE, IOWA

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
2. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH ALL REQUIREMENTS OF THE OWNER. EACH TRADE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PROCEDURES, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THEIR WORK.
3. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE ENGINEERING DEPARTMENTS AND UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO ANY EXISTING UTILITY.
4. THE GENERAL CONTRACTOR SHALL FILE FOR AND OBTAIN ALL REQUIRED PERMITS, LETTERS OF SATISFACTORY COMPLETION AND CERTIFICATES OF OCCUPANCY FROM THE LOCAL BUILDING OFFICIALS.
5. THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PROJECT AREA AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE ACTUAL JOB CONDITIONS PRIOR TO BIDDING AND THE START OF ANY WORK. FAILURE TO VISIT THE SITE SHALL NOT EXEMPT THE CONTRACTOR FROM PERFORMING THE WORK IN ACCORDANCE WITH THESE DRAWINGS.
6. THE CONTRACTOR SHALL VERIFY AT THE SITE, ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS PRIOR TO PROCEEDING WITH THE WORK.
7. THE CONTRACTOR SHALL NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. LARGE SCALE DRAWINGS SHALL GOVERN OVER SMALL SCALE DRAWINGS. NOTES AND DETAILS ON THE DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
8. THE SPECIFICATIONS AS PREPARED SHALL BE CONSIDERED A PART OF THESE DOCUMENTS AS BOUND HEREIN.
9. SUBMIT ALL REQUIRED SHOP DRAWINGS AND DATA IN ACCORDANCE WITH INDIVIDUAL SECTIONS OF THE SPECIFICATIONS.
10. ANY EXISTING MASONRY CONSTRUCTION DAMAGED IN THE REMOVAL OF ADJACENT ELEMENTS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
11. IF MASONRY REPAIRS ARE MADE AT OR BELOW GRADE, CONTRACTOR SHALL RESTORE GRADE TO ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO APPLICABLE MASONRY REPAIR ITEM.
12. ALL SURFACE-MOUNTED FIXTURES AND ACCESSORIES (LIGHTING, DOWNSPOUTS, ETC.) REMOVED DURING REPORTING ARE TO BE REINSTALLED IN THEIR ORIGINAL LOCATION AT THE COMPLETION OF WORK TO THAT AREA.
13. ALL INTERIOR FINISHES (INCLUDING COATINGS AND SEALANTS) THAT ARE DISTURBED OR REMOVED DURING INTERIOR REPAIR WORK SHALL BE REINSTALLED TO THEIR ORIGINAL CONDITION AFTER STRUCTURAL REPAIR WORK IS COMPLETE. REPLACEMENT MATERIALS, COLORS, TEXTURES AND PATTERNS SHALL BE INSTALLED TO MATCH EXISTING CONDITIONS.
14. THE MASONRY REPAIR AND REPOINTING PROJECT INCLUDES WORK ON THE MAIN WATER TREATMENT BUILDING AND THE PUMP STATION BUILDING. THE GENERAL INTENT OF THE PROJECT INCLUDES:
- A. REPOINT CRACKED AND SEPARATED MORTAR JOINTS ON EXTERIOR WALL, REPLACE CRACKED CONCRETE MASONRY FACE SHELLS, AS INDICATED ON PLANS AND IN AREAS WHICH ARE ENCOUNTERED IN FIELD.
- B. CUT NEW CONTROL JOINTS AND EXPANSION JOINTS AND SEAL WITH CAULK AND BACKER ROD PER PLAN AND DETAILS. MEASUREMENT BASED ON LINEAL FEET OF NEW JOINT. INSURED TO BE 1/2" DEEP OF JOINT MEASURED SEPARATELY.
- C. REMOVE GLASS BLOCK WINDOWS AND REPLACE WITH NEW ALUMINUM FRAMED INSULATED WINDOWS ON NORTH WALL OF STRUCTURE AS INDICATED ON PLAN AND DETAILS.
- D. REPOINT MASONRY JOINTS IN VICINITY OF PRECAST DOUBLE TEE BEARING AT SOUTHEAST AND SOUTHWEST CORNERS OF BUILDING INTERIOR.
- E. REPOINT MASONRY JOINTS EXHIBITING CRACKING OR MOISTURE STAINING ON INTERIOR SURFACE OF NORTH WALL AS INDICATED IN DETAILS.
- F. REMOVE IRON DEPOSITS WHERE EVIDENCED BY LEACHING FROM FACE OF CMU AND PATCH CMU WITH REPAIR MORTAR.
- G. INSTALL NEW INSULATED FURRING AND METAL PANEL CLADDING ABOVE UPPER WINDOWS ON NORTH WALL OF WATER TREATMENT BUILDING. LUMP SUM BID FOR INSULATED FURRING AND CLADDING SHALL INCLUDE WORK SHOWN IN DETAILS AND REQUIRED TO COMPLETE THE INSTALLATION.
- H. APPLY BLOCK SEALER TO NORTH AND WEST WALLS OF WATER TREATMENT BUILDING AND ENTIRE PUMP STATION BUILDING UPON COMPLETION OF MASONRY REPAIRS.
15. ALTERNATE A1 INCLUDES: PROVIDE COST FOR REPLACING INDICATED GLASS BLOCK WINDOWS WITH INSULATED TRANSLUCENT PANELS AS DETAILED IN THESE DOCUMENTS. THESE TRANSLUCENT PANEL WINDOWS SHALL BE PROVIDED IN LIEU OF ALUMINUM FRAMED STOREFRONT WINDOWS, WITH THE EXCEPTION OF THE OPERABLE WINDOW WHICH SHALL BE REPLACED WITH ALUMINUM FRAMED WINDOWS.
16. PROVIDE UNIT COSTS FOR REPOINTING, REPAIR, AND FACE SHELL REPLACEMENT WORK IDENTIFIED IN THESE DOCUMENTS, TO EXTENTS AS DIRECTED BY ENGINEER. ACTUAL QUANTITIES FOR THESE ITEMS MAY VARY FROM ESTIMATED QUANTITIES.
- A. REPLACE CMU FACE SHELLS - COST PER SQUARE FOOT
- B. REPOINT MORTAR JOINTS - COST PER LINEAR FOOT
- C. REPLACE CONTROL JOINT SEALANT - COST PER LINEAR FOOT
- D. INSTALL NEW EXPANSION JOINT - COST PER LINEAR FOOT
- E. INSTALL NEW CONTROL JOINT - COST PER LINEAR FOOT
- F. REPLACE SEALANT AT WINDOWS AND DOORS - COST PER LINEAR FOOT
- G. REMOVE AND PATCH LOCATIONS OF IRON DEPOSITS - COST PER EACH
- H. APPLY CONCRETE BLOCK SEALER - COST PER SQUARE FOOT
17. THE PHOTOS CONTAINED IN THESE DOCUMENTS ARE INTENDED TO ILLUSTRATE THE GENERAL EXISTING CONDITIONS AND ARE FOR THE CONTRACTORS INFORMATION ONLY. THESE PHOTOS DO NOT SHOW OR ATTEMPT TO REPRESENT ALL EXISTING CONDITIONS. THE CONTRACTOR MUST VISIT THE SITE AND INSPECT ALL EXISTING CONDITIONS TO REVIEW PROJECT SCOPE PRIOR TO BIDDING.
18. MORTAR JOINTS THAT REQUIRE REPOINTING ARE THOSE WHICH EXHIBIT ONE OR MORE OF THE FOLLOWING CONDITIONS:
- A. HAIRLINE AND LARGER CRACKS RUNNING VERTICALLY OR HORIZONTALLY THROUGH THE MORTAR
- B. MORTAR NOT ADHERING TO THE MASONRY.
- C. OPEN JOINTS WITH NO MORTAR (UNLESS JOINTS WERE DELIBERATELY LEFT OPEN TO PERMIT WATER TO "WEEP" OUT OF THE WALL.)
- D. MORTAR ERODED BACK MORE THAN 1/4" FROM THE FACE OF THE MASONRY.
- E. MORTAR WHICH IS CRUMBLING AND FRAGILE.
19. CONCRETE MASONRY UNITS THAT REQUIRE FACE SHELL REMOVAL AND REPLACEMENT ARE THOSE WHICH EXHIBIT ON OR MORE OF THE FOLLOWING CONDITIONS:
- A. A. SPALLING OF FACE OR CORNERS OF MASONRY UNITS.
- B. UNIT IS CRACKED OR SPLIT.
- C. WALL SECTION OR UNITS ARE DISPLACED 1/2" OR MORE OUT OF A STRAIGHT AND TRUE PLANE.
- D. INDIVIDUAL UNITS THAT ARE 1/4" OR MORE OFFSET FROM ADJACENT UNITS AT JOINTS OR CORNERS.

PROJECT MANAGER

PERRY K. GJERSVIK, PE

CONTACT INFORMATION

515.608.6005 direct
515.240.1921 mobile
pgjersvik@sehinc.com

STRUCTURAL ENGINEER OF RECORD

BENJAMIN A. WOLF, PE

CONTACT INFORMATION

507.316.6648 direct
507.254.0431 mobile
bwolf@sehinc.com

CITY ENGINEER - UTILITIES SUPERINTENDENT

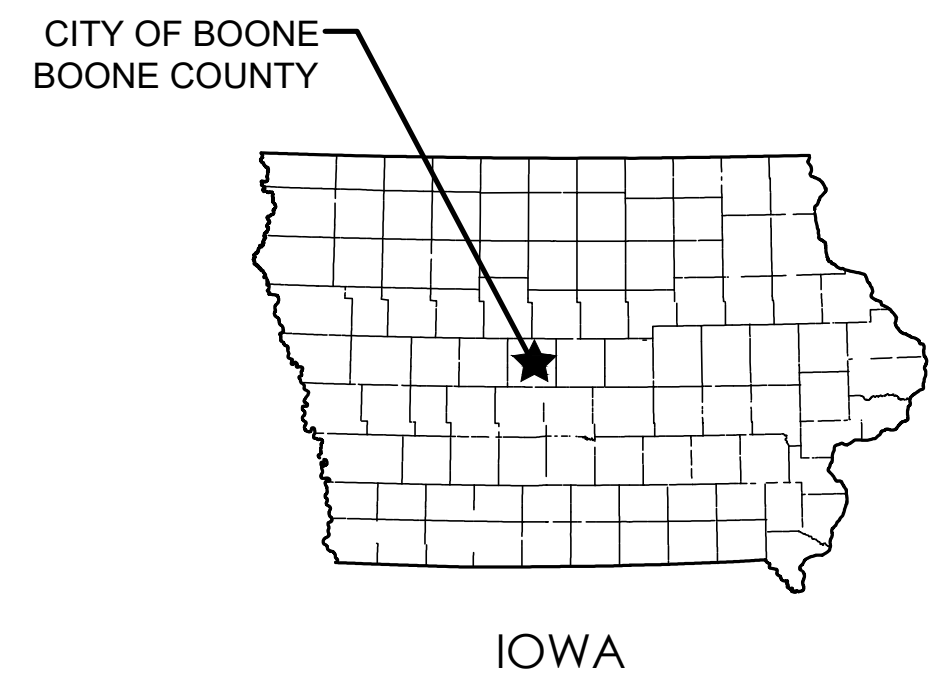
DANIEL SCOTT, PE

CONTACT INFORMATION

515.432.4211 ext. 1109
dscott@city.boone.ia.us

SHEET INDEX

S1.0 - GENERAL NOTES AND DETAILS
S2.0 - WATER TREATMENT BUILDING OVERALL PLAN
S2.1 - UPPER LEVEL FLOOR PLAN
S2.2 - WATER TREATMENT BUILDING ELEVATIONS
S2.3 - DETAIL IMAGES
S2.4 - DETAIL IMAGES
S3.1 - PUMP STATION BUILDING ELEVATIONS
S4.0 - DETAILS

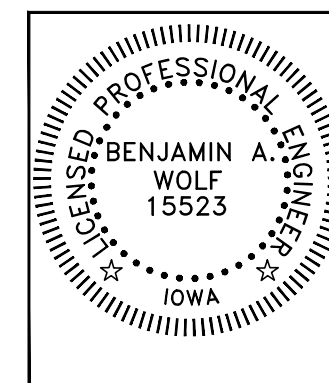


PROJECT ADDRESS:
1190 - 188th Road
Boone, IA 50036

- WATER TREATMENT BUILDING



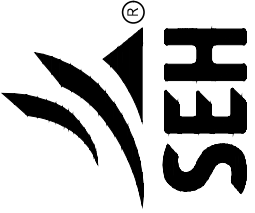
PUMP STATION
BUILDING



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

Benjamin A. Wolf	Date: 06-14-2021
My License renewal date is December 31, 2022	
Pages or sheets covered by this seal: \$1.0 - \$4.0	

5414 NW 88th STREET
SUITE 140
JOHNSTON, IA 50131-1701
PHONE: 515.608.6000
FAX: 888.908.8166
www.sehinc.com



WTF EXTERIOR WALL REPAIR
AND REPOINTING PROJECT
BOONE, IA

MARK	DATE	DESCRIPTION REVISIONS

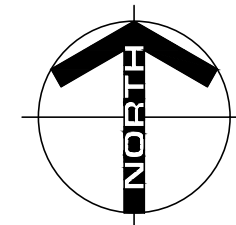
FILE NO.	BOONE 154710
E DATE	06-14-2021
IGNED BY	BWOLF
OWN BY	NSIEMS

Short Elliott Hendrickson, Inc.  (SEH)

SHEET TITLE	GENERAL NOTES AND DETAILS

SHEET

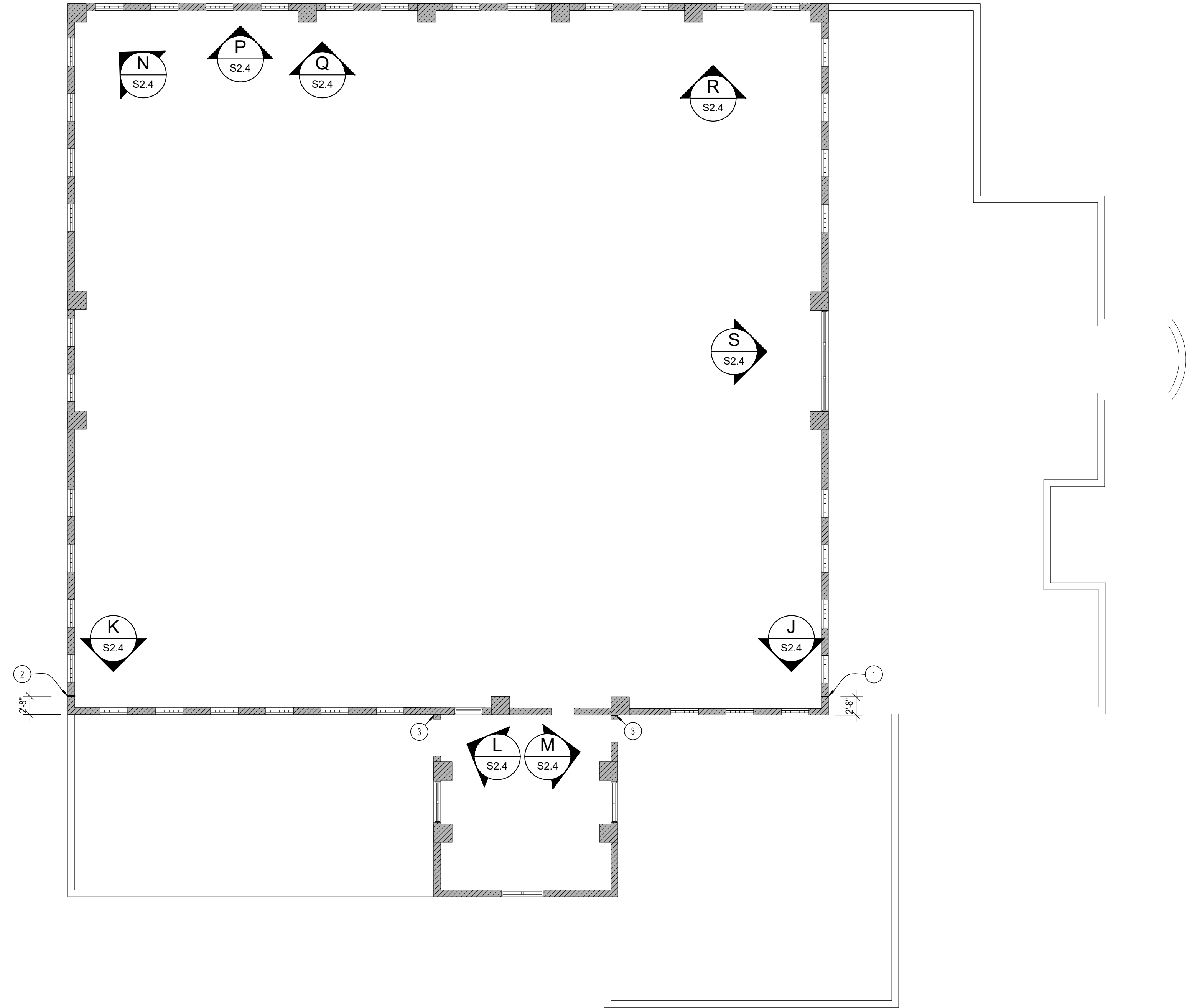
S1.0



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

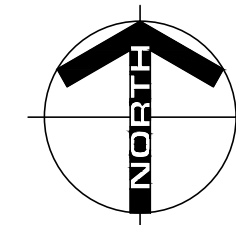
PLAN VIEW

- ① CUT NEW ½" THICK FULL DEPTH EXPANSION JOINT. FILL WITH BACKER ROD AND CAULK AT INSIDE AND OUTSIDE FACE. SEE UPPER LEVEL FRAMING PLAN.
- ② REPLACE UPPER LEVEL GLASS BLOCK WINDOWS ALONG NORTH WALL WITH NEW ALUMINUM FRAMED WINDOWS AS NOTED. SEE ELEVATIONS ON SHEET S2.1. ALTERNATE #1: REPLACE WITH TRANSLUCENT PANEL WALL SYSTEM AS DETAILED.
- ③ SEE UPPER LEVEL FLOOR PLAN FOR INTERIOR WORK WITHIN BUILDING.
- ④ INSTALL NEW INSULATED FURRING AND METAL PANEL CLADDING ON NORTH WALL ABOVE UPPER WINDOWS. SEE DETAILS AND SPECIFICATIONS.
- ⑤ APPLY BLOCK SEALER TO NORTH WALL, WEST WALL, AND EAST WALL TO NEW JOINT.



KEYNOTES:

- ① NEW ½" WIDE FULL DEPTH EXPANSION JOINT - IN EXPOSED WALL ABOVE LOW ROOF (SEE DETAIL.)
- ② NEW ½" WIDE FULL DEPTH EXPANSION JOINT - IN LOCATION OF EXISTING CONTROL JOINT (SEE DETAIL)
- ③ NEW ¾" WIDE CONTROL JOINT AT INSIDE AND OUTSIDE FACE OF LIME STORAGE ROOM WALLS INTERSECTION MAIN WATER PLANT WALLS.



1
S2.1

ORIGINAL SCALE: $\frac{3}{32}'' = 1'-0''$

UPPER LEVEL FLOOR PLAN

SHEET TITLE

UPPER LEVEL FLOOR PLAN

SHEET

S2.1

SEH FILE NO.	BOONE 154710
ISSUE DATE	06-14-2021
DESIGNED BY	BWOLF
DRAWN BY	NSIEMS

Short Elliott Hendrickson, Inc. (SEH)

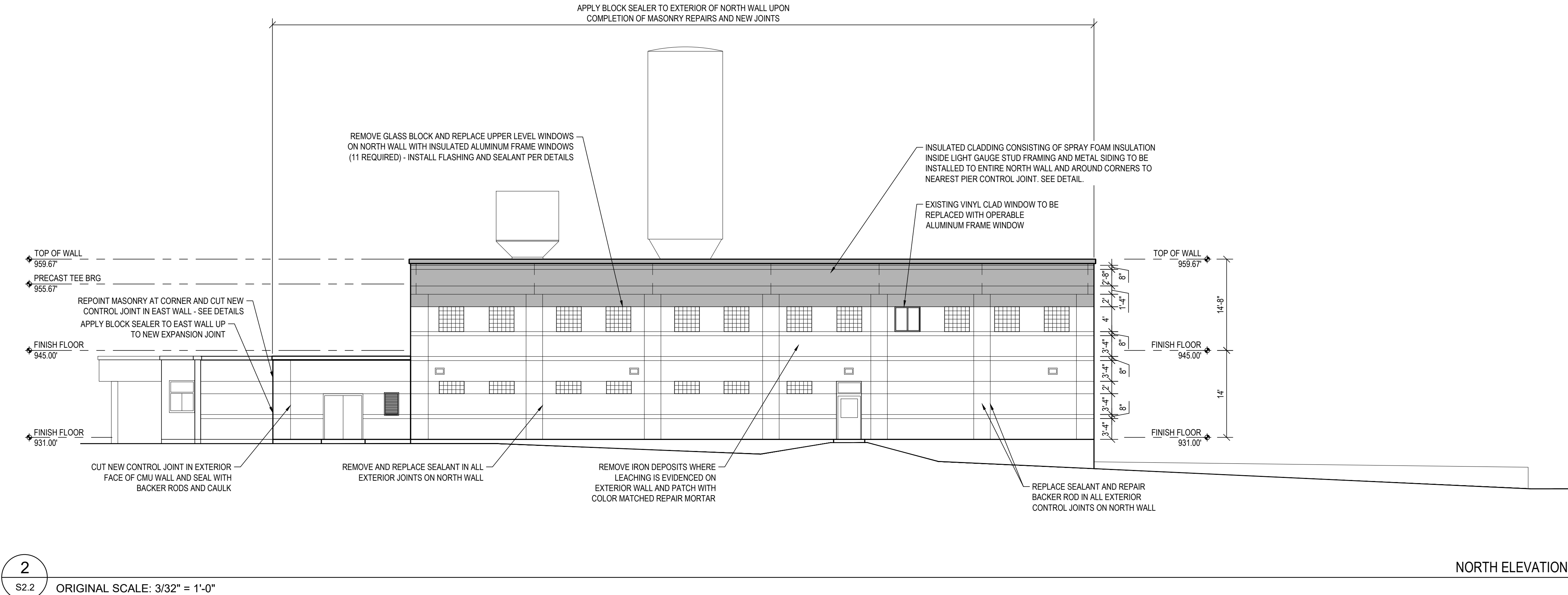
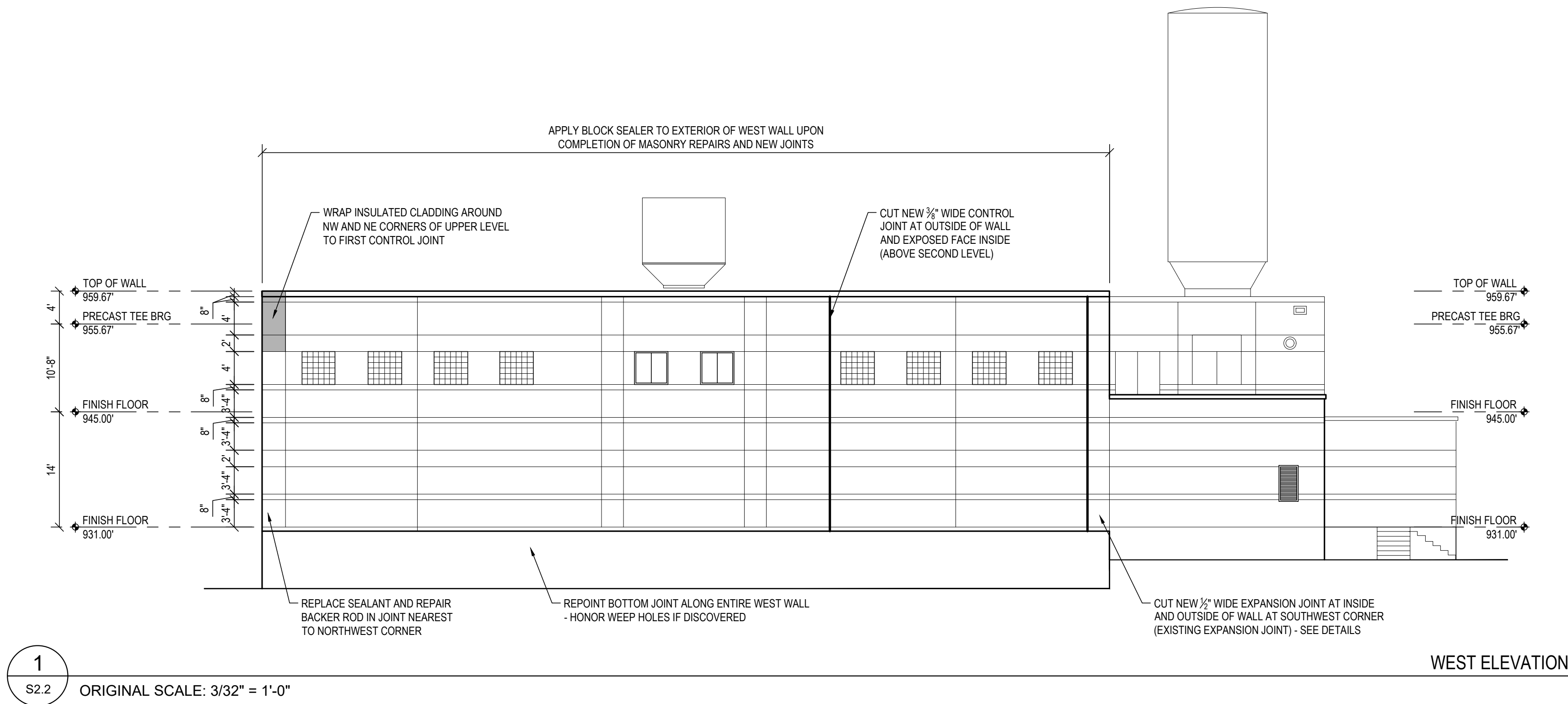
Short Elliott Hendrickson, Inc. ® (SEH)

MARK	DATE	DESCRIPTION	REVISIONS

WTF EXTERIOR WALL REPAIR
AND REPOINTING PROJECT
BOONE, IA



5414 NW 88th STREET
SUITE 140
JOHNSTON, IA 50131-1701
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PHONE: 565.698.8900
FAX: 565.502.8165
www.sehinc.com

WTF EXTERIOR WALL REPAIR
AND REPOINTING PROJECT
BOONE, IA

MARK	DATE	DESCRIPTION
REVISIONS		

SHEET TITLE
WATER TREATMENT
BUILDING ELEVATIONS

SHEET
S2.2

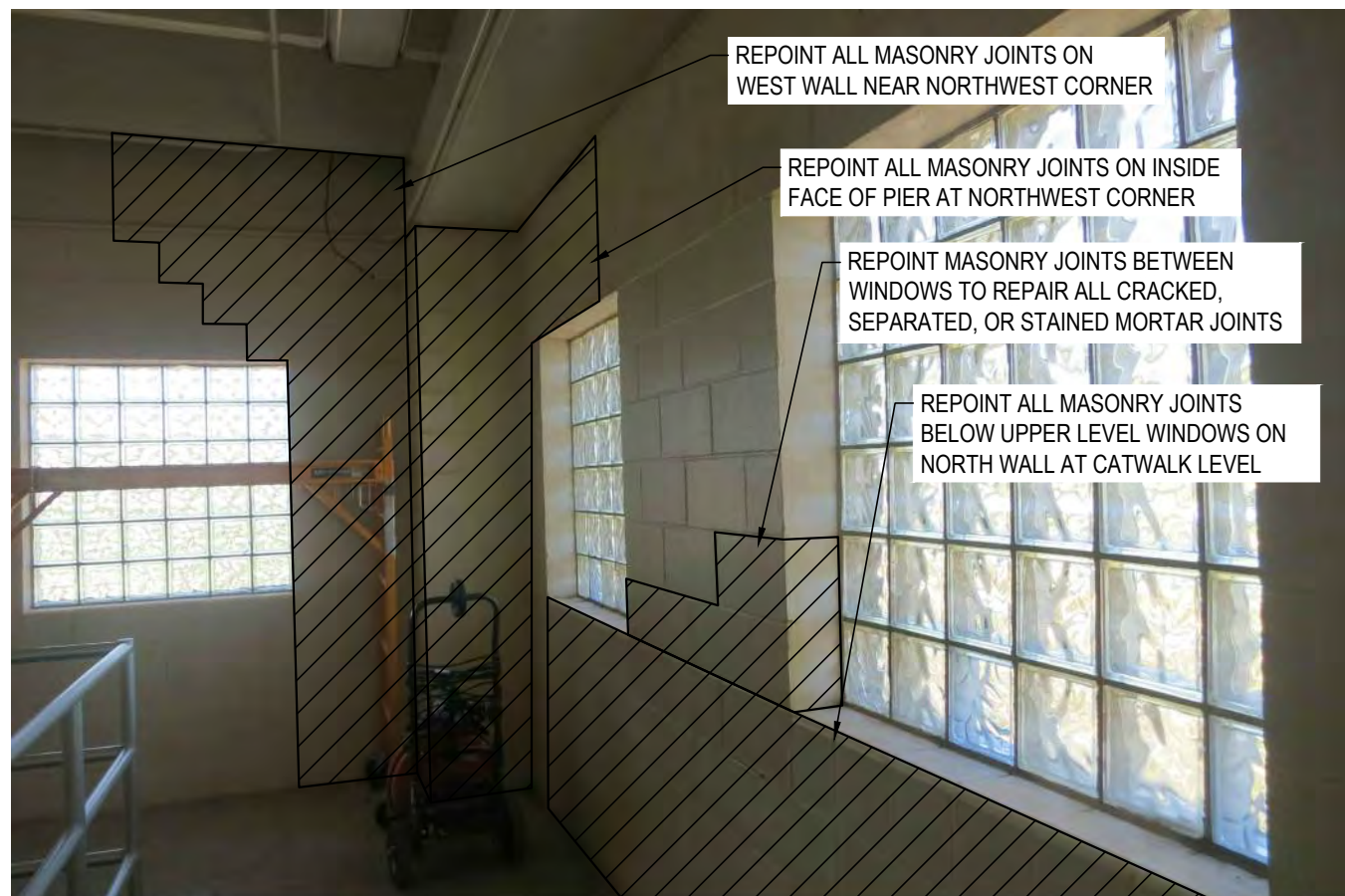
SEH FILE NO.
154710
ISSUE DATE
06-14-2021
DESIGNED BY
BWOLF
DRAWN BY
NSIEMS

BOONE 154710
06-14-2021
BWOLF
NSIEMS

Short Elliott Hendrickson, Inc. © (SEH)



J INTERIOR SOUTHEAST CORNER INSIDE AT UPPER LEVEL
S2.3 ORIGINAL SCALE: 1' = 1'-0"



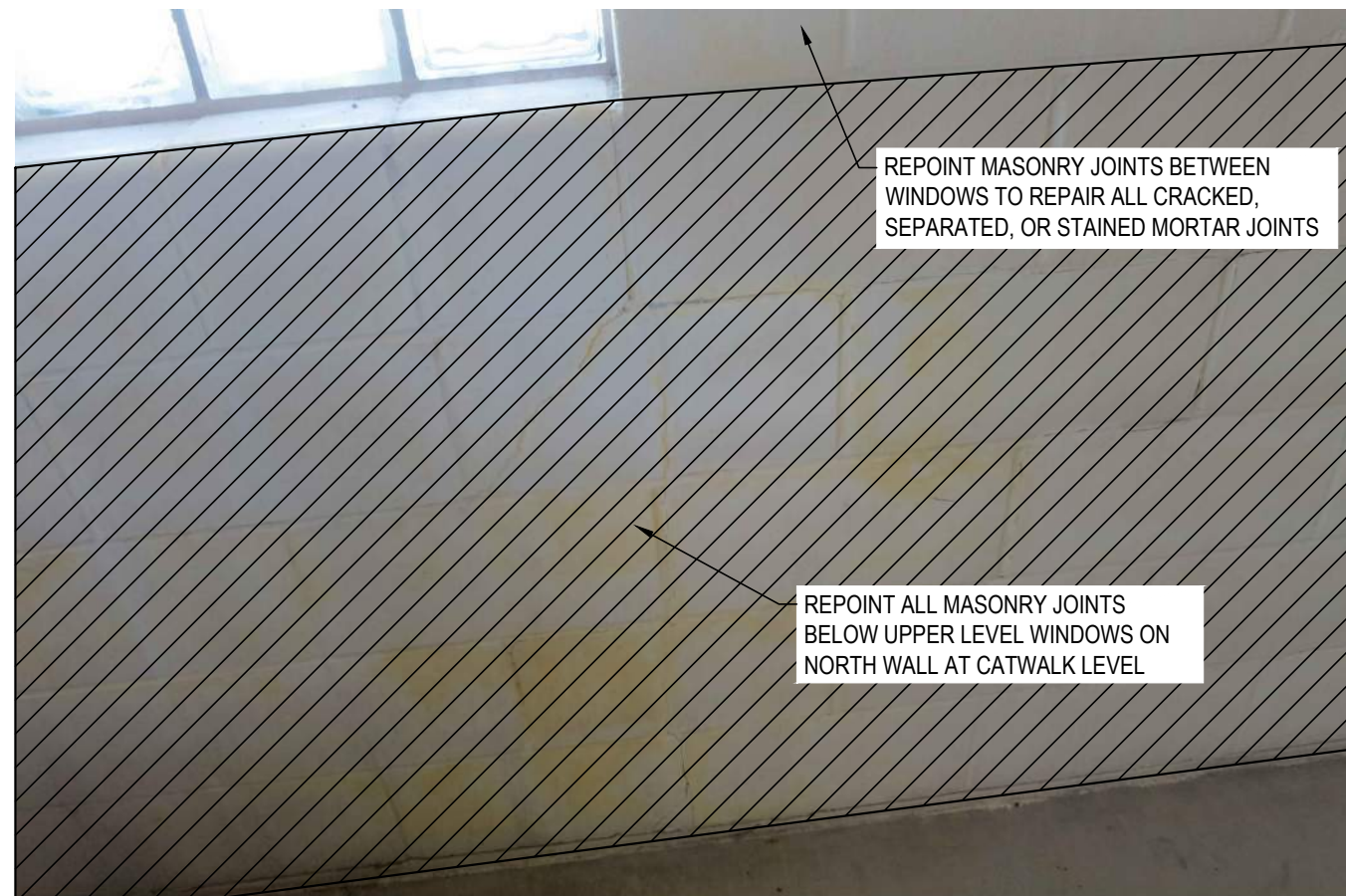

 INTERIOR NORTHWEST CORNER
 S2.4 ORIGINAL SCALE: 1' = 1'-0"



Q NORTH WALL NEAR MIDDLE LOOKING EAST
S2.4 ORIGINAL SCALE: 1' = 1'-0"



K INTERIOR SOUTHWEST CORNER INSIDE AT UPPER LEVEL
S2.3 ORIGINAL SCALE: 1' = 1'-0"



P NORTH WALL BETWEEN WINDOWS
S2.4 ORIGINAL SCALE: 1' = 1'-0"



R INTERIOR NORTH WALL AT NORTHEAST CORNER
S2.4 ORIGINAL SCALE: 1' = 1'-0"



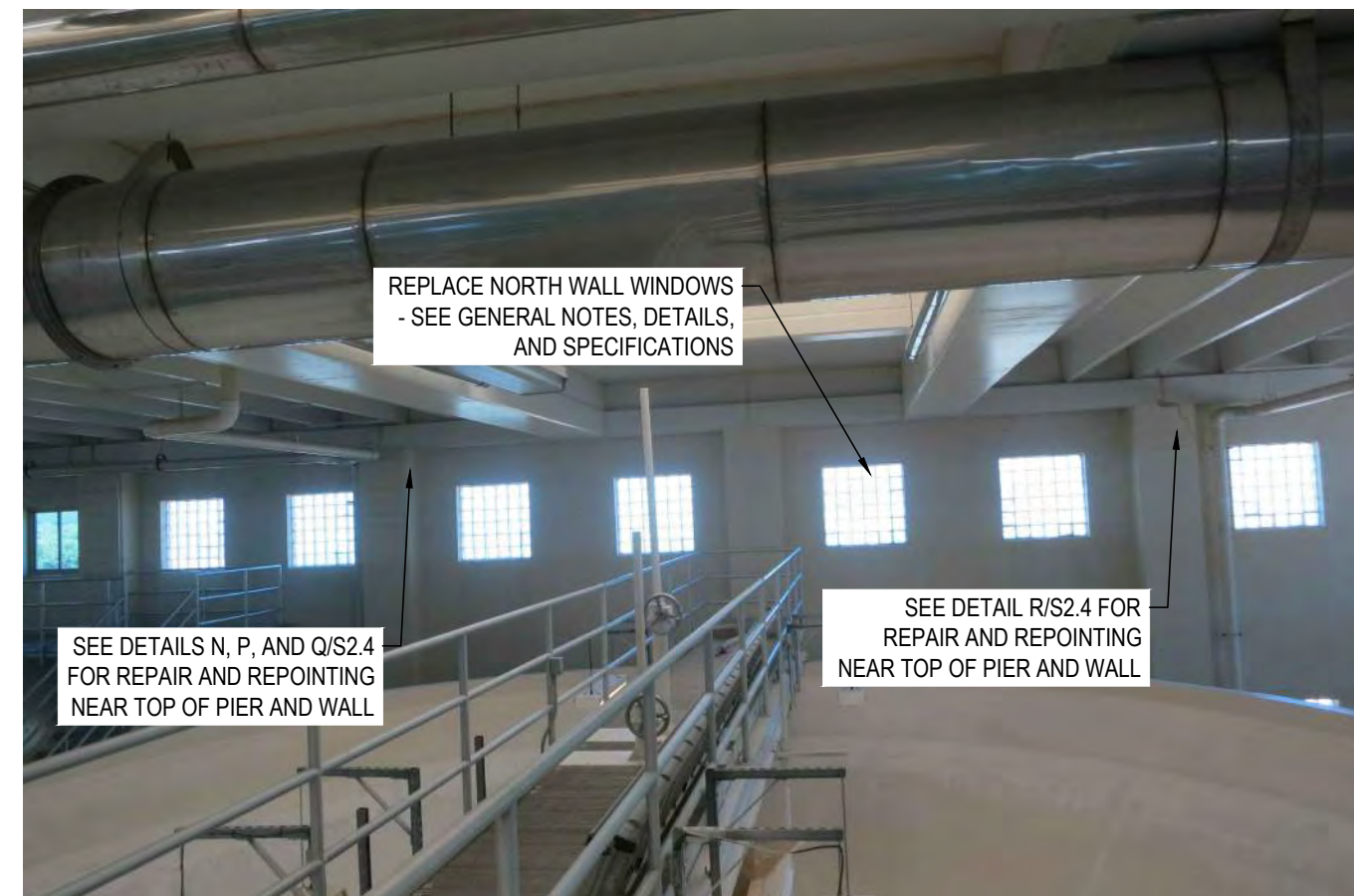
L INTERIOR NW CORNER OF LIME STORAGE ROOM
S2.3 ORIGINAL SCALE: 1' = 1'-0"



S INTERIOR WALL OF ARCH OVER ENTRY LOBBY
S2.4 ORIGINAL SCALE: 1' = 1'-0"




 INTERIOR NE CORNER OF LIME STORAGE ROOM
 ORIGINAL SCALE: 1' = 1'-0"



T
S2.4 ORIGINAL SCALE: 1' = 1'-0" NORTH WALL INTERIOR



REPAIRS AND CUTTING NEW CONTROL JOINTS





A

S3.2

ORIGINAL SCALE: 1' = 1'-0"

SOUTH CORNER WINDOW



B

S3.2

ORIGINAL SCALE: 1' = 1'-0"

NORTH CORNER OF UPPER LEVEL

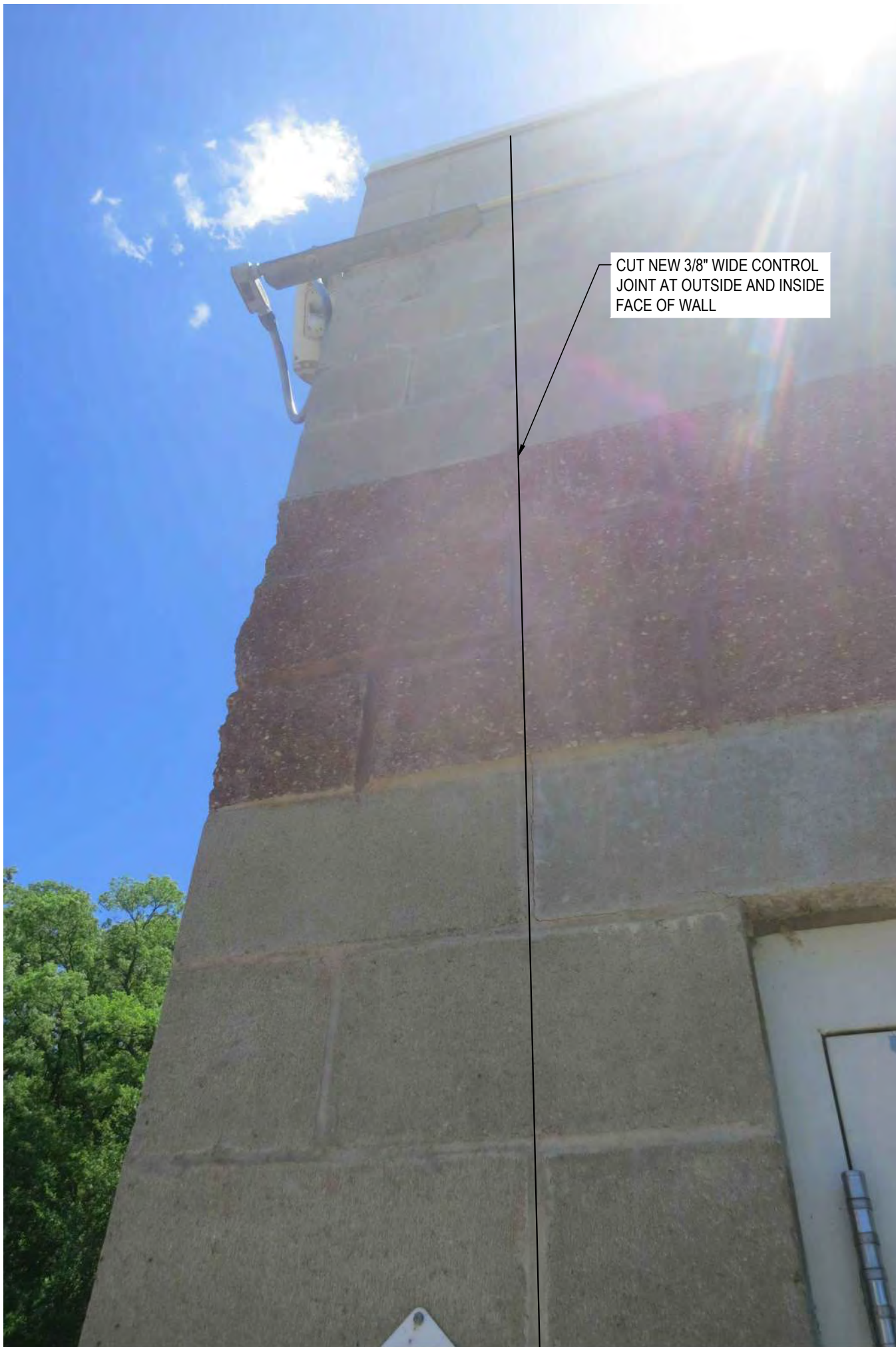


C

S3.2

ORIGINAL SCALE: 1' = 1'-0"

NORTHWEST WALL



D

S3.2

ORIGINAL SCALE: 1' = 1'-0"

NORTH CORNER EXTERIOR

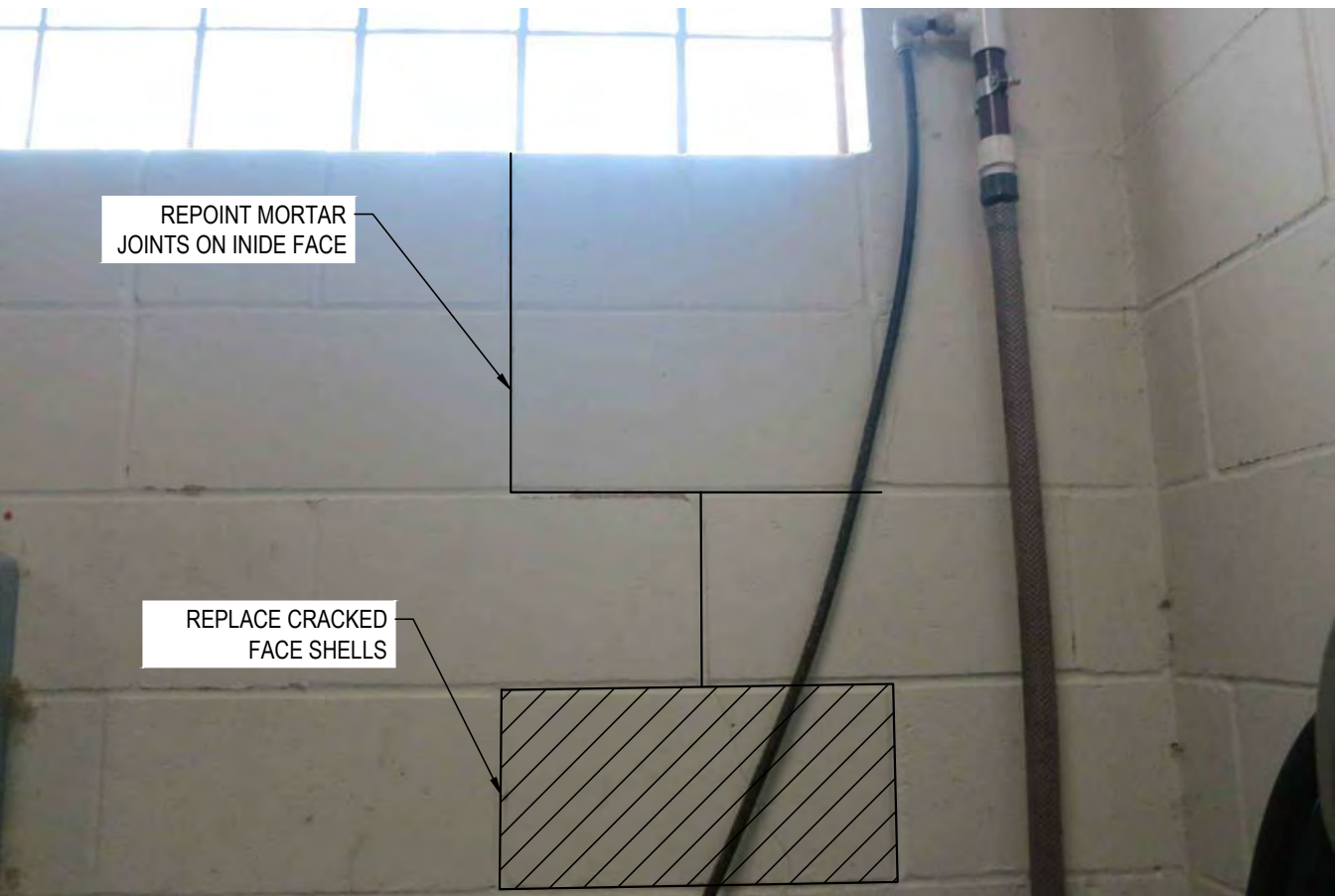


E

S3.2

ORIGINAL SCALE: 1' = 1'-0"

NORTH CORNER INTERIOR



F

S3.2

ORIGINAL SCALE: 1' = 1'-0"

SOUTHWEST WALL OF UPPER LEVEL

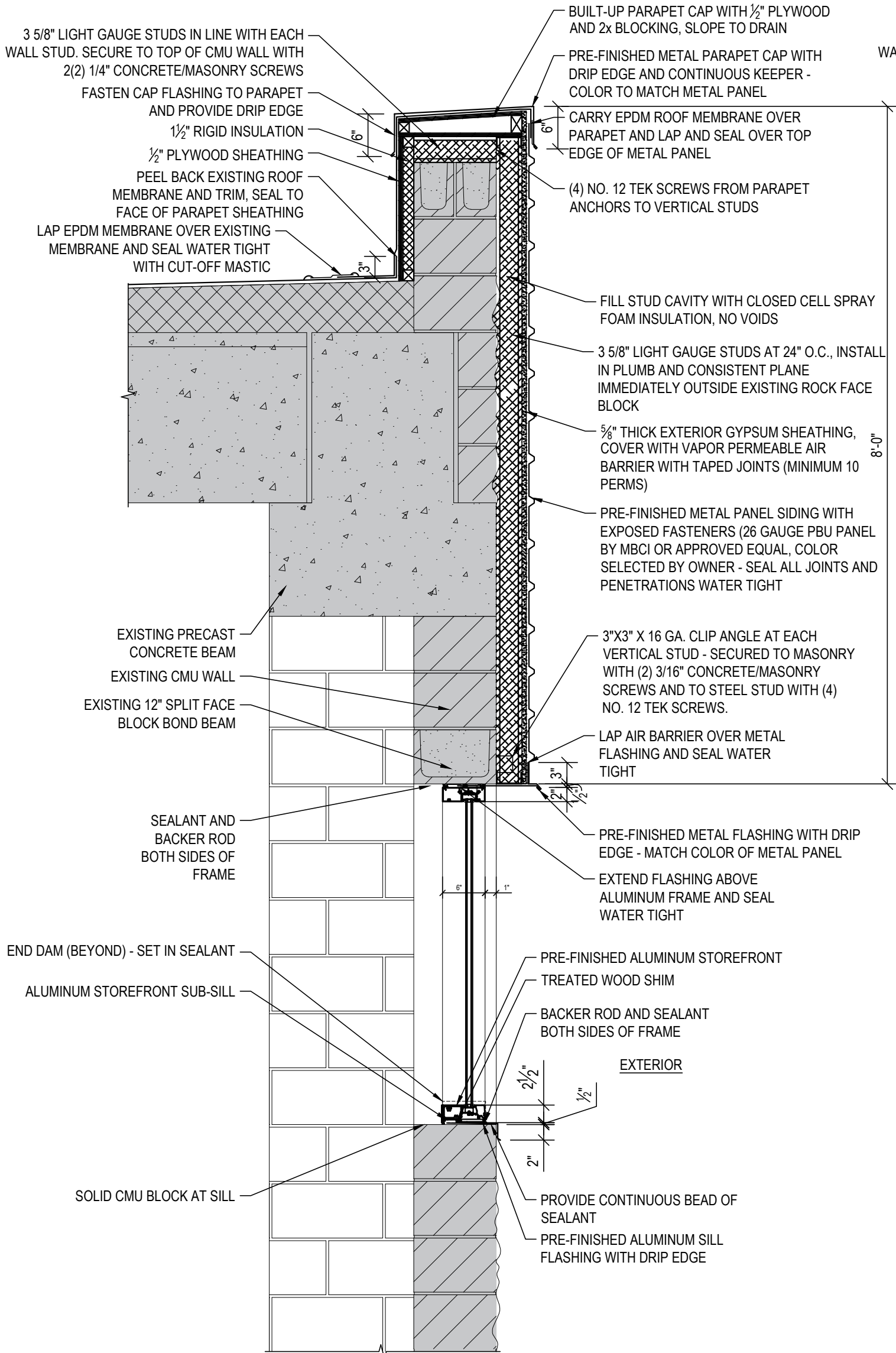


G

S3.2

ORIGINAL SCALE: 1' = 1'-0"

NORTH CORNER OF UPPER LEVEL

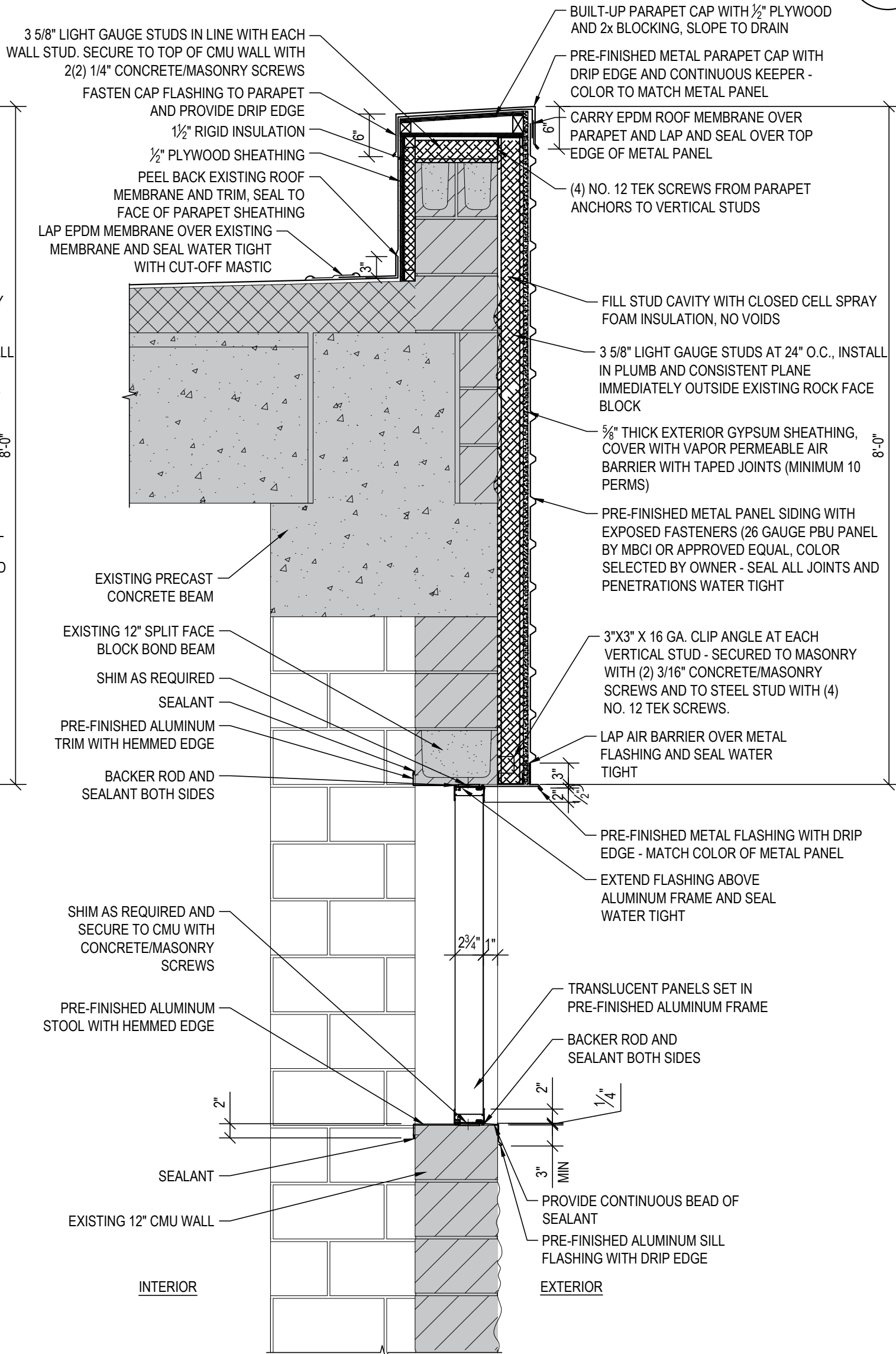


E

S4.0

SECTION THROUGH ALUMINUM WINDOW

ORIGINAL SCALE: 3/4" = 1'-0"

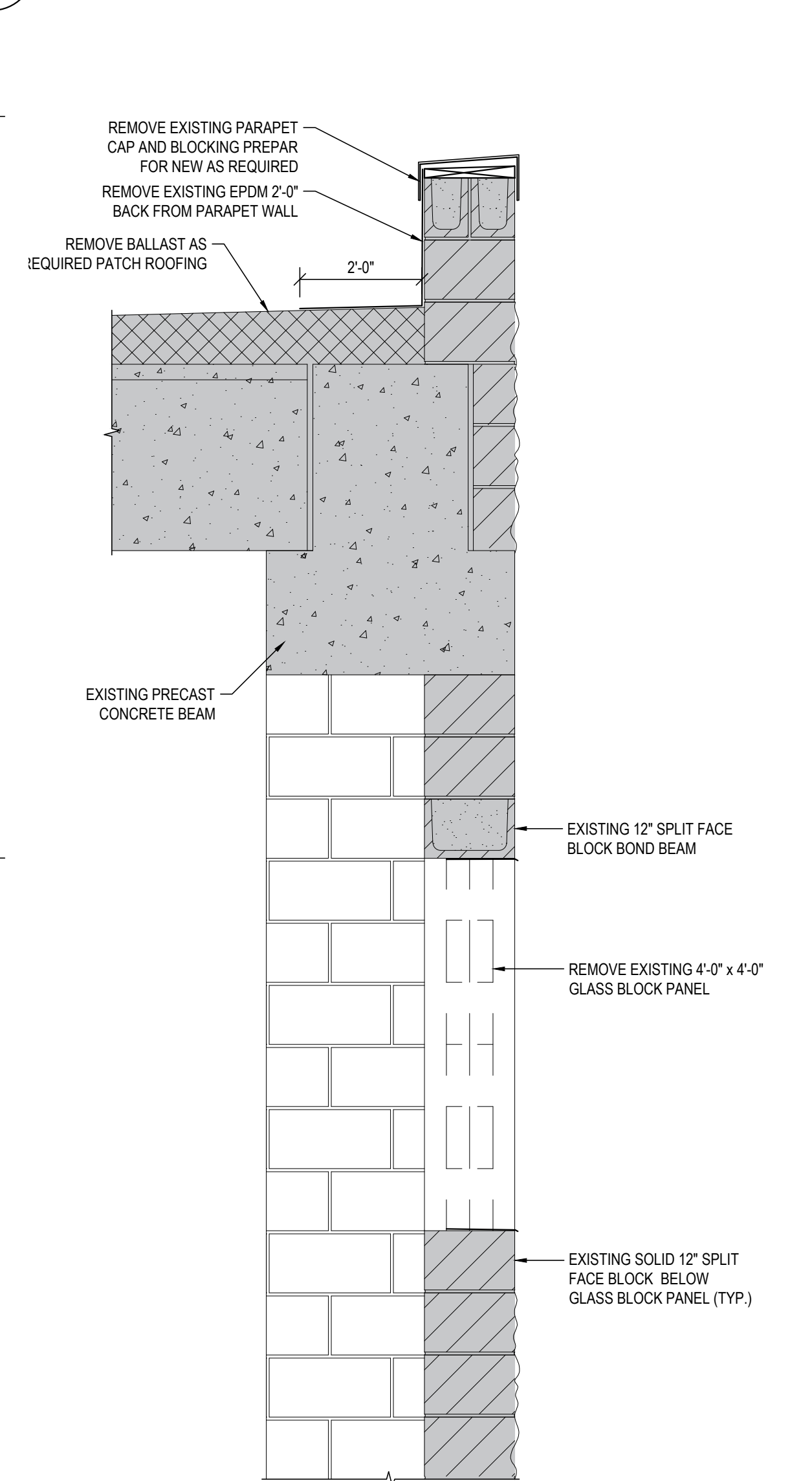


F

S4.0

SECTION THROUGH TRANSLUCENT PANEL

ORIGINAL SCALE: 3/4" = 1'-0"

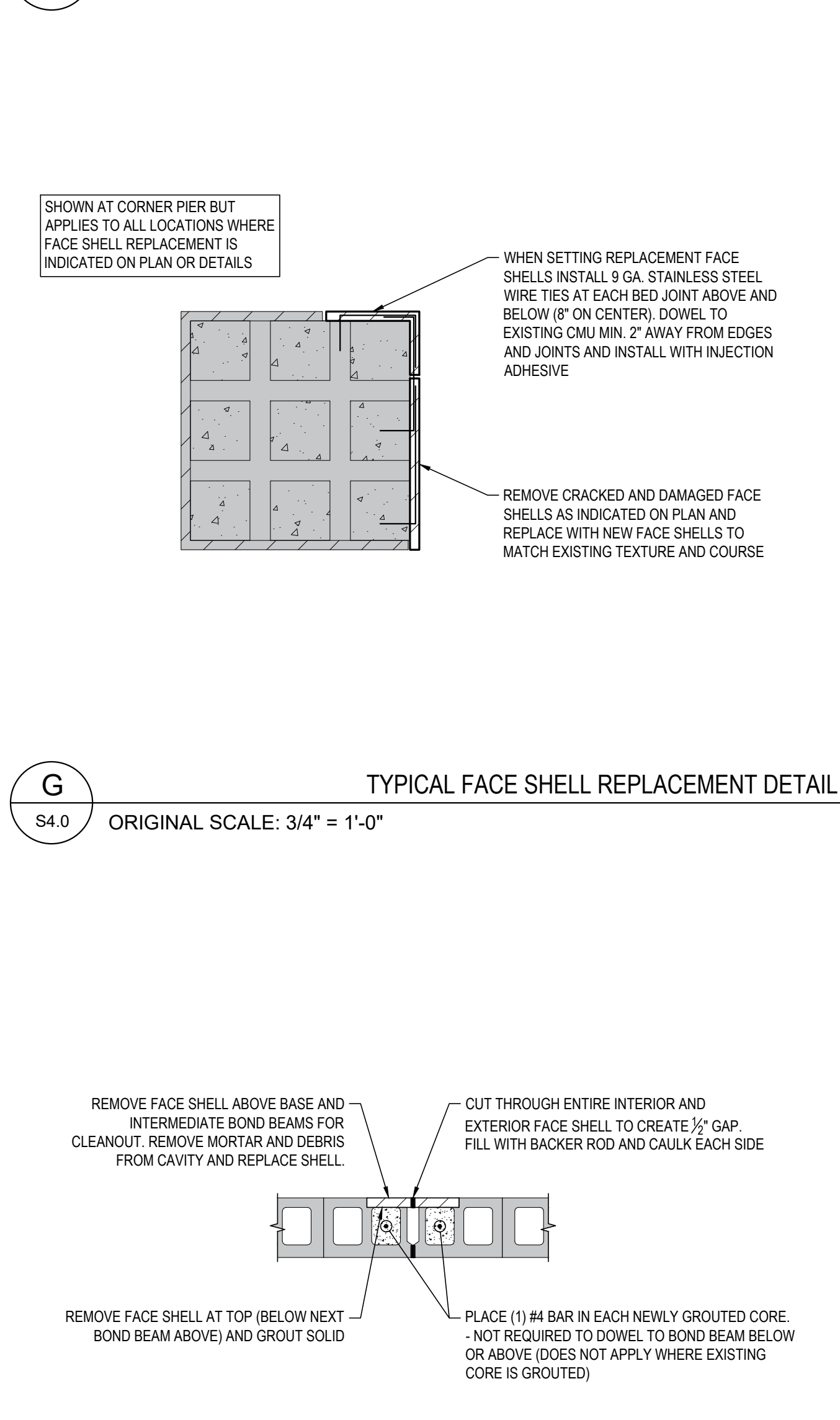


C

S4.0

GLASS BLOCK WINDOW DEMO SECTION

ORIGINAL SCALE: 3/4" = 1'-0"

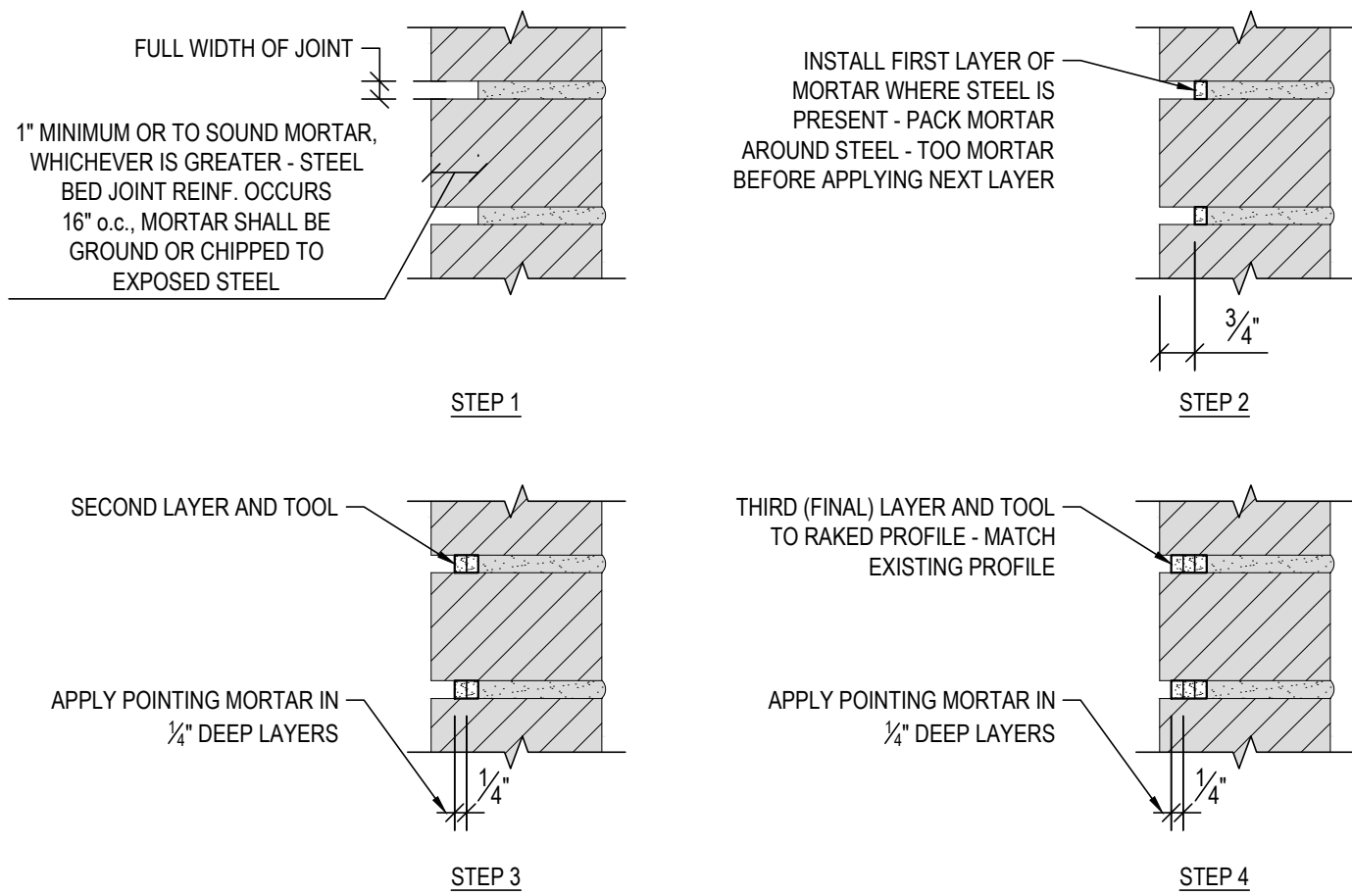


D

S4.0

TYPICAL NEW EXPANSION JOINT DETAIL

ORIGINAL SCALE: 3/4" = 1'-0"

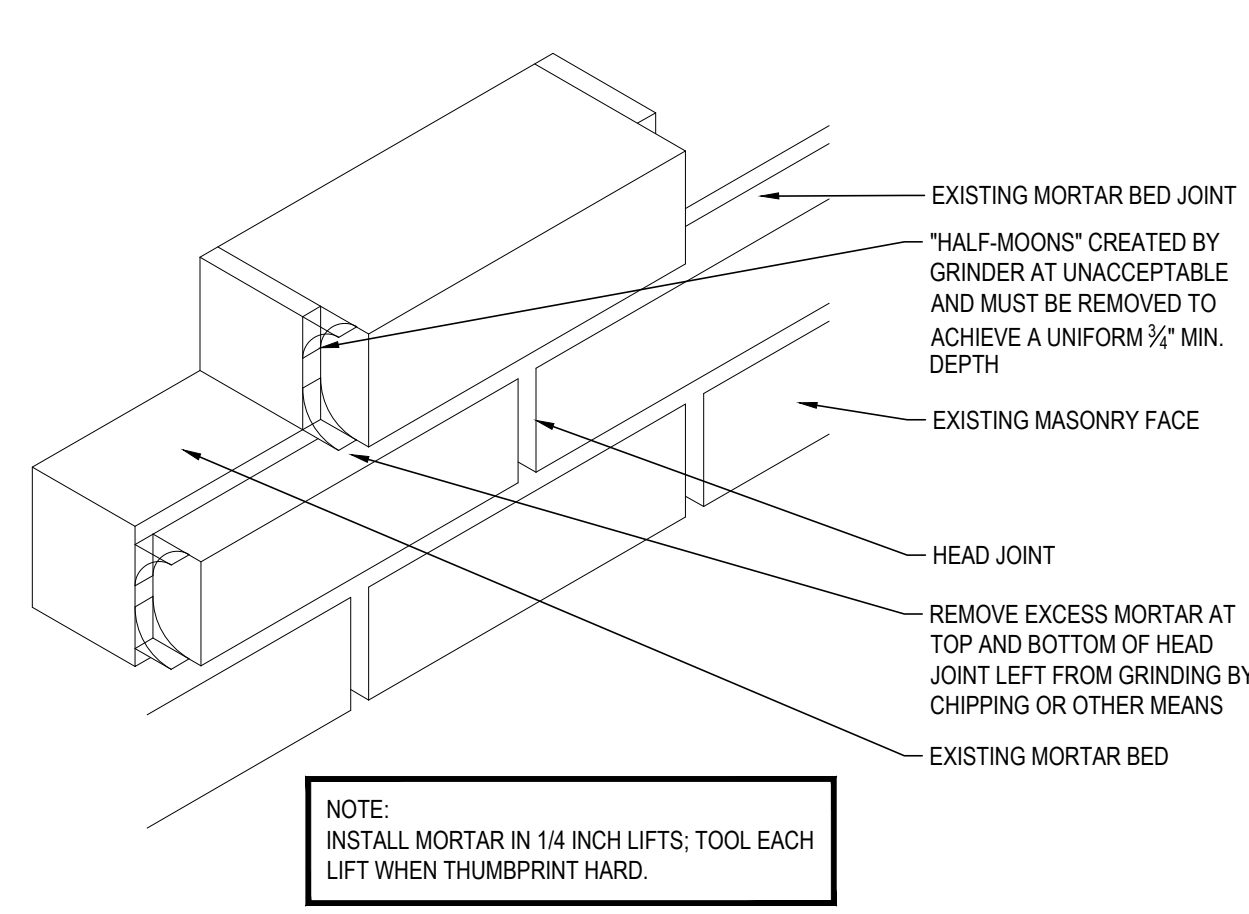


A

S4.0

REPOINTING DETAILS

ORIGINAL SCALE: 3" = 1'-0"



B

S4.0

REPOINTING ISOMETRIC VIEW

ORIGINAL SCALE: 3" = 1'-0"

CITY COUNCIL
CITY OF BOONE, IOWA

RESOLUTION NO. 2896
APPROVING THE HIRING OF A NEW FULL TIME FIRE FIGHTER TO FILL A
VACANT POSITION FOR THE BOONE FIRE DEPARTMENT

WHEREAS, the City desires to fill a vacant full-time Fire Fighter position within the Boone Fire Department; and

WHEREAS, the Civil Service Commission has developed a Civil Service List, of Applicants that have successfully completed a physical agility test, a written test, and an interview; and

WHEREAS, the City Council of Boone, Iowa has certified the Civil Service List as recommended by the Civil Service Commission; and

WHEREAS, the City Council would like to retain the services of Jacob Demastus as a full-time Fire Fighter for the City of Boone.

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

Section 1: That the Fire Chief, is now authorized to enter into an Employment Agreement with Jacob Demastus with an effective date of July 5, 2021.

Section 2: That the City will provide certain benefits, establish certain conditions of employment, and to set working conditions of the Fire Fighter.

Section 3: That based on Demastus’s knowledge and experience, Jacob Demastus’s wage will be set at the one (1) year salary, of \$4,744.10 per month, set by the Fire Union Contract.

Section 4: That the City of Boone will reimburse Jacob Demastus in the amount of \$5,000.00 for the reimbursement of Paramedic School tuition. Reimbursement shall be paid at \$2,500.00 at the time of hire, and \$2,500.00 at his one (1) year anniversary.

Passed this 5th day of July, 2021.

AYES (A), NAYES (N), ABSENT (X): ABSTAIN (/)

BJ McGinn ☐
Steven Ray ☐
Terry Moorman ☐

David Byrd ☐
Holly Stecker ☐

Elijah Stines ☐
Greg Piklapp ☐

Mayor
City of Boone

Clerk
City of Boone

CITY COUNCIL
CITY OF BOONE, IOWA

RESOLUTION NO. 2897
APPROVING THE HIRING OF A NEW FULL TIME POLICE OFFICER TO FILL A
VACANT POSITION FOR THE BOONE POLICE DEPARTMENT

WHEREAS, the City desires to fill a vacant full-time police officer position within the Boone Police Department; and

WHEREAS, the Civil Service Commission has developed a Civil Service List, of Applicants that have successfully completed a physical agility test, a written test, and an interview; and

WHEREAS, the City Council of Boone, Iowa has certified the Civil Service List as recommended by the Civil Service Commission.

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

Section 1: The authorization to hire Jessica R. Hinz as a full-time Police Officer for the City of Boone.

Section 2: That the City will provide certain benefits, establish certain conditions of employment, and to set working conditions of the Police Officer.

Section 3: That Hinz’s wage shall be set at \$4,420.84 per month, as stated in the Police Union Contract.

Passed this 5th day of July, 2021.

AYES (A), NAYES (N), ABSENT (X): ABSTAIN (/)

BJ McGinn	☐	David Byrd	☐	Elijah Stines	☐
Steven Ray	☐	Holly Stecker	☐	Greg Piklapp	☐
Terry Moorman	☐				

Mayor
City of Boone

Clerk
City of Boone

CITY COUNCIL
CITY OF BOONE, IOWA

RESOLUTION NO. 2898
AUTHORIZING PUFFERBILLY DAYS COMMITTEE CERTAIN AUTHORITIES
WITHIN THE RIGHT OF WAY OF THE CITY OF BOONE FOR THE PURPOSE OF
SAFETY AND ORGANIZATION OF THE PUFFERBILLY DAYS EVENT

WHEREAS, the Pufferbilly Days Committee has requested authority of certain described public property during the Pufferbilly Days celebration; and

WHEREAS, the purpose of the Committee’s request is to aid in vendor control, parking availability, parade safety and overall general safety of the public during Pufferbilly Days; and

WHEREAS, this resolution grants the Committee the necessary authority to develop and enforce policy decisions concerning the festival; and

WHEREAS, the passage of this resolution will aid in the long-range planning and growth of the festival as well as establish the necessary guidelines and authority for overall control.

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

Section 1: That the City Council hereby grants to the Pufferbilly Days Committee control and supervision of the following described area for and during the 2021 celebration, subject to all police powers of the city of Boone and the laws of the state of Iowa:

Everything south of 12th Street within corporate limits.

PASSED THIS 5th day of July, 2021.

AYES (A), NAYES (N), ABSENT (X) ABSTAIN (/):

Greg Piklapp	☐	Holly Stecker	☐	Terry Moorman	☐
B.J. McGinn	☐	David Byrd	☐	Elijah Stines	☐
Steven Ray	☐				

Mayor
City of Boone

Clerk
City of Boone



June 29, 2021

Dear Administrator Skare,

Enclosed in this packet are detailed charts of street closures, maps, and itemized event requests related to the 2021 Pufferbilly Days™ celebration, to be held August 6-8, 2021. The maps include notes where key activities will take place, specific street closure locations and times, and notes identifying the control of the streets and right of way we are requesting in order to conduct Pufferbilly Days™ in downtown Boone. If you could please add these to the next city council agenda for approval, it would be greatly appreciated.

We have applied for our beer license for the festival, which is pending DRAM shop insurance verification.

If you or city council members have any questions on the information in this packet, please reach out so we may address them right away. If you would like a staff member to appear at a council meeting to discuss further, we can make that arrangement as well.

Thank you for the City of Boone's ongoing support to make Pufferbilly Days™ a successful event.

Sincerely,

Laura Bade
Communication & Events Director
Boone County Chamber of Commerce

Mike Hammond
Interim Executive Director
Boone County Chamber of Commerce

Pufferbilly Days™ 2021

The 2021 Pufferbilly Days™ Steering Committee respectfully invites your consideration of the following street and parking lots closings for our planned celebration. All days listed below correspond to the set-up and celebration of the festival, August 6-8, unless otherwise noted with specific dates.

Street	Day	Distance	Time Frame
Story Street	Thursday Friday Sat. & Sun. Sat. ONLY	8 th to 9 th OPENING CEREMONIES 7 th to 10 th CAR SHOW 6 th to 10 th CRAFT FAIR 10th to 11th (not blocking 10th or 11th)- BSVRR Trolley loading + Spike Driving	3pm to 8pm 4pm to 9pm 4am (8/7) to 5pm (8/8) 6am to 8pm
7 th Street	Sat. & Sun. Fri.	Alley west of Story to alley East of Story - CRAFT FAIR Alley west of Story to alley East of Story CAR SHOW	4am-Mid (8/7) to 5am-5pm (8/8) 4pm to 9pm (8/6)
8 th Street	Thursday Friday Saturday Sunday	Alley west of Story - Allen St OPENING CEREMONIES Alley west of Story - Allen St. CAR SHOW Story to Allen St. MOTORCYCLE SHOW Alley west of Story - Allen St. FAMILY FUN DAY & CHURCH SERVICE	3pm to 8pm 4pm to 9pm (8/6) 6am-4pm (8/7) 6am to 5pm (8/8)
MAIN FESTIVAL AREA			
9 th Street	Tues. to Sun. Fri. to Sun.	Story St. to Greene Street CARNIVAL Story St to Allen St (Parking Spaces) HANDICAPPED PARKING	Noon (8/3) to 8pm (8/8) 4pm (8/6) to 4pm (8/8)
Keeler Street	Tues. to Sun.	8 th to 9 th	6am (8/3) to 8pm (8/8)
Arden Street	Tues. to Sun.	8 th to 9 th	6am (8/3) to 8pm (8/8)
PUFFERBILLY DAYS PARADE			
Story Street	Saturday	Hancock to 8 th	9am to 1pm
8 th Street	Saturday	Story St. to Crawford	9am to 1pm
Hancock Dr.	Saturday	S. Linn to Parkway Dr.	9am to 11:30am
So. Marshall Street	Saturday	Kate Shelley to Hancock Dr.	8am to 11:30am
Crestwood Dr.	Saturday	To be monitored by Nat. Guard	
So. Linn Street	Saturday	Park Ave. to Kate Shelley	8am to 11:30am
Kate Shelley Dr.	Saturday	S. Linn to So. Marshall St.	8am to 11:30am
5K/10K RUN			
		<i>Volunteers will be in place throughout race route wearing neon vests to assist runners with crossing the street safely without blocking street on entire route</i>	
8 th Street	Saturday	Story to Greene	7-9pm
7 th Street	Saturday	Story to Greene	7-9pm
Park Ave Northbound to Herman Park	Saturday	Lincoln from Park to Woodland	7-9pm

PUBLIC LOTS			
9 th St. Lot between Keeler & Greene	Fri. to Sun.	Entertainment/Support vehicles	5pm (7/30) to 8pm (8/8)
Keeler St. between KWBG and former BNR	Fri. to Sun.	Food Vendor Parking	6am (8/6) to 8pm (8/8)

ADDITIONAL REQUESTS			
Picnic Tables moved (16 total)	Thursday	Greenspace OPENING CEREMONIES	In place by 3pm
Picnic Tables moved (remainder)	Thursday	Beer tent/Stage/Food area	In place by 3pm
Leave 8 Picnic Tables in Greenspace	Thursday night	8 tables left for seating over weekend, not blocking street	
8 Picnic Tables moved from Greenspace	Friday	8 tables from Greenspace moved to Veterans Park	In place by Friday 11am
Mud Volleyball Pits filled with water		Boone County Fairgrounds	Have ready by Sunday at 10am
Any remaining logistics will be noted in detail during logistics meeting on July 20 at Noon at the Chamber Office. City Staff will be invited to that meeting with prior setup volunteers and Steering Committee setup member to clarify timing and locations of those final pieces.			

Laura Bade
 Director of Communications & Events
 Boone County Chamber of Commerce

Mike Hammond
 Interim Executive Director
 Boone County Chamber of Commerce



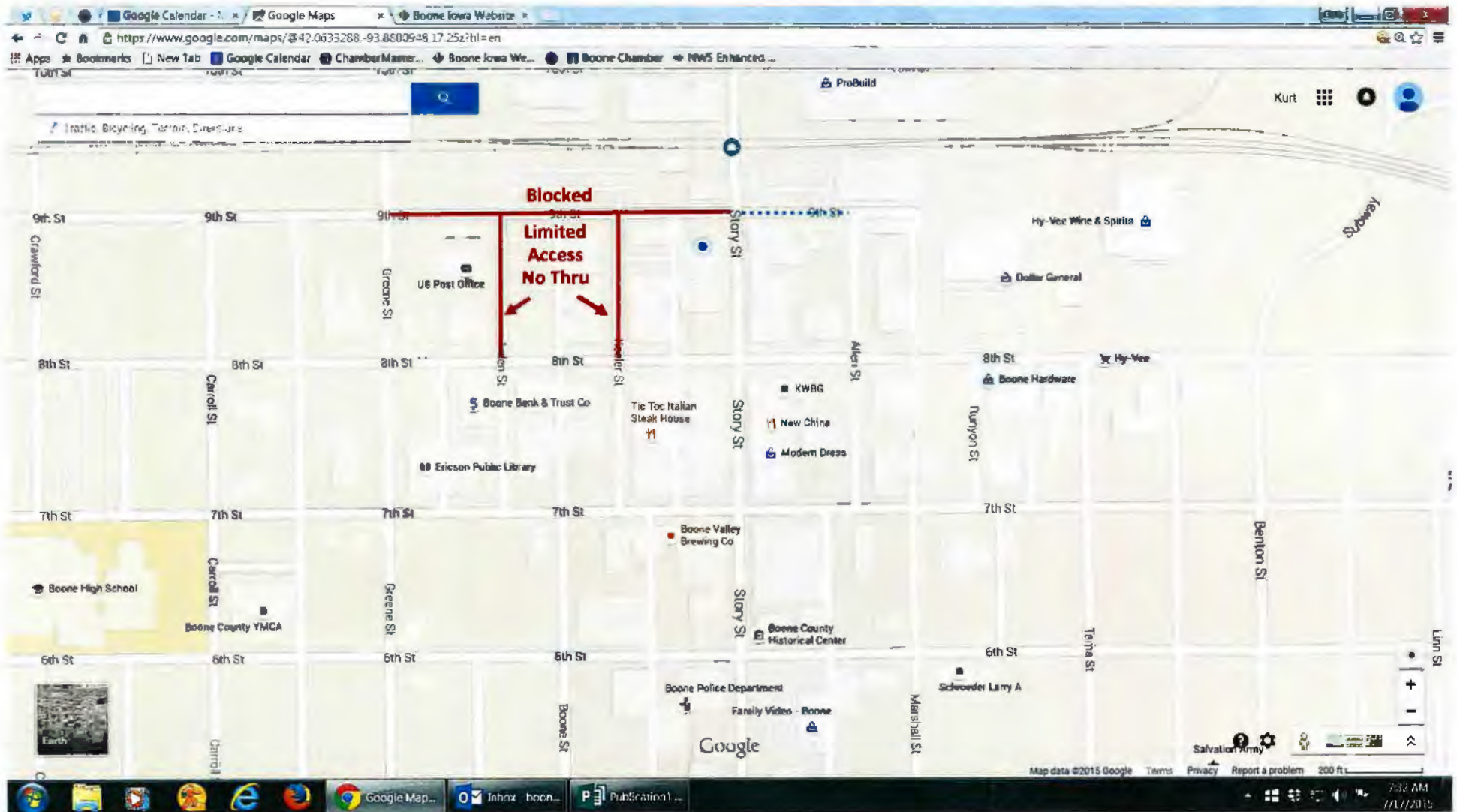
● CARNIVAL SUPPORT	● LOGISTICS TENT	● TICKET
● STAGE	● TENT	● ID BOOTH
● BEER TRUCK	● CARNIVAL	● PICNIC TABLES
● FOOD VENDORS	● MEMORABILIA	

- XXXX PORTA POTTY
- HANDICAP PARKING
- INFLATABLE ARCHWAY

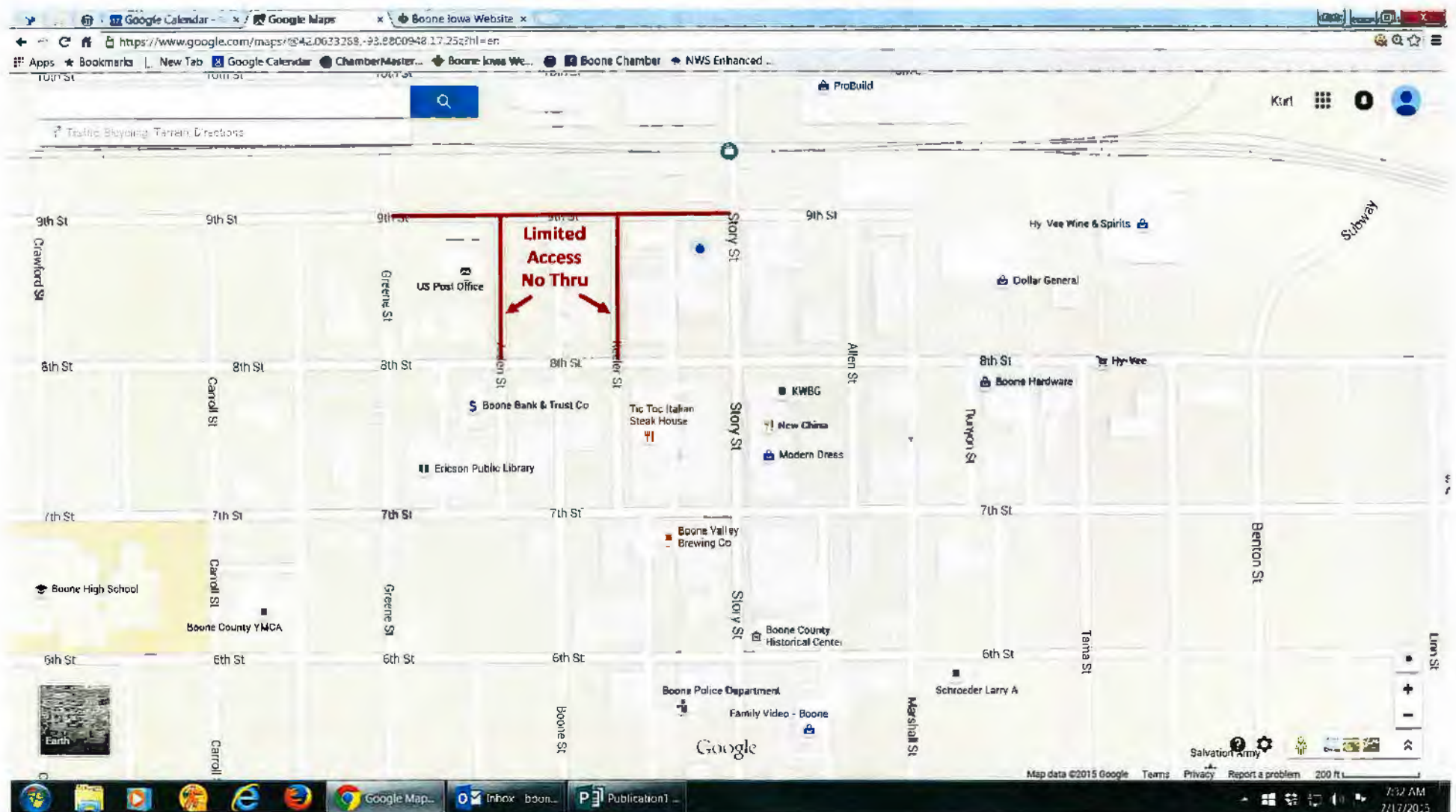
*Scale not to size

Street Closings Map - All Days of Festival

..... Handicapped Parking

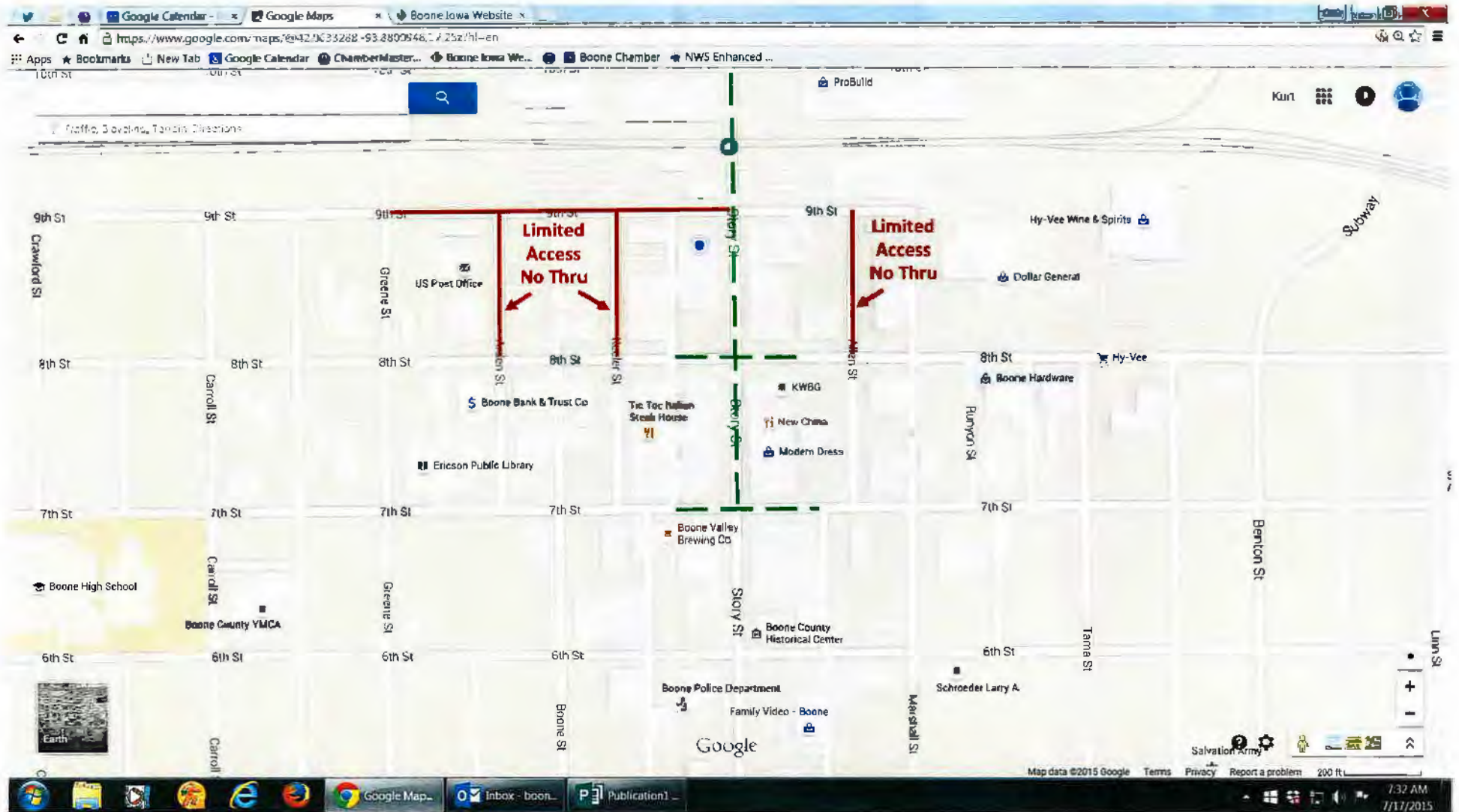


T/W/TH Street Closings Map



Friday Street Closings Map

--- Classic Car Show

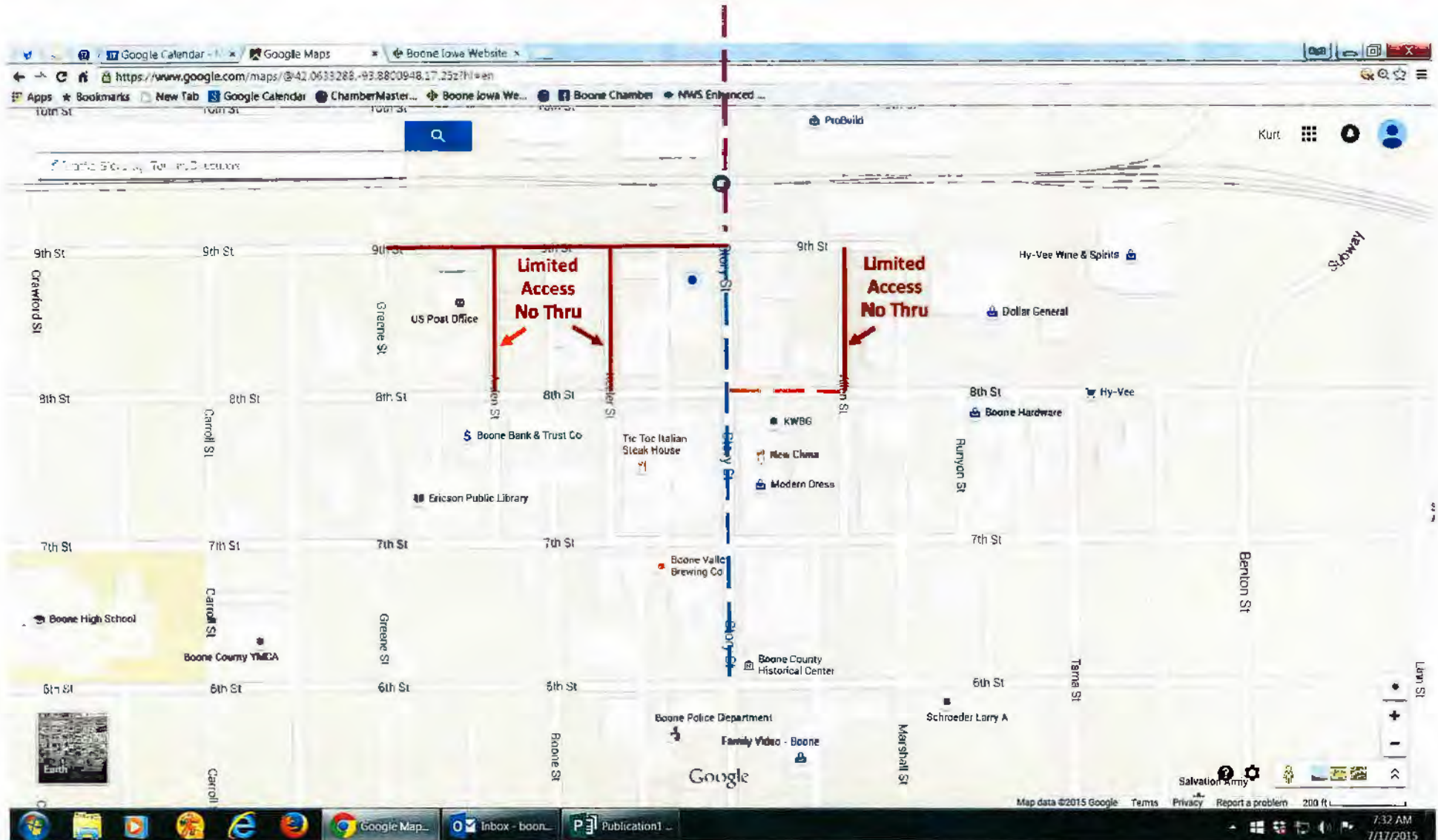


Saturday Street Closings Map

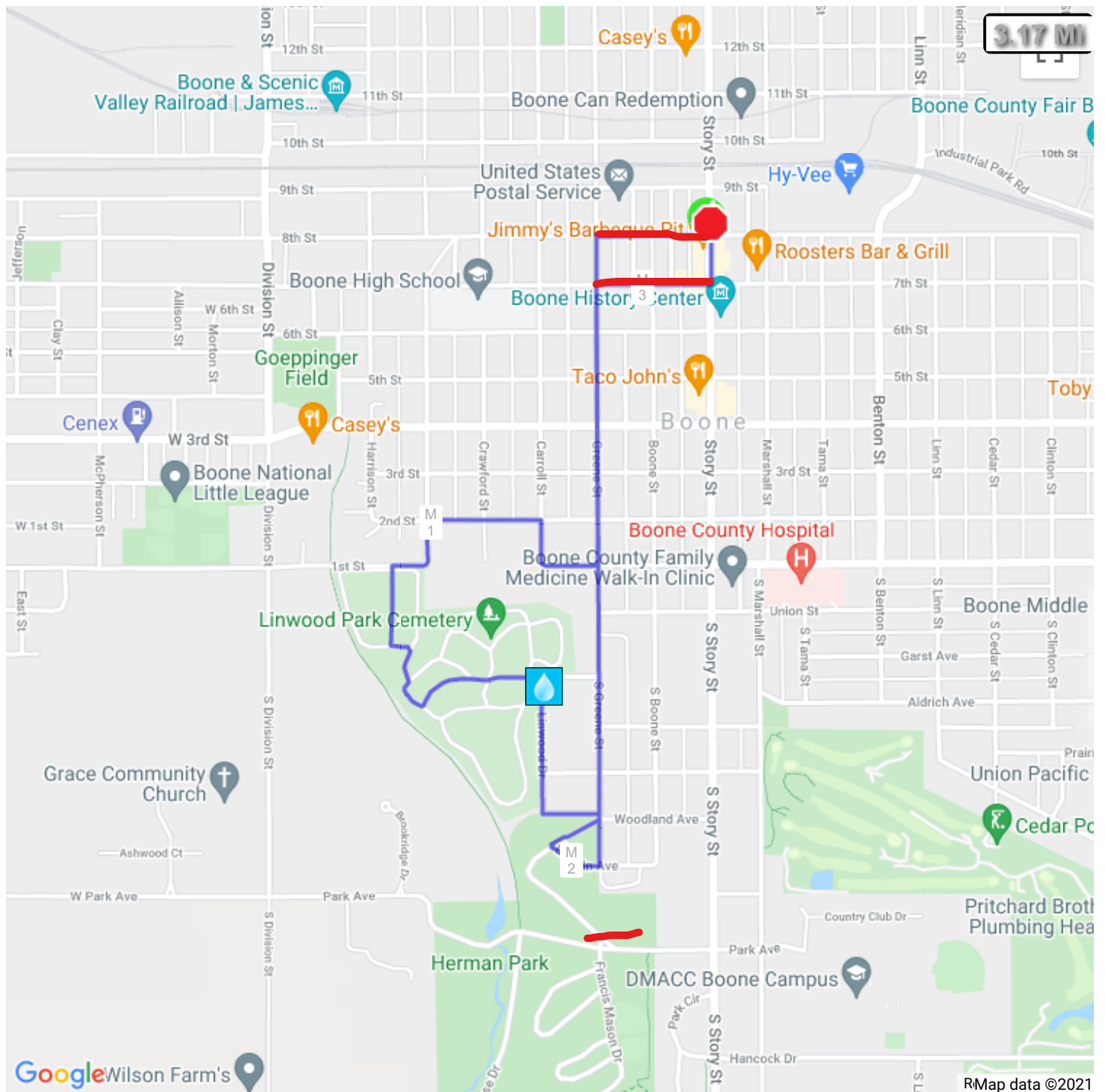
— — — CRAFT FAIR

— — — SPIKE DRIVING

— — — MOTORCYCLE



Pufferbilly Days™ 5k



— = street closure

RECEIVED
6-25-2021
KM

June 17, 2021

City of Boone
PO Box 550
Boone, Iowa 50036

To Whom it May Concern:

Garbage Guys is submitting an application for waste hauler collection service in the City of Boone. We have had several residents reach out to us looking for options for waste removal, and we would love to expand to the Boone area. Please let us know if you have any questions about our services and thank you for your consideration.

Sincerely,

Paula Eichinger

Garbage Guys
PO Box 622
Slater, Iowa 50244



WASTE HAULER COLLECTION SERVICE APPLICATION

Information:

No person shall engage in the business of collecting, transporting, processing or disposing of solid waste other than waste produced by that person within the City without first obtaining from the City an annual license in accordance with the City of Boone Ordinance, Chapter 106.

All applicants must file and maintain with the City evidence of satisfactory public liability insurance covering all operations of the applicant pertaining to such business and all equipment and vehicles to be operated. Each Insurance policy shall include as part thereof provisions requiring the insurance carrier to notify the City of the expiration, cancellation, or other termination of coverage not less than ten (10) days prior to the effective date of such action. Insurance coverage must meet the minimum coverage as stated below:

Bodily Injury:	\$100,000.00 per person
	\$300,000.00 per occurrence
Property Damage:	\$50,000.00

To obtain a license with the City of Boone please send the completed application, a \$25.00 license fee, and proof of insurance to the City Clerk at P.O. Box 550, Boone, Iowa 50036, once received the City Council will take action on the application at the next available City Council Meeting.

If you have any questions, you may contact us at 515-432-4211 option 6.

Company Information:

Company Name: Garbage Guys

Company Mailing Address: 52160 320th St
Slater IA 50244

Company Street Address (if different from mailing address):
305 S. Water St.
Cambridge IA 50046

Company Phone Number: 515-707 3866

Company email address: admin@garbageguysia.com

Primary Contact Name: Jenna Eichinger
Email address: admin@garbageguysia.com
Phone Number: 515-707-3866

Company's Owner/Officers (Please list all owners or officers of the company if you need more space please attach a separate piece of paper):

Full Name of Owner/Officer: Clinton Eichinger
Street Address: 305 S Water St Cambridge IA 50046
Phone Number: 515-720-6761

Full Name of Owner/Officer: Taylor Eichinger
Street Address: 7322 NW 18th St, Ankeny IA 50021
Phone Number: 515-707-3883 ~~60000~~

Full Name of Owner/Officer: Paula Eichinger
Street Address: 52160 320th St - Slater IA 50244
Phone Number: 515-238-4590

Equipment Information: (Please provide a complete and accurate listing of the number and type of collection and transportation equipment to be used within the City of Boone)

Year: <u>2009</u>	Make: <u>Mack</u>	Model: <u>GU712 (Reel off truck)</u>
Year: <u>2018</u>	Make: <u>Freightliner</u>	Model: <u>M2 (Residential truck)</u>
Year: <u>2012</u>	Make: <u>Freightliner</u>	Model: <u>M2 (Residential truck)</u>
Year: <u>2019</u>	Make: <u>Peterbilt</u>	Model: <u>LM (Residential truck)</u>
Year: <u> </u>	Make: <u> </u>	Model: <u> </u>

Please any other types of equipment that maybe used:

Type of Collection: residential garbage collection and dumpsters for residential customers and commercial accounts.
Description of Service being provide: (Please include the frequency, routes, and method of collection and transportation to be used).

Weekly pick up for residential customers
Pick up as needed for business and construction customers.
Operate Monday-Friday 6AM-6PM

Disposal Information:

Precise location of disposal:

Boone County Landfill

Describe the method or processing facilities to be used:

All waste will be delivered to
Boone County Landfill

Please verify you have included the following items with your application:

- ☒ Completed and signed Application
- ☒ Proof of public liability insurance
- ☒ \$25.00 License Fee

Paula Erickson

Signature of Owner or Duly Appointed Representative

6-9-21

Date



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

6/29/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER TrueNorth Companies, L.C. 500 1st St SE Cedar Rapids IA 52401	CONTACT NAME: Monica Danner PHONE (A/C, No, Ext): 515-735-4510 FAX (A/C, No): 515-232-6236 E-MAIL ADDRESS: mdanner@truenorthcompanies.com
INSURED Eichinger Brothers LLC DBA Garbage Guys 52160 320th St Slater IA 50244	INSURER(S) AFFORDING COVERAGE INSURER A: Technology Insurance Company, Inc. INSURER B: Western National Mutual Insurance Company INSURER C: INSURER D: INSURER E: INSURER F:

COVERAGES**CERTIFICATE NUMBER:** 1215211749**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☒ PRO-JECT ☒ LOC OTHER:			CPP 1251081 00	12/10/2020	12/10/2021	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☒ SCHEDULED AUTOS ☒ HIRED AUTOS ONLY ☒ NON-OWNED AUTOS ONLY			CPP 1249953 00	12/10/2020	12/10/2021	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$ 10,000			UMB 1042432 00	12/10/2020	12/10/2021	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N ☒ Y	N/A	TARIA1033815-01	3/27/2021	3/27/2022	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Taylor Eichinger, Clinton Eichinger, and Jared Eichinger are excluded from workers compensation coverage.

CERTIFICATE HOLDER**CANCELLATION**

City of Boone
923 8th Street
Boone IA 50036

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Nomination Form: Community Dedication Award

CBINews0521

Submit to: City Hall Central Business Office

Due Date: June 30th

Nomination No. _____

Nominee:

Current Resident: ☒ Yes ☐ No

Form Author:

Current Resident: ☒ Yes ☐ NoCox
Last NameBetty
First Name375-490-8499
PhoneFinnestad
Last NameCarolyn
First Name

Phone

1412 South Linn St.
Mailing AddressBoone
City1459 Kate Shelley Dr.
Mailing AddressBoone
Cityeacox@isunet.net
e-mailFinnestad@netins.net
e-mail

Other Information:

Organization/Company/Group

Address, City

Phone

Category:

☐ Starting new and innovative programs that help maintain and grow our local treasures for the benefit of Boone residents and visitors to our community☒ Inspired and lifelong support to the professional development in Boone but not limited to: local education projects, community events and celebrations, volunteer work, leadership in community fundraising efforts.☐ Spearheading the effort at the local, regional and national level to help grow our community and make it accessible to everybody who chooses to live here, contribute to its growth and call it home.

Describe how the Nominee has demonstrated the qualities within the category noted above. Please note that this information will be public record and may be used as part of publicity and publications. (you may attach a type written document if preferred - Please limit to one page)

See attached page

I HEREBY NOMINATE THE ABOVE NAMED INDIVIDUAL OR GROUP AND AGREE TO THE POLICIES OF THIS PROGRAM.

Carolyn Finnestad
SignatureJune 28, 2021
Date

*Submit this application to the Administration Department at City Hall (515-432-4211)

For Office Use Only

Date Received: _____

Action by Mayor and Council:

☐ Award Winner

Date: _____

June 28,2021

Administration Department
City Hall
Boone, Iowa 50036

To Whom It May Concern,

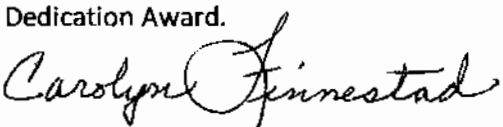
It is with great pleasure that I write this nomination letter for Betty Cox for the 2021 Boone Community Dedication Award. Betty has been a long time member of this community and is a prime example of what it means to give back. She worked diligently to provide a wonderful experience and place for her and her husband, Don, to raise their children—a place where their family can truly call Boone “home”. Now that her children are grown she has dedicated much more of her time continuing to make this community better for current and future residents to enjoy,

Betty has made an impact in the lives of many here in Boone-young and old. She is a go-getter and puts every effort she has into the current tasks at hand. She is successful in all that she does and is very well-rounded. There isn't a project she can't handle—if she isn't physically working on one, she is organizing, promoting, collaborating, and/or delegating,. She is very resourceful and is willing to give it her all for her family, church, organizations, and community.

The desire and passion she has for Boone shows in the many successes of all that she does. She displays great leadership with her organizations and planning skills and encourages others to contribute and participate as well. She has inspired many young people to pursue their goals and achieve success while also boosting the older generation with her enthusiasm and spirit to continue to make a difference in the community. Her efforts are endless, but speak volumes as to the benefits of her support for this community. I will list a few here, however.

1. Has been a RSVP Volunteer at the Senior Citizens Center
2. Has been a member of the Boone County Hospital Auxiliary
3. Has been a Youth & Shelter Services (YSS) Mentor and Board Member
4. Welcome Caboose Member
5. Active member at the First Presbyterian Church- has also been a Deacon and Circle Member
6. Volunteers at polling sites for elections
7. Rings Bells for the Salvation Army
8. Donates and makes quilts for many people and organizations, --made many masks during Covid.
9. Participates with the Augustans Lutheran Church Quilters
10. Encourages people to support Boone businesses- in particular Boone's Movie Theater
11. Assists with fundraising efforts for the Boone Community Theater
12. Active City of Boone volunteer for whatever is requested of her
13. Has taken many elderly to doctor appointments, Covid shots, physical therapy, and to vote.

Thank you for your consideration of my recommendation for Betty Cox as the recipient of the Boone Community Dedication Award.

Sincerely,  Carolyn Finnestad

**Nomination Form: Community Dedication Award**

CB1NEWS0521

Submit to: City Hall Central Business Office

Due Date: June 30th

1ST**2ND**

Nomination No.

Nominee:

Current Resident: ☒ Yes ☐ No

Form Author:

Current Resident: ☒ Yes ☐ No

GREINER

FRED

432-230-0174 NEWBOLD

MIKE

432-5897

Last Name

First Name

Phone

Last Name

First Name

Phone

624 BROOKRIDGE DRIVE BOONE

1410 PRAIRIE AVE BOONE

Mailing Address

City

Mailing Address

City

e-mail

e-mail

Other Information:

MOST ORGANIZATIONS

BOONE, IOWA

Organization/Company/Group

Address, City

Phone

Category:

☒ Starting new and innovative programs that help maintain and grow our local treasures for the benefit of Boone residents and visitors to our community☒ Inspired and lifelong support to the professional development in Boone but not limited to: local education projects, community events and celebrations, volunteer work, leadership in community fundraising efforts.☒ Spearheading the effort at the local, regional and national level to help grow our community and make it accessible to everybody who chooses to live here, contribute to its growth and call it home.

Describe how the Nominee has demonstrated the qualities within the category noted above. Please note that this information will be public record and may be used as part of publicity and publications. (you may attach a type written document if preferred - Please limit to one page)

FRED SPEARHEADED THE FREEDOM ROCK PROJECT
 FRED SERVES ON ALL MILITARY ORGANIZATIONS
 FRED MILITARY HONOR GUARD AT FUNERALS.
 FRED BELONGS TO MOST SERVICE CLUBS.
 RETIRED FORMER FAREWAY CEO -
 DMACC FAREWAY FIELDHOUSE HEADLINER

MIKE HAS SUPPORTED BOONE HIGH SCHOOL FOR YEARS
 MIKE IS FORMER PRESIDENT OF BOONE JR CHAMBER
 MIKE IS CURRENTLY BOONE CHAMBER MEMBER
 MIKE IS OWNER/OPERATOR OF CARDINAL CLEANERS
 MIKE SUPPORTS BOONE IN ALL COMMUNITY PROJECTS.
 MIKE BELONGS TO MOST SERVICE CLUBS

I HEREBY NOMINATE THE ABOVE NAMED INDIVIDUAL OR GROUP AND AGREE TO THE POLICIES OF THIS PROGRAM.

Gary L Irvine

5/17/2021

GARY L IRVINE

Signature

Date

*Submit this application to the Administration Department at City Hall (515-432-4211)

For Office Use Only

Date Received: _____

Action by Mayor and Council: _____

☐

Award Winner

Date: _____



Nomination Form: Community Dedication Award

CB1NEWS0520

Submit to: City Hall Central Business Office

Due Date: June 30th

Nomination No. _____

Nominee:

Current Resident: ☒ Yes ☐ No

Form Author:

Current Resident: ☒ Yes ☐ No

Wells

Jeff

515-657-1563

Beer

Vicky

432-3995

Last Name

First Name

Phone

Last Name

First Name

Phone

310 S. Clinton St. Boone, IA

1427 Garst Ave. Boone, IA

Mailing Address

City

Mailing Address

City

jeffreywells@msn.com

e-mail

Vlbeer@icloud.com

e-mail

Other Information:

Organization/Company/Group

Address, City

Phone

Category:

☐ Starting new and innovative programs that help maintain and grow our local treasures for the benefit of Boone residents and visitors to our community☒ Inspired and lifelong support to the professional development in Boone but not limited to: local education projects, community events and celebrations, volunteer work, leadership in community fundraising efforts.☐ Spearheading the effort at the local, regional and national level to help grow our community and make it accessible to everybody who chooses to live here, contribute to its growth and call it home.

Describe how the Nominee has demonstrated the qualities within the category noted above. Please note that this information will be public record and may be used as part of publicity and publications. (you may attach a type written document if preferred - Please limit to one page)

See enclosed notes

If you have any questions, please contact me.

I HEREBY NOMINATE THE ABOVE NAMED INDIVIDUAL OR GROUP AND AGREE TO THE POLICIES OF THIS PROGRAM.

Vicky Beer

Signature

6-8-2020

Date

*Submit this application to the Administration Department at City Hall (515-432-4211)

For Office Use Only

Date Received: _____

Action by Mayor and Council:

☐ Award Winner

Date: _____

Community Dedication Award Nomination Form:

I am nominating Jeff Wells for the 2020 Community Dedication Award in the inspired and lifelong support to the professional development in Boone, but not limited to: local education projects, community events, celebrations, volunteer work, leadership in community fundraising efforts category.

Jeff was an educator for 45 with most of those at Boone High School and Middle School. He taught math and English. He has continued to be active in education in working as a substitute teacher the last two years.

He has served as Boone High School Tennis Coach for 39 years. During those years he's coached four Individual State Champions. For 33 years, he was involved with the Boone Summer Tennis Camp, serving as director for 30 of those years. This community activity averaged participation of 180 of Boone's youth and at times as many as 250 participants. Developing skills and a love for tennis was something many youth looked forward to each summer.

With his English interest he served as Boone High School Speech Team Coach for 10 years encouraging many students to develop abilities and confidence in public speaking or performance.

Jeff also coached Boys' Basketball for 32 years over his career. He was on the other side of the whistle when refereeing basketball for 36 years. He became involved in officiating basketball while in college. And speaking of refereeing, he served as a football official for 25 years.

For 24 years Jeff has taught educator/counselor AEA classes, Area Education Agency classes to local and central Iowa educators. Most of these were taught during the summer months after finishing a tennis season and two weeks of community Summer Tennis Camp.

Jeff has made a huge positive impact on hundreds of Boone youth. This was often evidenced in the spring of the year when he would receive as many as 65 invitations to graduation open house celebrations. He was asked to be the Senior Class Day speaker twice and Graduation Commencement speaker four times. Because of his dedication to helping others succeed, he's written numerous letters of recommendations for college admission and scholarships. He has also been listed as a reference on many job applications in support of Boone students.

Teaching and coaching tennis were not his only endeavors. While being busy with students he also found time to serve in his church, Augustan Lutheran Church. He has served on the church council for 6 years, and taught Sunday School for 10 years. That's quite a commitment after teaching and coaching during the week and supporting youth in spiritual growth on the weekend. Jeff worked with Augustana youth during a fundraising variety show called Augie's Diner for 13 years. Augie's Diner raised fund to help send students to national summer youth gatherings. Augie's Diner was an opportunity to mentor kids in public speaking, growth in faith, and performance.

Jeff Wells has served Boone youth in many capacities and helped to provide opportunities for our children academically, physically, spiritually, and in community service.

He's done all this while being supported by his wife, Carolyn, for 44 years. I'm sure he'd be the first to say this community and youth dedication would not be possible without the support and love of Carolyn. They are the parents of two adult children, both educators, and five grandchildren.

Instilling the desire for community service was important to Jeff. He has worked tirelessly in service to the youth of Boone. Our community and students have greatly benefited from his efforts.

Vicky Bear

Date 6-8-2020



Nomination Form: Community Dedication Award

CBINEWS0521

Submit to: City Hall Central Business Office

Due Date: June 30th

1ST2ND

Nomination No. _____

Nominee:

Current Resident:

☒ Yes☐ No

Form Author:

Current Resident:

☒ Yes☐ No

GREINER

FRED

432-230-0174 NEWBOLD

MIKE

432-5897

Last Name

First Name

Phone

Last Name

First Name

Phone

624 BROOKRIDGE DRIVE BOONE

1410 PRAIRIE AVE BOONE

Mailing Address

City

Mailing Address

City

e-mail

e-mail

Other Information:

MOST ORGANIZATIONS

Organization/Company/Group

Boone, Iowa

Address, City

Phone

Category:



Starting new and innovative programs that help maintain and grow our local treasures for the benefit of Boone residents and visitors to our community



Inspired and lifelong support to the professional development in Boone but not limited to: local education projects, community events and celebrations, volunteer work, leadership in community fundraising efforts.



Spearheading the effort at the local, regional and national level to help grow our community and make it accessible to everybody who chooses to live here, contribute to its growth and call it home.

Describe how the Nominee has demonstrated the qualities within the category noted above. Please note that this information will be public record and may be used as part of publicity and publications. (you may attach a type written document if preferred - Please limit to one page)

FRED SPEARHEADED THE FREEDOM ROCK PROJECT
FRED SERVES ON ALL MILITARY ORGANIZATIONS
FRED MILITARY HONOR GUARD AT FUNERALS.
FRED BELONGS TO MOST SERVICE CLUBS,
RETIRED FORMER FAREWAY CEO -
DMACC FAREWAY FIELDHOUSE HEADLINER

MIKE HAS SUPPORTED BOONE HIGH SCHOOL FOR YEARS
MIKE IS FORMER PRESIDENT OF BOONE JR CHAMBER
MIKE IS CURRENTLY BOONE CHAMBER MEMBER
MIKE IS OWNER/OPERATOR OF CARDINAL CLEANERS
MIKE SUPPORTS BOONE IN ALL COMMUNITY PROJECTS.
MIKE BELONGS TO MOST SERVICE CLUBS

I HEREBY NOMINATE THE ABOVE NAMED INDIVIDUAL OR GROUP AND AGREE TO THE POLICIES OF THIS PROGRAM.

Gary L Irvine

Signature

5/17/2021

Date

GARY L IRVINE

*Submit this application to the Administration Department at City Hall (515-432-4211)

For Office Use Only

Date Received: _____

Action by Mayor and Council:

☐ Award Winner

Date: _____



Action Center

Item Detail Report - 2021-Q8HZOG

Submission Information

ID:	11725
Item:	Nomination Form: Community Dedication Award
Tracking Num:	2021-Q8HZOG
Submission Date:	2021-06-22 19:56:25

Submitter Responses

Form Page: Page 1

Submittal Dates: May 1st to June 30th:	
Contact Information:	
Nominee Name::	Sharon Collins
Address:	1625 160th Street, Boone, IA 50036
Phone Number:	515-432-9503
Email Address:	tskc00@gmail.com
Current Resident:	Yes
Nominated by::	Phil Waldo
Address:	1217 UNION STREET, BOONE, IA 50036
Phone Number:	515-298-2350
Email Address:	philwaldo@yahoo.com
Current Resident:	Yes
Category:	Starting New & innovative programs that help maintain & grow our local treasures for the benefit of Boone residents & visitors
Describe how the Nominee has demonstrated the qualities within the category noted above:	Sharon started the food pantry at Boone Open Bible Church in 2010 and has relentlessly worked to ensure that it is open every week to help local people have the food they need. There have been over 50 households helped each month. She served weekly community meals from 2008 through 2016, typically serving over 100 meals per week, only stopping when her health would no longer allow her to continue. Each Thanksgiving, Sharon and her family spend the day before and Thanksgiving Day cooking and organizing a community Thanksgiving meal (not held in 2020 due to the pandemic). All of this work has been done on a volunteer basis. She has been 100% dedicated to her passion to ensure the hungry are fed.
Please note that this information will be public record and may be used as part of publicity and publications.:	
I hereby nominate the above named individual or group and agree to the policies of this program.:	

Workflow History

Status Update

Status:	Open
Step:	Submitted
Updated:	2021-06-22 19:56:25
Updated By:	eGov Strategies
Notes:	No Notes

Contituent's Messages

Service Norm:	
Confirmation Message:	Thank you, your Nomination Form has been submitted.