

PROJECT MANUAL

**REPLACE EXTERIOR DOORS – SIOUX FALLS RTI & REPLACE EXTERIOR DOORS – SF UTES
SIOUX FALLS
CFMO# 466527 & 467009**

Prepared By:

Department of the Military

2823 West Main Street
Rapid City, South Dakota 57702
(605) 737-6637

February 2024

OWNER:

State of South Dakota



This Project Manual provides for liquidated delay damages in the amount of **\$575.00** per calendar day for the Contractor's delay in completion of the work.
See the Bid Form and Article 10 of the General Conditions for details.

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CONSTRUCTION DOCUMENTS BID SET

Volume One of One
PROJECT MANUAL

Replace Exterior Doors Sioux Falls RTI & UTES

SOUTH DAKOTA DEPARTMENT OF THE MILITARY



NG RTI Project No. 466527

NG UTES Project No. 467009

FEH Project No. 2023027

February 02, 2024



FEH DESIGN
ARCHITECTURE / ENGINEERING / INTERIORS

SIoux CITY, IA
712 252 3889

DES MOINES, IA
515 288 2000

DUBUQUE, IA
563 583 4900

MILWAUKEE, WI
414 200 9660

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FOR
STATE SPECIFICATION
HEAD SECTIONS, GENERAL CONDITIONS,
SPECIAL CONDITIONS, TECHNICAL SPECIFICATIONS
AND PLANS

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Invitation to Bid

Electronic bids will be accepted by the State Engineer on behalf of the South Dakota Department of the Military at enter https://www.sd.gov/cs?id=sc_cat_item&sys_id=8802af2687080610ad0932e40cbb3573 here until February 29, 2024 at 2:000 PM CT for the Replace Exterior Doors – Sioux Falls RTI & SF UTES project in Sioux Falls, South Dakota, CFMO# 466527 & 467009.

There will be an on-site pre-bid meeting on February 22, 2024 at 11:00 AM CT. All bidders can meet at the front entrance to the SF RTI, 803 W. National Guard Dr., Sioux Falls, SD 57104. This pre-bid meeting is optional but is the bidders only opportunity to review the site. SD Dept. of the Military contact is Kelly Eitrem, 605-737-6637, kelly.eitrem@state.sd.us.

Copies of the Plans and Specifications may be obtained by bidders at the office of FEH Design, 1201 4th Street, Suite 201, Sioux City, IA 51101, Brittney Ruba, 712-252-3889, brittneyr@fehdesign.com. Anyone requesting, reviewing, or copying Plans and Specifications for this project agrees that they are doing so for the sole purpose of submitting a bid on the project. Bidder further agrees the Plans and Specifications are the sole property of the State.

Each bid in excess of \$100,000.00 must either pre-mail a certified check, cashier's check, or draft in the amount of 5% of the base bid and all add alternates and drawn on a State or National Bank to the SD Dept. of the Military, 2823 W. Main Street, Rapid City, SD 57702, or upload a copy of their 10% bid bond to their electronic bid issued by a surety authorized to do business in the State of South Dakota and made payable to the South Dakota Department of the Military. The SD Dept. of the Military reserves the right to reject any or all bids and to waive any irregularities therein. All active bids can be found here: <https://boa.sd.gov/state-engineer/adv-advertisements.aspx>

To Be Advertised In The:

Sioux Falls Argus Leader on February 15, 2024 and February 22, 2024

cc: Construction Industry Center, cic@constructionindustrycenter.com
Plains Builders Exchange, info@plainsbuilders.com
Sioux Falls Builders Exchange, info@sfbx.com

BIDDER'S CHECKLIST

The following items need to be submitted along with your bid, via the electronic bidding platform. All bids and any modifications to bids must be in the hands of the State Engineer or the State Engineer's representative, via the electronic bidding platform, on or before the time set for opening bids in the Invitation for Bids.

- ☐ All blanks on the electronic Bid Form are filled in.
- ☐ Receipt of all addenda is noted on the electronic Bid Form.
- ☐ Bid Form is electronically signed by an officer of the corporation or, if not a corporation, a proprietor or partner.
- ☐ For bids of \$100,000.00 or higher, a copy of the bid bond or security is submitted with the electronic bid and is mailed to the Office of the State Engineer.
- ☐ If a foreign contractor, a fully executed "Non-Resident Bidder Affidavit" is submitted with the bid.

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ASBESTOS STATEMENT

ASBESTOS CONTAINING MATERIALS CAUTION:

It is brought to the contractor's attention that asbestos containing materials (greater than 1%) may be present outside the project requirements yet within the building or area. The contractor shall take the necessary precautions so as not to disturb this material. If asbestos containing materials are disturbed, the contractor shall follow and comply with the state rules promulgated under SDCL 34-44 pertaining to asbestos, and 29 CFR 1926.58, 40 CFR Part 61, 40 CFR Part 763 as in effect and the United States Environmental Protection Agency publication entitled "Guidance for Controlling Asbestos Containing Materials in Buildings" (EPA 560/5-85-024, June 1985).

ASBESTOS CONTAINING MATERIALS STATEMENT:

In accordance with the provisions of SDCL 34-44-8, all bidders and contractors are hereby notified that to the best knowledge of the owner or those representing him in any capacity, this project **does not** involve asbestos containing materials (greater than 1%). Bidders are further instructed that no asbestos containing materials are to be installed in this project.

The contractor is cautioned that hidden materials unknown to the owner and inaccessible for testing may be found during the demolition work of this project which may be asbestos containing materials. Proper procedures shall be followed upon discovery of these materials. The owner or those representing the owner in any capacity shall not be held responsible or liable for any injury or cost to any person resulting from handling of or proximity to such materials.

ASBESTOS LIABILITY STATEMENT

In accordance with amended SDCL 34-44, neither the owner, employees, or agents of the owner, nor any other person may have any claim, right or action against the prime contractor for any asbestos related injury or damage arising from the activities of a certified asbestos abatement subcontractor. Unless exempt under applicable state and federal law, no asbestos abatement work may be performed except by a certified asbestos contractor. A certified asbestos abatement subcontractor shall hold the owner and general contractor harmless from any liability arising from such subcontractor's activities on the project. A certified asbestos abatement contractor shall cause the owner and, if acting as a subcontractor, the general contractor to be named as additional insureds and provide sufficient proof of insurance for purposes of this section.

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INSTRUCTIONS TO BIDDERS

1. Examination of Plans, Specifications and Site.

Bidders should carefully examine the site of the proposed work, subsurface conditions, the Plans and Specifications, and the bid and contract documents governing the project. The submission of bids is conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered; the character, quality, and scope of the proposed work; the quality and quantity of the materials to be furnished; and the requirements of the bid, the Plans and Specifications, and the other Contract Documents.

The Plans and Specifications are to be used only with respect to this project and are not to be used for any other project or purposes other than preparing a bid for this project; the Plans and Specifications will not be disseminated to any person or entity for purposes other than obtaining pricing information without the express written approval of the state; all information contained in the Plans and Specifications is confidential; and should the bidder disseminate the Plans and Specifications to an individual or entity for purposes of obtaining pricing information, the bidder will require that individual or entity to adhere to the terms set forth herein. The bidder, however, assumes no liability for the misuse of the Plans and Specifications by such third party or such third party's failure to comply with the provisions contained herein.

Any copies of the Plans and Specifications obtained directly from the State will be returned to the office of the Architect/Engineer immediately after the State provides notice that bidder will not be awarded a contract, or thirty (30) days after the bid opening for the project, whichever occurs first. Any copies of the Plans and Specifications made by the bidder will be destroyed immediately after the State provides notice that bidder will not be awarded a contract, or thirty (30) days after the bid opening for the project, whichever occurs first. If bidder does not submit a bid, bidder will fulfill the requirements previously outlined on or before the date of the bid opening. Should bidder be awarded a contract for construction of the project, bidder does not need to return or destroy Plans and Specifications until after completion of the project.

2. Submission of Bids.

Each bid must:

- A. Be submitted via the electronic bidding platform;
- B. Include any addenda issued during the time of advertising for bids the same as though it had been included in the original Plans and Specifications; and

All bids and any modifications to bids must be in the hands of the Engineering Manager or the Engineer Manager's representative, via the electronic bidding platform, on or before the time set for opening bids in the Invitation for Bids. Bids will not be received after the time for bid opening.

3. Modification of Bids.

Bids may be modified, via the electronic bidding platform, at any time, not later than the time set for the opening of bids. No bid made shall be changed or altered by telephone. No oral changes, alterations or conditions will be accepted under any circumstance.

4. Contractor's Qualification Statement.

For bids of \$100,000.00 or more, the low bidder, upon request, must submit to the Dept. of the Military, within 48 hours of said request, Contractor's Statement of Skills and Capabilities (Exhibit "F") with their bids. The Contractor's Qualification Statement (AIA Document A305) or the AGC's Contractor Qualification Statement may be used provided it includes all the information required by the OSE document, minus the financial statement.

5. Bid Security.

Each bid over \$100,000.00 must be accompanied by a bid security as follows:

- A. Certified Check, Cashier's Check or Draft. A certified check, cashier's check or draft for five percent (5%) of the amount of the bid, including all add alternates, such check to be certified or issued by either a State or National Bank and payable to said public corporation or officer. A certified check, cashier's check or draft shall be received at the Dept. of the Military no later than the date and time of the bid opening.

- B. **Bid Bond.** In lieu of a certified check as a bid guarantee, a bid bond of ten percent (10%) of the total amount of the bid, including all add alternates, may be furnished by the Contractor. See Exhibit "C" for Bid Bond form. Such bond to be issued by a surety authorized to do business in the State of South Dakota. Such bond shall be payable to said public corporation or officer as guaranty that such bidder will enter into a contract with said public corporation, its Board or officers thereof, in accordance with the terms of such letting and bid in case such bidder be awarded the contract. A copy of the bid bond shall be attached to the bid, via the electronic bidding platform.

No bidder shall be required to leave his/her certified check or other guaranty or bid bond posted for a longer period than thirty (30) days if the bid is not accepted. The certified check or other guaranty of the successful bidder shall be returned to him forthwith upon the execution of the contract and surety herein provided for.

6. Withdrawal of Bids.

Any bid may be withdrawn, via the electronic bidding platform, at any time before the time specified in the advertisement therefor. Withdrawal of a bid does not prejudice a bidder's right to submit a new bid within the time designated for the submission of bids. No bids may be withdrawn after the time designated in the Invitation to Bid for the opening of bids.

7. Request for Interpretation.

Any person who plans to bid on the project may submit to the Owner a written request for an interpretation of any part of the Plans and Specifications or Contract Documents. Requests for interpretations shall be made not less than ten (10) days prior to the opening of bids. Any interpretation will be in writing and furnished to each person receiving Plans and Specifications for bidding. The Owner will not be responsible for any other explanation or interpretation.

8. Or Equal Clause.

Whenever a material, article, or piece of equipment is identified on the Plans or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and any materials, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the requirements of Article 6.3.4 of the General Conditions are met and the material, article, or equipment so proposed is, in the opinion of the Architect and Engineering Manager, of equal substance and functions.

9. Preference for South Dakota Products, Labor and Materials.

By virtue of statutory authority in SDCL § 5-18A-6(10) et seq. preference will be given to South Dakota products, labor and materials as provided by law.

10. Opening of Bids.

Bids will be received until the time for opening designated in the Invitation to Bid. All bids received within the designated time will be opened and read aloud at the time and place designated in the Invitation to Bid. Bidders and their authorized agents are invited to attend in person or online.

11. Relief from Mistake in Bid.

A bidder claiming a mistake in a bid must give the State written notice of the alleged mistake within five calendar days after the bids are opened, specifying in detail how the mistake occurred. Relief will only be granted for clerical or mathematical mistakes which can be documented to the satisfaction of the Engineering Manager.

12. Consideration of Bid Proposals.

At the time of opening bid proposals, the State will verify the bidder is prequalified for the specified work type and the bidder's bidding capacity at that time is sufficient to handle the work for which the bidder submitted a bid proposal. The State reserves the right to refuse to accept a bid proposal for any of the following reasons:

- A. ~~Lack of competency or adequate machinery, plant, or other equipment, as shown by the Contractor's Prequalification Statement;~~
- B. Uncompleted work which the State determines, in its sole discretion, may hinder or prevent the prompt completion of additional work;
- C. Failure to pay or satisfactorily settle any legal obligation due for labor or material on any contract at the time of issuance of bid;
- D. ~~Failure to comply with the State's prequalification regulations;~~
- E. Default under any previous contract or contracts;

- F. Debarment by the State or the federal government;
- G. Disqualification by the State. The following reasons will be considered sufficient for disqualifying a bidder and rejecting the bid proposal or bid proposals:
 - 1. Submittal of more than one bid proposal for the same work from an individual, firm, or corporation under the same or different name; or,
 - 2. Evidence of collusion among bidders. A participant in collusion will not receive recognition as a bidder for future work with the State until reinstated as a qualified bidder;
- ~~H. Lack of overall bidding capacity as established by the Contractor's prequalification statement, considering the uncompleted work currently under contract;~~
- I. Lack of per contract bidding capacity as established by the Contractor's prequalification statement; or
- J. Unsatisfactory performance on previous work or any current contract or contracts consisting of, but not limited to:
 - 1. Noncompliance with contract specifications, contract requirements, or Engineer's directives;
 - 2. Failure to complete work on time;
 - 3. Instances of substantial corrective work prior to acceptance;
 - 4. Instances of completed work that requires acceptance at reduced pay;
 - 5. Production of work or materials not meeting required specifications, and when applicable, requiring price reductions or corrective work;
 - 6. Failure to provide adequate safety measures or appropriate traffic control that endangers the safety of the work force and public;
 - 7. Questionable moral integrity as determined by the Attorney General of the State, or the State; or,
 - 8. Failure to reimburse the State for monies owed on any previously awarded contract including any contract where the prospective bidder is a party to a joint venture and the joint venture has failed to reimburse the State for monies owed.

After opening, the State will compare the bid proposals on the basis of the summation of the products of the quantities shown in the bid proposal by the unit bid prices. The State will make results of such comparisons available to the public. In the event of a discrepancy between unit bid prices and extensions, the unit bid price will govern.

The State reserves the right to reject any bid proposal, the right to waive technicalities, and the right to reject all bid proposals and advertise for new bid proposals, if in the sole judgment of the State the rejection or waiver will promote the best interest of the State.

13. Rejection of Bids.

Bids may be rejected if they show any alteration of form, additions not called for, conditional bids, incomplete bids, unexplained erasures, or irregularities of any kind. The State may waive any informality in the bids received. When bids are signed by an agent other than an authorized corporate officer or member of a partnership, a power of attorney must be filed with the bid. Otherwise, the bid will be rejected as irregular and unauthorized. If there is reason to believe that collusion among the bidders exists, any or all bids may be rejected. The State reserves the right to reject all bids if in the judgment of the Engineering Manager it is in the best interest of the State.

14. Award of Contract.

If the contract is awarded, it will be awarded to the responsible bidder submitting the lowest bid, subject to paragraph 18 below, which complies with the Invitation to Bid and with these instructions. The successful bidder will be notified within thirty (30) calendar days of the date bids are opened. Subsequent to notice of award, the successful bidder will be presented with a contract agreement. The contract will require the completion of work according to the Plans and Specifications and the Contract Documents. Conditional bids will not be accepted.

15. Responsibility.

The Owner may make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

16. Nonresident Bids.

SDCL § 5-18A-26, provides that the Contract shall be let to the lowest responsible bidder; provided, however, a resident bidder may be allowed a preference on any such contract as against the bid of any bidder from any other State or foreign province which enforces or has a preference for resident bidders. The amount of the preference given to the resident bidder shall be equal to the preference in the other state.

17. Subcontractor Certification.

SDCL § 5-18B-6, provides that prior to execution of a public improvement project a successful bidder shall certify on the prescribed form (Exhibit "G"):

- A. That no more than twenty-percent of the cost of labor included in the contract is being provided by nonresident subcontractors; or
- B. That more than twenty percent of the cost of labor included in the contract is being provided by nonresident subcontractors because resident contractors are not available and at competitive prices.

18. Method of Award.

- A. Bidding procedure involving only a base bid: If the base bid is within the amount of funds available to finance the construction contract, then contract award will be made to that responsible bidder submitting the low base bid. If the low bid exceeds the funds available to finance the construction, the State may negotiate with the low bidder to produce a bid amount within the availability of funds.
- B. Bidding procedure involving a base bid and alternate bids: If the base bid is within the amount of funds available to finance the construction contract and the Owner wishes to accept alternate bids, then contract award will be made to that responsible bidder submitting the low combined bid, consisting of the base bid and any combination of add or deduct alternative bids found to be most advantageous to the Owner. Under this procedure, if the Owner wishes to make award on low base bid only, then contract award will be made to that responsible bidder submitting the low base bid. If the low bid exceeds the funds available to finance the construction, the State may negotiate with the low bidder to produce a bid amount within the availability of funds.

19. Execution of Agreement.

Within ten (10) calendar days after the proposed contract agreement is presented to the successful bidder for execution, the successful bidder must execute the contract documents and, *if the Contract is for more than \$100,000.00*, provide a performance and labor and material payment bond.

20. Performance & Labor and Material Payment Bond.

If the Contract is for more than \$100,000.00, provide a performance and labor and material payment bond produced by a South Dakota licensed insurance producer (agent) and issued by a South Dakota licensed surety in an amount not less than the amount of the awarded contract. The performance and labor and material payment bond Surety or Sureties shall meet all requirements of South Dakota Law.

This bond is to secure the faithful performance of the contract and the payment of those to whom the bidder may become legally indebted for labor, materials, tools, equipment, or services of any kind used or employed by the bidder in performing the work. The surety bond shall be on the form attached hereto as Exhibit "D". *(Failure on the part of the bidder to furnish such bond in the time stated shall be cause for consideration by the State of awarding the Contract to the second low bidder and the retention of the bid deposit.)*

21. Power of Attorney.

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

22. Default.

The failure to execute the contract documents or to furnish bonds required by these instructions within ten (10) calendar days after the proposed contract agreement is presented for execution constitutes a default. In the event of a default, the State may award the contract to the next lowest bidder or may re-advertise for bids. The State may charge against the defaulting bidder the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed plus the State's additional administrative cost necessitated by the bidder's failure to execute the Contract Documents, irrespective of whether the amount thus due exceeds the amount of the bid bond. If a more favorable bid is received by re-advertising, the defaulting bidder shall have no claim against the State for a refund.

23. Commencement of Work/Time of Completion.

The contractor for the general construction shall commence work under the contract within ten (10) consecutive calendar days after issuance of written Notice to Proceed and shall substantially complete all work under the contract within the timeframe specified in the Bid Form.

24. Liquidated Damages.

See Article 10.3.4 of the General Conditions.

25. Applicable Laws and Regulations.

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

26. South Dakota Tax Information for Public Contracts.

Contractors performing public contracts in South Dakota may become responsible for two types of taxes: the excise tax upon realty improvement contracts and the sales/use tax upon materials.

All contractors must secure a license from the Department of Revenue before engaging in the construction activities in this State. Detailed information on tax requirements may be obtained from the Department of Revenue, Anderson Building, Pierre, South Dakota 57501. Telephone 605.773.3311.

27. Applicable Standards.

In addition to codes, Standards and Regulations referenced for compliance in the various sections of the Specifications, the work shall be in compliance with the following:

- A. ANSI Z53.1 - 1971, and as revised
Safety color code for marking physical hazards.
- B. ANSI A13.1 - 1975, and as revised
Scheme for the identification of piping systems.
- C. ANSI C2, and as revised
National Electrical Safety Code.

28. Affirmative Action Plan.

The State of South Dakota requires that all contractors, vendors, and suppliers, employing fifty or more persons, doing business with any State Agency, Department, or Institution, place on file a statement of Affirmative Action that said contractor, vendor, or supplier does not discriminate in its employment practices with regard to race, color, religion, sex or national origin.

No award of any contract with the State of South Dakota shall be executed or awarded and approved by the State for any service, supply, or commodity unless the successful bidder submits such statement.

Above statement may be submitted to the Engineering Manager with the contractor's bid, or prior to award of contract.

29. Procurement Law.

This project is subject to the provisions of SDCL § 5-18A and 5-18B et seq.

30. Federal Registration.

All bidders shall be registered with SAM.gov.

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EXHIBIT "A"

BID FORM

All bids shall be submitted via the Office of the State Engineer Electronic Bidding Platform, details below:

Overview

The undersigned, being familiar with the local conditions affecting the work, and with the Contract Documents, including the Invitation to Bid, Instructions to Bidders, Bid Form, Explanation of Alternates, Modification to Bid Form, Bid Bond Form, Performance and Payment Bond, Acknowledgment of Surety, Sample Certification of Surety, Non-Resident Bidder Affidavit, Form of Agreement for Construction, General Conditions, Special Conditions, Technical Specifications, Plans and Addenda which govern the purchase of material and labor and the awarding of contracts hereby proposes to do all the work and provide all the material and equipment for the project.

Bid Opening Date: February 29, 2024

Bid Opening Time: 2:00pm CT

Date of Project Manual: February 2024

Date of Plans: February 2024

Substantial Completion Date: The Contractor will have **177** consecutive calendar days to complete the work from the Notice to Proceed date.
w/ Liquidated Damages: **\$575.00** Error! Reference source not found. per calendar day

Final Completion Date: The Contractor will have **14** consecutive calendar days to complete the work from the Substantial Completion Date.
w/ Liquidated Damages: **\$575.00** per calendar day

Total value of material subject to tax: **\$0.00**
Any material furnished by the State for use in this project is subject to Use Tax and Excise Tax.

Link to Bidding: https://www.sd.gov/cs?id=sc_cat_item&sys_id=8802af2687080610ad0932e40cbb3573

Link to Bid Opening: <https://state-sd.zoom.us/j/93270689780?pwd=a0FqMkdKUEVkvVEtoMkdMRjViV0NTUT09>

Meeting ID: 932 7068 9780

Passcode: 334006

ATTENTION BIDDERS!

- **TECHNICAL DIFFICULTIES:** OSE is not responsible for technical difficulties resulting from the electronic bidding platform.
- **MODIFY BIDS:** It is highly recommended that contractors submit their bid early and modify as needed prior to the bid closing. Please note, bids may be modified as many times as desired prior to the bid opening date/time as well as withdrawn at any point prior to the bid opening.
- **SESSION TIMEOUT:** The online bidding platform session will timeout if left open for too long, therefore bids need to be submitted in a timely manner as to ensure the information is not lost and other errors do not occur.

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May 9, 2022

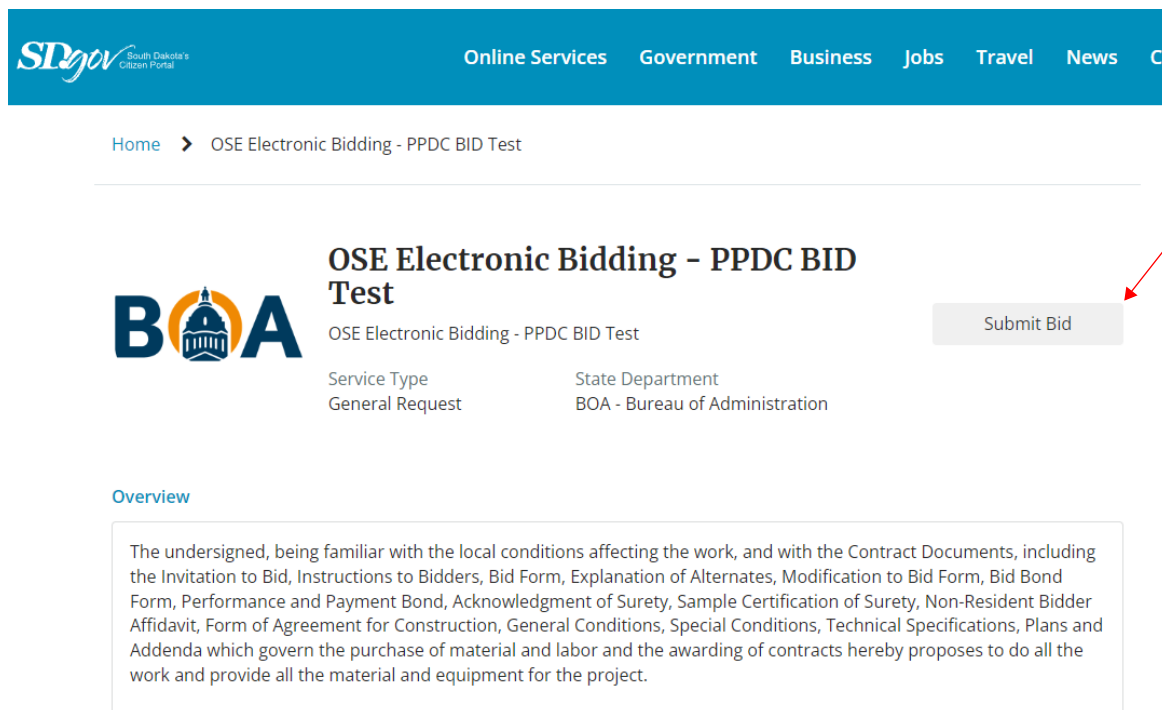
RE: ELECTRONIC BIDDING

The State of South Dakota, Office of the State Engineer (OSE), has switched to an electronic bidding platform! Please find below screen shots and information on submitting an electronic bid.

The State of SD has switched to a “single sign on” platform for all State services. Therefore, the username and password you use for purchasing a SD hunting or fishing license would be the same username and password you would use to submit an electronic bid on an OSE project. We just want you to be cognizant of that as you set up your SD.gov account.

Each project will have its own unique web address for bidding. This can be found in the advertisement on our website for that specific project, the builders exchanges advertisements, as well as the newspapers. If you ever cannot find the link, please reach out to OSE at the contact information above and we can assist you.

When you click the link, it will ask you to log on. Once you have logged on, you’ll see the project title and a button to click for “Submit Bid.”



SD.gov South Dakota's Citizen Portal

Online Services Government Business Jobs Travel News Contact

Home > OSE Electronic Bidding - PPDC BID Test

BOA

OSE Electronic Bidding - PPDC BID Test

OSE Electronic Bidding - PPDC BID Test


Submit Bid

Service Type: General Request
State Department: BOA - Bureau of Administration

Overview

The undersigned, being familiar with the local conditions affecting the work, and with the Contract Documents, including the Invitation to Bid, Instructions to Bidders, Bid Form, Explanation of Alternates, Modification to Bid Form, Bid Bond Form, Performance and Payment Bond, Acknowledgment of Surety, Sample Certification of Surety, Non-Resident Bidder Affidavit, Form of Agreement for Construction, General Conditions, Special Conditions, Technical Specifications, Plans and Addenda which govern the purchase of material and labor and the awarding of contracts hereby proposes to do all the work and provide all the material and equipment for the project.

Once you click “Submit Bid” you will see the project information populate and the path on top. The Contractor will be prompted to enter their company information.



Online ServicesGovernmentBusinessJobsTravelNewsContact

Home > OSE Electronic Bidding - PPDC BID Test Overview > OSE Electronic Bidding - PPDC BID Test

OSE Electronic Bidding - PPDC BID Test

1Project

2Bid Information

3Unit Prices

4Review

* Indicates required

OSE #:

ASW22--FUN/PPDC

Project Name:

PPDC BID Test

Project Location:

Drifters Bar and Grille

Project Campus:

Capital Complex

Bid Opening Date

06/03/2022 10:30:00

The undersigned, being familiar with the local conditions affecting the work, and with the Contract Documents, including the Invitation to Bid, Instructions to Bidders, Bid Form, Explanation of Alternates, Modification to Bid Form, Bid Bond Form, Performance and Payment Bond, Acknowledgment of Surety, Sample Certification of Surety, Non-Resident Bidder Affidavit, Form of Agreement for Construction, General Conditions, Special Conditions, Technical Specifications, Plans and Addenda which govern the purchase of material and labor and the awarding of contracts hereby proposes to do all the work and provide all the material and equipment which pertains to this project.

* Bidder:

Name of Firm / Company

* Name Of Firm's Representative:

Stacy Watters

* Title Of Firm's Representative:

* Phone

(605) 484-6754

* Email

Wattersstacy@gmail.com

* Firm's Business Address:

* State of Incorporation:


Required information

Bidder:

Title Of Firm's Representative:

Firm's Business Address:

State of Incorporation:

 Add attachments

Next

The project information will auto populate, including the bid opening date.

Page 2 of 12

OSE Electronic Bidding - PPDC BID Test



* Indicates required

* Dollar amount: \$

Review


Please click on the pencil icon in the Actions column below and enter an Alternate bid for each line item.

* Bid Information

Actions	Alternate	Zero Dollar Change/Add/Deduct from the base bid the sum of:	DOLLARS \$
	Construction funds approved in legislation this FY		

Required information

Dollar amount: \$

 Add attachments

Back

Next

Once you click next, it will bring you to the bid form for the project. This will have base bid plus any alternates. The base bid must be filled in with numbers only (no symbols). Once you fill base bid in and click outside of that field, the review tab will auto populate with symbols for you to review.

If your bid is over \$100,000 an additional line will appear asking for a copy of a bid bond. This will only show up, if your bid exceeds that threshold. Please attach a copy (jpg, pdf, or similar) to your bid. If you prefer to mail a certified check, there is also a button you can select that says, "I have mailed a check to OSE, in lieu of a bid bond."

This project has one alternate listed. Click on the pencil to edit the value for the alternate.

Edit Row

×

Alternate

Construction funds approved in legislation this FY

*Zero Dollar Change/Add/Deduct from the base bid the sum of:

Add

-- None --

Add

Deduct

Zero Dollar Change

Cancel

Save

Once you click the pencil, it will ask from a drop down menu if you want to add, deduct, or zero dollar change for the alternate. The alternate title will be listed for reference. Once you make your selection, enter your dollar value and click save.

OSE Electronic Bidding - PPDC BID Test



*Dollar amount: \$

100001.00

Review

\$100,001.00

*Only applicable for bid is greater than \$100,000 Uploaded to this proposed bid is a copy of a 10% bid bond, for the base bid and all alternates, issued by a surety authorized to do business in the state of South Dakota, in the amount of

10000.10

Review

\$10,000.10

Please attach a copy of your Bid Bond. At the bottom of the page you will see the "Add Attachment" paperclip icon.

☒ Check this box if you have mailed a certified check or cashier's check in the amount of 5% of the base bid and all add alternates in lieu of a 10% bid bond. Mailing address: Office of the State Engineer, 523 East Capitol Ave, Pierre SD 57501

Please click on the pencil icon in the Actions column below and enter an Alternate bid for each line item.

*Bid Information

Actions	Alternate	Zero Dollar Change/Add/Deduct from the base bid the sum of:	DOLLARS \$
	Construction funds approved in legislation this FY	Add	500,000,000

Add attachments

Back

Alternate Title

Next


This will then bring you to your bid form filled out for your review.
Then click "Next."

OSE Electronic Bidding - PPDC BID Test



No Unit Prices are needed for this project

Review

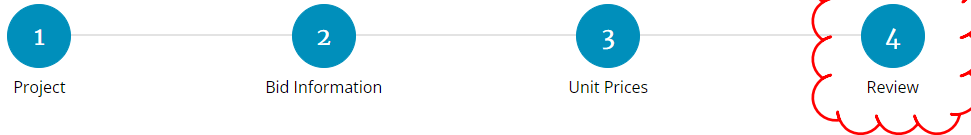
 Add attachments

Back

Next

If your project has unit prices, they will populate next for you to fill out. You would enter those in the same fashion that you entered your alternate. Click "Next" to proceed.

OSE Electronic Bidding – PPDC BID Test



This then brings you to your final review page

* Indicates required

OSE #:

ASW22--FUN/PPDC

Project Name:

PPDC BID Test

Project Location:

Drifters Bar and Grille

Project Campus:

Capital Complex

Bid Opening Date

06/03/2022 10:30:00

The undersigned, being familiar with the local conditions affecting the work, and with the Contract Documents, including the Invitation to Bid, Instructions to Bidders, Bid Form, Explanation of Alternates, Modification to Bid Form, Bid Bond Form, Performance and Payment Bond, Acknowledgment of Surety, Sample Certification of Surety, Non-Resident Bidder Affidavit, Form of Agreement for Construction, General Conditions, Special Conditions, Technical Specifications, Plans and Addenda which govern the purchase of material and labor and the awarding of contracts hereby proposes to do all the work and provide all the material and equipment which pertains to this project.

* Bidder:

South African Construction

* Name Of Firm's Representative:

Stacy Watters

* Title Of Firm's Representative:

Grunt

* Phone

(605) 484-6754

* Email

Wattersstacy@gmail.com

* Firm's Business Address:

523 East Capital Ave. Pierre SD 57501

* State of Incorporation:

SD

Review all information!

*Dollar amount: \$
100001.00

Review

\$100,001.00

*Only applicable for bid is greater than \$100,000 Uploaded to this proposed bid is a copy of a 10% bid bond, for the base bid and all alternates, issued by a surety authorized to do business in the state of South Dakota, in the amount of

10000.10

Review


\$10,000.10

Please attach a copy of your Bid Bond. At the bottom of the page you will see the "Add Attachment" paperclip icon.

☒ Check this box if you have mailed a certified check or cashier's check in the amount of 5% of the base bid and all add alternates in lieu of a 10% bid bond. Mailing address: Office of the State Engineer, 523 East Capitol Ave, Pierre SD 57501

Please click on the pencil icon in the Actions column below and enter an Alternate bid for each line item.

*Bid Information

Actions	Alternate	Zero Dollar Change/Add/Deduct from the base bid the sum of:	DOLLARS \$
	Construction funds approved in legislation this FY	Add	500,000,000

No Unit Prices are needed for this project

Review

The above bid includes all applicable State and Municipal Sales and Use Taxes on materials, and State and Municipal Excise Taxes and all other State and Federal Taxes that would affect the amount of the bid. (See Instructions to Bidders-SD Sales and Use Tax Information for Public Contracts.)

In addition, any material furnished by the State for use in this project is subject to Use Tax and Excise Tax. The total taxable value of materials furnished by the State for this project is:

0

A Performance and Payment Bond as required by General Conditions will not be required on contracts which do not exceed One Hundred Thousand Dollars (\$100,000). (See SDCL 5-21-1.1 as amended). If discrepancies remain at the time of substantial completion, a value will be assigned to each of the discrepancies and two (2) times their estimated value will be retained from payment to the Contractor until completed and accepted. (See SDCL 5-18-13 as amended).

Within ten (10) days after Contractor's receipt of the Agreement for Construction, the Contractor shall submit to the Office of the State Engineer, the executed Agreement for Construction, Performance and Payment Bond, Certificates of Insurance and Affirmative Action Plan (if applicable).

Work shall be commenced within ten (10) consecutive calendar days after written Notice to Proceed by the State Engineer and shall be substantially completed by:

12/31/2022

The undersigned acknowledges that they have read and understand the Asbestos-Containing Materials Statement contained in the project manual.

Review all information!

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids and to waive any irregularities. It is further understood by the Bidder that he may not withdraw their Bid within 30 days after the actual opening thereof.

In submitting this bid, bidder asserts they have reviewed all provisions of the General Conditions including the provision for assessment of liquidated damages found in Article 10 of the General Conditions. Bidder agrees that the damages anticipated by the Owner in the event of delay in completion of the project are uncertain in amount and difficult to prove; the amount stipulated in Article III of the Agreement for Construction is a reasonable amount in light of the anticipated loss and injury; and the Owner's actual damages in the event of delay would be impracticable or extremely difficult to fix. Bidder agrees to be bound by the liquidated damages set forth in Article III of the Agreement for Construction. Bidder further agrees that the liquidated amount stipulated in Article III of the Agreement for Construction is not a penalty.

For contractors, vendors, suppliers, or subcontractors with five (5) or more employees who enter into a contract with the State of South Dakota that involves the expenditure of one hundred thousand dollars (\$100,000) or more, by submitting a response to this solicitation or agreeing to contract with the State, the bidder or offeror certifies and agrees that the following information is correct:

The bidder or offeror, in preparing its response or offer or in considering proposals submitted from qualified, potential vendors, suppliers, and subcontractors, or in the solicitation, selection, or commercial treatment of any vendor, supplier, or subcontractor, has not refused to transact business activities, has not terminated business activities, and has not taken other similar actions intended to limit its commercial relations, related to the subject matter of the bid or offer, with a person or entity on the basis of Israeli national origin, or residence or incorporation in Israel or its territories, with the specific intent to accomplish a boycott or divestment of Israel in a discriminatory manner. It is understood and agreed that, if this certification is false, such false certification will constitute grounds for the State to reject the bid or response submitted by the bidder or offeror on this project and terminate any contract awarded based on the bid or response. The successful bidder or offeror further agrees to provide immediate written notice to the contracting executive branch agency if during the term of the contract it no longer complies with this certification and agrees such noncompliance may be grounds for contract termination.

*The signer acknowledges that they have read, understand, and agree to the information stated in the Instructions to Bidders


☐ Yes

If you need to withdraw your bid after it's submitted, please click on the "Take Action" tab. You will see a Close Request button there.

Submit

Required information

The signer acknowledges that they have read, understand, and agree to the information stated in the Instructions to Bidders

 Add attachments

Back

[Home](#) > [OSE Electronic Bidding - PPDC BID Test](#)

OSE Electronic Bidding – PPDC BID Test

Request Confirmation



Thank you for submitting request CS0002377

View Request

Go Home

Once you click submit, you will see this screen. If you click, view request, you can view and/or edit at any time.

Number
CS0002377

Created just now Updated just now State Bid Received

OSE Electronic Bidding - PPDC BID Test

Show more ▾

OSE Electronic Bidding - PPDC BID Test

CS0002377 Bid Received

Details

Opened
06/01/2022 08:51:13

Task type
Office of the State Engineer

Updated
06/01/2022 08:51:22

Bid Details Comments Attachments Take Action

Variables

OSE #:

ASW22--FUN/PPDC

Number
CS0002377

Created 1m ago Updated 1m ago State Bid Received

OSE Electronic Bidding - PPDC BID Test

Show more ▾

OSE Electronic Bidding - PPDC BID Test

CS0002377 Bid Received

Details

Opened
06/01/2022 08:51:13

Task type
Office of the State Engineer

Updated
06/01/2022 08:51:22

Bid Details Comments Attachments Take Action

Type your message here...

Send



S

system
[Electronic Bidding PPDC.pdf](#)
218.6 KB

1m ago

SW

Stacy Watters
CS0002377 Created

1m ago

Start

Comments on the project are here. Any addendum's issued would show up in the comments (as well as emailed).

Number
CS0002377

Created
1m ago

Updated
1m ago

State
Bid Received

OSE Electronic Bidding – PPDC BID Test

Show more ▾

OSE Electronic Bidding – PPDC BID Test

CS0002377 **Bid Received**

Details

Opened
06/01/2022 08:51:13

Task type
Office of the State Engineer

Updated
06/01/2022 08:51:22

Bid Details Comments Attachments Take Action

Any attachments are under the
"Attachments Tab"

Electronic Bidding PPDC.pdf (218.6 KB)

1m ago

Number
CS0002377

Created
2m ago

Updated
2m ago

State
Bid Received

OSE Electronic Bidding – PPDC BID Test

Show more ▾

OSE Electronic Bidding – PPDC BID Test

CS0002377 **Bid Received**

Details

Opened
06/01/2022 08:51:13

Task type
Office of the State Engineer

Updated
06/01/2022 08:51:22

Bid Details Comments Attachments Take Action

Close Request

Click on "Close
Request" only if you
want to withdraw your
bid entirely.

Once you submit your bid, you will receive an email similar to the snapshot below. You will receive similar emails for any addendum's issued.



RE: Electronic Bid received

Location: Drifters Bar and Grille

Campus: Capital Complex

OSE# ASW22--FUN/PPDC

Dear Stacy Watters,

Your bid for the above referenced project has been received and will be opened publicly on the date and time of the advertisement, which is when bidding officially closes for this project. You can modify your bid any time up until the bidding is closed. You will be notified via email if any addendum's are issued that need to be acknowledged. They will also be posted on the website.

We will be opening bids via Zoom on our live channel that can be found at this link: <https://zoom.us/j/3043640283>

Password: BID

If you are unable to watch, a bid tab will be posted to the website shortly after the bids have been opened and read. Thank you for your interest in working with the State of South Dakota.

Respectfully,

The Office of the State Engineer

- Make sure the email address you use is checked regularly
- When an addendum is issued, you will be notified via email to log back on and acknowledge the addendum(s)
- For projects over \$100K, there will be a link to attach a copy of your bid bond or an address to send a cashier's check to (we prefer bid bond over check if possible)
- Any bids submitted will not be visible to those of us at OSE until the day/time of the bid opening
- Once you submit your bid, you will receive an email acknowledging that it was received automatically
- You may withdraw your bid electronically at any time before the bid closes
- Bid Tabulations can be found here, after the bid closes
 - [OSE Pr https://www.sd.gov/cs/?id=ose_projects - Citizen Services \(sd.gov\)](https://www.sd.gov/cs/?id=ose_projects - Citizen Services (sd.gov))

EXHIBIT "C"
BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

as Principal, and _____

as Surety, are hereby held and firmly bound unto _____

as owner for the penal sum of _____ of which, well and truly to be made, we

hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed, this _____ day of _____, 20____.

The condition of the above obligation is such that whereas the Principal has submitted to

_____ a certain Bid, attached hereto and hereby made a part hereof to

enter into a contract in writing for the _____

NOW, THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract, attached hereto (properly completed in accordance with said bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in force and effect: it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extensions of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

Surety

SEAL

By: _____

Page intentionally left blank.

EXHIBIT “D”
PERFORMANCE AND PAYMENT BOND

Contractors shall utilize the Performance and Payment Bond found on the South Dakota Bureau of Administration, Office of the State Engineer website. <https://boa.sd.gov/state-engineer/forms.aspx>

Contractors shall follow the Performance and Payment Bond Instructions to complete the Performance and Payment Bond.

Page intentionally left blank.

EXHIBIT "E"
NON-RESIDENT BIDDER AFFIDAVIT

Country of _____)
) ss
State or Province of _____)

Business Name: _____

Business Address: _____

Affiant's Name and Title: _____

Project Name and Location: _____

CFMO Project Number: _____

AFFIDAVIT WHEN NO PREFERENCE IS GIVEN

I do hereby affirm that _____ resides in the country of _____
_____ in the state or province of _____ and that said country and/or state or
province does not grant a preference to resident bidders for work on behalf of said country, state or province.

Dated: _____

Signed _____

AFFIDAVIT WHEN PREFERENCE IS GIVEN

I do hereby affirm that _____ resides in the country of _____
in the state or province of _____ and that said country and/or state or province does grant a preference to
resident bidders for work on behalf of said country, state, or province, the nature and extent of such preference being _____
_____.

Dated: _____

Signed _____

ACKNOWLEDGEMENT OF AFFIANT

Country of _____)
) ss
State or Province of _____)

On this _____ day of _____, 20____, before me personally appeared _____
_____, known to me to be the affiant who, being duly sworn, declares all statements made in
this affidavit to be true and correct to the best of his or her knowledge.

Notary Public

My commission expires the _____ day of _____, 20____.

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EXHIBIT "F"
STATE OF SOUTH DAKOTA
CONTRACTOR'S STATEMENT OF SKILLS AND CAPABILITIES

Send Completed Form to: South Dakota Department of the Military
Attn: Engineering Manager
2823 West Main Street, Bldg. 420
Rapid City, South Dakota 57702

Project Name: Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES

Location: Sioux Falls

CFMO # 466527 & 467009

CONTRACTOR INFORMATION

A. Business Structure

Submitted By:

1. Current Business Name and Address.

Business Name: _____

Address: _____

Phone: _____

Fax: _____

email: _____

2. How many years has your company been in business under the name listed above?

3. Has your company been in business under any other business name(s)?

If so, list previous business name(s) and the years your company operated under each name:

4. If a corporation, provide the:

Date and State of incorporation:

Type of corporation:

Names of Officers

President:

Vice-president(s):

Secretary:

Treasurer:

5. If a partnership, provide the:

State of Organization:

Partnership type:

Date of organization:

Names of partners:

6. If individual, provide:

Date of organization:

Name of owner:

7. Use this space to describe your company's business structure if it differs from those listed above:
8. List the states and trades in which you may legally do business where applicable. Provide registration or license number(s).
9. If your company is organized under the laws of another state, has it registered with the Secretary of State for the State of South Dakota and/or the Department of Revenue?

B. Background and History

1. What types of Work does your company perform with its own forces?
2. Has your company ever failed to complete Work it had contracted to perform? Provide details if the answer is "yes."
3. Within the last five years, has any officer or principal of your company been an officer or principal of another company that failed to complete Work that the latter company contracted to perform? Provide details if "yes."
4. List any and all judgments, claims, suits at law, or arbitration proceedings pending or outstanding against your company or its officers regarding any construction contracts:
5. Within the last five years, has your company filed law suits or requested arbitration regarding any construction contracts?
6. On separate paper, provide a list of major construction projects your company is currently working on. For purposes of this document "major construction projects" shall be considered anything of average size or greater for your company. Provide name of owner, location, architect, contract amount, and scheduled completion.
7. On separate paper, list the major construction projects your company has completed in the last five years. For purposes of this document "major construction projects" shall be considered anything of average size or greater for your company. Provide name of owner, project, location, architect, contract amount, and scheduled completion.
8. On separate paper, list the construction background/experience of the key personnel in your company.
9. What is the average annual value of all construction work your company performed within the last five years?

C. References

1. List your company's Business/Industry References:
2. List your company's Financial References:
3. Provide the name and address of your company's Surety, as well as the name and address of the Agent:

SIGNATURE AND NOTARIZATION

Date _____

Typed Name: _____

Title: _____

Signature

Business Name: _____

(Affix Seal)

Address: _____

On this _day of _____, 20 _____, before me personally appeared
_____, who, being duly sworn, declares all statements made in this
Qualification Statement to be true and correct to the best of his or her knowledge.

Notary Public

My commission expires the _____ day of _____, 20_____

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EXHIBIT "G"
RESIDENT AND NON-RESIDENT
SUBCONTRACTOR BREAKOUT

Company: _____ Contract Amount: _____

Date: _____

Re: Project Name: Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTE
Project Location: Sioux Falls
CFMO # 466527 & 467009

Resident Contractors

[illegible]

Non- Resident Contractors

Company	Location	Labor Cost	% Value of Contract
Total:			

As defined in 5-18A:

(26) "Resident," any person, partnership, association, limited liability company, foreign limited liability company, corporation, or foreign corporation licensed to do business within this state that has maintained a substantial and bona fide place of business and has conducted business from within this state for at least one year prior to the date on which a contract was awarded. The members of the partnership or association shall have been bona fide residents of the state for one year or more immediately prior to bidding upon the contract. A foreign corporation licensed pursuant to §§ 47-1A-1501 to 47-1A-1532, inclusive, is not a resident as defined by this section if the state or country in which it is organized enforces or has a preference for resident bidders;

If more than 20% of the labor cost included in the contract is being provided by nonresident subcontractors, please explain:

EXHIBIT "H"
CONTRACTOR'S EXCISE TAX LICENSE

CERTIFICATION

Effective July 1, 2003, no public corporation may award any contract for the construction of any public improvement unless the contractor has a contractors' excise tax license. (SDCL 5-18B-17) In addition, all contractors that contract for construction services or realty improvement work in South Dakota must have a contractor's excise tax license. (SDCL 10-46A and 10-46B)

To be awarded a contract with the State of South Dakota, or to be considered for future contracts, your business must have a South Dakota contractors' excise tax permit. If you do not have a contractor's excise tax permit, you may apply for a permit with the South Dakota Department of Revenue. You may obtain an application from the Department of Revenue's web-site at www.state.sd.us/drr or by calling 1-800-TAX-9188.

Please complete the following and return this form to this office with your bid/contract. This information will be verified with the Department of Revenue.

1. Owner Name: _____
2. Business Name: _____
3. South Dakota Contractor's Excise Tax Permit Number: _____
4. If you applied for a contractors' excise tax license but have not received the license yet, please list your federal identification number and the date you applied for a license:

Federal ID # _____ Application Date: _____

Failure to provide documentation that your business is licensed will result in your removal from contracts with the State of South Dakota.

I certify that, to the best of my knowledge, the above information is accurate and complete.

_____ Signature	_____,20_____ Date
--------------------	-----------------------

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**STATE OF SOUTH DAKOTA
AGREEMENT FOR CONSTRUCTION
PRIME CONTRACT FOR**

REPLACE EXTERIOR DOORS – SIOUX FALLS RTI & REPLACE EXTERIOR DOORS – SF UTES

Sioux Falls, South Dakota
CFMO# 466527 & 467009

THIS Agreement is made the **xxth day of Month, 2024** by and between **Name of Contractor** (the "Contractor") and the **South Dakota Department of the Military** represented by its legal officers (the "Owner").

WITNESSETH, that the Contractor and the Owner for the consideration stated herein agree as follows:

ARTICLE I – CONTRACT DOCUMENTS:

The following documents and any other documents incorporated in them by reference constitute the contract documents:

1. This Agreement
2. The Project Manual dated **February 2024**
3. The Project Drawings dated **February 2024**
4. Addenda issued prior to execution of this Agreement dated **Month Year, Month Year, and Month Year.**
5. Contractor's Performance and Labor and Material Payment Bond
6. Value Engineering Letter dated **Month Year**

These documents constitute the entire and integrated agreement between the parties hereto and supersede prior negotiations, representations, or agreements, either written or oral. The Index for items 2 and 3 is attached hereto as Exhibit "A."

ARTICLE II – STATEMENT OF WORK:

To the extent not otherwise provided in the contract documents, contractor shall furnish and pay for all labor, tools, equipment, supplies, materials, appurtenances, utilities, charges, fees, permits, and all other construction accessories and services required to complete the work specified in the contract documents in strict compliance with the contract documents.

A background check will be completed on all superintendents by the SDARNG. The project superintendents will need to be on site AT ALL TIMES that work is being completed as an escort to those without background checks. Any additional background checks required will be done at the contractor's expense. When necessary, a contractors badge will be issued to the prime contractor superintendent. This badge must be turned in to the Project Manager upon successful completion of the project.

Upon successful completion of the project, the contractor must provide, in addition to the operation and maintenance manuals, a digital copy of all of the warranties listed in Microsoft Excel format. The tables should include at a minimum: the item with a warranty, the length of the warranty, and contact information of who services the warranty.

ARTICLE III – DATE OF COMMENCEMENT AND COMPLETION:

- A. The work shall be commenced within ten (10) consecutive calendar days after the date of issuance of the Notice to Proceed by the Owner.
- B. The project shall be substantially completed not later than **177 calendar days from the effective date of the Notice to Proceed**, subject to adjustments of the contract time as provided in the contract documents.
- C. Should the Contractor fail to substantially complete the work within the time set forth herein, or within such extra time as may have been allowed by increases in the contract, or by formally approved extensions granted by the Owner, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner **\$575.00 per calendar day as liquidated damages** for each calendar day of delay until the work is substantially complete.
- D. The project shall be completed and ready for final inspection/acceptance no later than **191 calendar days from the effective date of the Notice to Proceed**, subject to adjustments of the contract time as provided in the contract documents.

- E. After Substantial Completion, if the Contractor shall neglect, refuse, or fail to complete the remaining Work as outlined in the approved punch list, subject to adjustments of the contract time as provided in the contract documents, the Contractor shall be liable for and shall pay the Owner **\$575.00 per calendar day as liquidated damages** for each calendar day of delay until the Work is completed and ready for final inspection/acceptance.

ARTICLE IV – CONTRACT SUM:

- A. For the performance of the work specified in the Contract Documents, Owner will pay Contractor and Contractor will accept as full compensation the sum of **\$(AMOUNT)**, subject to additions or deductions as provided in the contract documents;
- B. Contract sum includes the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner: **N/A or List Alternates by Number, Name and Price**
- C. Unit Prices, if any, are as follows:
Where the quantities originally contemplated are so changed that application of the agreed unit price to the quantity of work performed is shown to create a hardship to the Owner or the Contractor, there shall be an equitable adjustment of the contract to prevent such hardship.
- D. Contract sum includes the following value engineering items, if any, which are described in the Contract Documents and are hereby accepted by the Owner: **N/A or List Value Engineered Items by Number, Description and Mod. Price**

ARTICLE V – PROGRESS PAYMENTS:

The Owner shall make progress payments on a monthly basis for work accomplished in accordance with General Conditions, Article 11.

ARTICLE VI – ACCEPTANCE AND FINAL PAYMENT:

- A. Final payment less amounts withheld to cover the cost of nonconforming work, shall be made by the Owner in accordance with General Conditions Sub-Article 11.8.
- B. Prior to issuing final payment, the Contractor shall provide all submittals required within the project manual, specifically those listed in specification section 00 65 00 – Closeout Forms.

ARTICLE VII – NOTICE:

All notices, demands and other communications required by the Contract Documents shall be in writing and shall be deemed to have been duly given if personally delivered, mailed first class (postage prepaid), or e-mailed:

- 1) **If to Contractor:**
- 2) **If to the State:**
Department of the Military
Attn: Kelly Eitreim
2823 West Main St., Bldg 420
Rapid City, South Dakota 57702-8170
Phone: 605.737.6637
Email: kelly.eitreim@state.sd.us
- 3) **If to the Architect:**
FEH Design
Attn: Brittney Ruba
1201 4th Street, Suite 201
Sioux City, IA 51101
Phone: 712.252.3889
Email: brittneyr@fehdesign.com

Either party may change the addresses set forth for notice herein upon written notice thereof to the other.

ARTICLE VIII – CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION:

- A. Contractor certifies, by signing this Agreement, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation, by any Federal department or agency, from transactions involving the use of Federal funds.
- B. Pursuant **Executive Order 2020-01**, for contractors, vendors, suppliers, or subcontractors with five (5) or more employees who enter into a contract with the State of South Dakota that involves the expenditure of one hundred thousand dollars (\$100,000) or more, by signing this contract the Contractor certifies and agrees that it has not refused to transact business activities, have not terminated business activities, and have not taken other similar actions intended to limit its commercial relations, related to the subject matter of the contract, with a person or entity that is either the State of Israel, or a company doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel to do business, or doing business in the State of Israel, with the specific intent to accomplish a boycott or divestment of Israel in a discriminatory manner. It is understood and agreed that, if this certification is false, such false certification will constitute grounds for the State to terminate this contract. The Contractor further agrees to provide immediate written notice to the State if during the term of the contract it no longer complies with this certification, and agrees such noncompliance may be grounds for contract termination.”

C. **COMPLIANCE WITH EXECUTIVE ORDER 2023-02:**

Contractor certifies and agrees that the following information is correct:

In preparing its response or offer or in considering proposals submitted from qualified, potential subconsultants, vendors, suppliers, and subcontractors, or in the solicitation, selection, or commercial treatment of any subconsultant, vendor, supplier, or subcontractor, Contractor is not an entity, regardless of its principal place of business, that is ultimately owned or controlled, directly or indirectly, by a foreign national, a foreign parent entity, or foreign government from China, Iran, North Korea, Russia, Cuba, or Venezuela, as defined by South Dakota Executive Order 2023-02.

Contractor further agrees that, if this certification is false, such false certification will constitute grounds for the State to terminate this Agreement. Contractor further agrees to provide immediate written notice to the State if during the term of this Agreement it no longer complies with this certification and agrees such noncompliance may be grounds for termination of this Agreement.

IN WITNESS WHEREOF, THE parties hereto have caused this instrument to be executed in one original counterpart the day and year above first written:

CONTRACTOR:

CONTRACTOR NAME: _____
(Affix Corporate Seal if Available)

SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

DATE: _____

RECOMMENDED BY
DEPARTMENT OF THE MILITARY

STATE OF SOUTH DAKOTA
DEPARTMENT OF THE MILITARY

CULLEN B. JORGENSEN (Date)
Engineering Manager

MARK R. MORRELL (Date)
Major General (SD), SDNG
The Adjutant General

Exhibit "A"
AGREEMENT FOR CONSTRUCTION
Enumeration of Contract Documents

1. This agreement
2. The General and Special Conditions contained in the Project Manual dated **FEBRUARY 2024**
3. The Invitation for Bids and Instruction to Bidders contained in the Project Manual dated **FEBRUARY 2024**
4. The Specifications are those contained in the Project Manual dated **FEBRUARY 2024** and are as follows:

<u>Section</u>	<u>Title</u>
00 00 01	Index
00 00 02	Invitation to Bid
00 00 03	Bidder's Checklist
00 00 04	Asbestos Statement
00 00 05	Instruction to Bidders
00 00 05A	Bid Form
00 00 05-A1	Modification to Bid Form
00 00 05-B	Format for Sealed Envelope
00 00 05-C	Bid Bond
00 00 05-D	Performance and Payment Bond
00 00 05-E	Non-Resident Bidder Affidavit
00 00 05-F	Contractor's Statement of Skills and Capabilities
00 00 05-G	Subcontractor Certification
00 00 05-H	Contractor's Excise Tax License
00 00 06	Agreement for Construction
00 00 07	General Conditions
00 01 00	Technical Specifications Index
00 01 15	List of Drawings Sheets

5. The drawings are as follows:

<u>Number</u>	<u>Title</u>
A-101	Title Sheet
A-102	Demolition Plan and Notes
A-103	Floor Plan
A-104	Door Schedule and Notes
A-105	Door and Frame Elevations
A-201	Title Sheet
A-202	Demolition Plan and Notes
A-203	Floor Plan
A-204	Door Schedule and Notes
A-205	Door and Frame Elevations

6. The addenda, if any, are as follows:

<u>Number</u>	<u>Date</u>
---------------	-------------

7. Value Engineering Letter dated: **Date or N/A**

8. The Performance and Labor and Material Payment Bond dated _____
Issued by _____. Bond # _____.
9. Other documents forming a part of the Contract Documents are: None

**GENERAL CONDITIONS
TO
AGREEMENT FOR CONSTRUCTION**

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Article 1

Definitions

- 1.1 **Owner:** The owner is the State of South Dakota acting through the legally appointed commissioner for the Bureau of Administration and his representative, the Office of the State Engineer.
- 1.2 **Architect/Engineer:** The term “architect/engineer” (hereinafter A/E) means the person or entity identified as such on the cover sheet to the drawings or plans and his/her authorized representative including his/her consulting engineer(s).
- 1.3 **Contractor:** The term "contractor" means the person or entity identified as such in the Agreement for Construction and his authorized representatives.
- 1.4 **Subcontractor:** Any individual, firm or corporation to whom the Contractor sublets any part of the contract for supplying materials and labor, or only labor, at the site of the project.
- 1.5 **The Contract Documents:** The documents identified as the Contract Documents in the Agreement for Construction.
- 1.6 **The Contract:** The Contract Documents form the contract. The contract may be amended or modified only in writing in the manner set forth in Article 14. Nothing contained in the Contract Documents shall create any contractual relationship between the owner and any subcontractor, sub-subcontractor or supplier.
- 1.7 **The Work:** The completed construction required by the Contract Documents, and every part thereof, and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated into such construction.
- 1.8 **The Project:** The total construction of which the work performed under the Contract Documents may be the whole or a part.
- 1.9 **The Drawings or Plans:** The graphic and pictorial portions of the Contract Documents showing the design, dimensions and layout of the work including, but not limited to, plan views, elevation views, details, sections, schedules, and diagrams.
- 1.10 **The Specifications:** The written requirements in the Contract Documents for materials, equipment, construction systems, standards and workmanship.
- 1.11 **The Project Manual:** The manual compiled for the work containing the Invitation for Bid, Instructions to Bidders, blank form of Bid Bond, blank form of Agreement for Construction, blank form of Performance and Labor and Material Payment Bond, sample forms, General Conditions, and Special Conditions.

Article 2

Execution, Correlation and Intent

- 2.1 By executing the contract, the contractor represents he has examined the plans, specifications, site of the proposed Work and Contract Documents in accordance with the requirements of the Instructions to Bidders.
- 2.2 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings. All work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such work is to be done by others. Should the Drawings or the Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of work and/or materials unless otherwise directed by written change.

- 2.3 The organization of the Specifications into Divisions, Sections and Articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.
- 2.4 Neither the Owner nor the A/E assumes any liability arising out of jurisdictional issues raised or claims advanced by trade organizations or other interested parties based on the arrangement or manner of subdivision of the content of the Specifications and Drawings.
- 2.5 The Contractor and all Subcontractors shall refer to all of the Drawings, including those showing primarily the work of the mechanical, electrical, and other specialized trades, and to all of the Sections of the Specifications, and shall perform all work reasonably inferable therefrom as being necessary to produce the indicated results. The Contractor shall promptly report any discrepancy or omission which it observes in the Construction Documents and any need for clarification or interpretation to the Owner and the A/E. The Contractor's failure to do so will cause any additional cost incurred by the Contractor to be its sole responsibility. The Contractor shall number Requests for Information in consecutive order. The Contractor shall maintain a log of each Request for Information indicating the date it was issued, the date or dates of any correspondence and/or discussions on the Request for Information, and the date a final answer is received.
- 2.6 The General Conditions and the Special Conditions are a part of each Section of the Specifications. The Special Conditions for Mechanical and Electrical Trades, if any, are part of each Section of the Specifications referenced therein, and apply to the work of the trades affected thereby.
- 2.7 A typical or representative detail indicated on the Drawings shall constitute the standard for workmanship and material throughout corresponding parts of the Work. Where necessary, and where reasonably inferable from the Construction Documents, the Contractor shall adapt such representative detail for application to such corresponding parts of the Work. The details of such adaptation shall be subject to prior approval by the A/E. Repetitive features shown in outline on the drawings shall be in exact accordance with corresponding features completely shown.
- 2.8 The layout of mechanical and electrical systems, equipment, fixtures, piping, ductwork, conduit, specialty items, and accessories indicated on the Drawings is diagrammatic, and all variations in alignment, elevation, and detail required to avoid interferences and satisfy architectural and structural limitations are not necessarily shown. Actual layout of the Work shall be carried out without affecting the architectural, engineering and structural integrity and limitations of the Work and shall be performed in such sequence and manner as to avoid conflicts, provide clear access to all control points, including valves, strainers, control devices, and specialty items of every nature related to such systems and equipment, obtain maximum headroom, and provide adequate clearances as required for operation and maintenance.
- 2.9 The Drawings shall not be scaled for dimensions. If figured dimensions are not given on the Drawings, the Contractor shall request same from the A/E giving reasonable advance notice.
- 2.10 All indications or notations which apply to one of a number of similar situations, materials or processes shall be deemed to apply to all such situations, materials or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents.
- 2.11 Where codes, standards, requirements and publications or public and private trade associations or other bodies are referred to in the Specifications, references shall be understood to be in the latest revision prior to the date of receiving bids, except where otherwise indicated.
- 2.12 Where no explicit quality or standards for materials or workmanship are established for work, such work is to be of good quality for the intended use and consistent with the quality of the surrounding work, of the construction of the Project generally, and industry standards.
- 2.13 All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents. A copy of the manufacturer's written or printed directions shall be provided to the Owner upon completion of the project.

Article 3
Ownership, Use of Documents, Confidentiality of Documents.

3.1 Ownership of Work Product

Any plans, specifications, engineering calculations, technical data, reports, miscellaneous drawings, and all information contained therein provided by the State, its consultants, employees, contractors and agents to the contractor for the contractor's performance of its obligations under this agreement are the property of the State. They are to be used only with respect to this Project and are not to be used for any other project. The contractor may not disseminate these materials to any person or entity nor may the contractor use these materials for purposes other than work for the state, without the express written approval of the state. The state shall not unreasonably withhold such approval for dissemination of these materials as necessary to subcontractors and suppliers.

3.2 Confidentiality of Documents

All reports, plans, specifications, engineering calculations, technical data, miscellaneous drawings, and information contained therein provided to or prepared by the contractor, its owners, officers, employees, agents, consultants, suppliers, and subcontractors in connection with the contractor's performance under this Agreement are confidential and the contractor, its owners, officers, employees, agents, consultants, suppliers, and subcontractors shall not disclose this information to any person, individual, or entity without the express written permission of the state.

3.3 Return of Documents

All documents covered by Article 3 shall be delivered to the A/E at the completion of the work. The contractor may not retain any such documents for its own use without the express written permission of the state and any documents that are retained, with or without state permission, shall be subject to all of the requirements of Article 3.

3.4 Terms to be Included in Subcontracts

The contractor shall include the requirements of Article 3 in any contract it enters into with any consultants, subcontractors, suppliers, persons, individuals, or entities for the performance of any of the contractor's obligations under this agreement.

Article 4
A/E'S RESPONSIBILITIES

- 4.1 The A/E, under the direction of the State Engineer, will provide administration of the Contract as hereinafter described. The A/E will represent the Owner during construction. The A/E will advise and consult with the Owner. The Owner's instructions to the Contractor may be forwarded through the A/E. The A/E will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with Sub-Article 4.15.
- 4.2 The Contractor shall accept instructions only from the A/E or State Engineer, and not the A/E's consulting engineers, except as the A/E and State Engineer shall authorize in writing.
- 4.3 The A/E will visit the construction site at intervals appropriate to the stage of construction to keep generally familiar with the progress and quality of the work completed and to determine in general if the Project is being constructed in a manner such that when completed it would be in conformance with the plans and specifications and other Contract Documents. The A/E will not, however, be required to make exhaustive or continuous on-site inspections to check the quality or quantity of work. On the basis of such observations or inspections, the A/E shall keep the Owner informed of the progress and quality of the work on the Project and endeavor to guard the Owner against defects and deficiencies in the work of the Contractor. The A/E will maintain written reports of all site visits.
- 4.4 The A/E shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Project, since these are solely the Contractor's responsibilities under the Agreement for Construction. The A/E shall not be responsible for the Contractor's schedules or failure to carry out the Project in accordance with the Contract Documents. The A/E shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Project, except to the extent that the A/E may formally notify the Contractor of the unacceptability of various portions of the Project or failure to carry out the Work on the Project in accordance with the Contract Documents.

- 4.5 The A/E will inform the Contractor on behalf of and in consultation with the Owner to cease work on the Project or portions thereof affected by those items that are unacceptable and remain uncorrected until such time as corrections are made.
- 4.6 The A/E shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the A/E may perform his functions under the Contract Documents.
- 4.7 Except as may otherwise be provided in the Contract Documents or when direct communications have been approved by the A/E, the Owner and its representatives and the Contractor shall communicate through the A/E. Communications by and with the A/E's consultants shall be through the A/E.
- 4.8 The A/E will determine the amounts owing to the Contractor based on inspections and observations at the site, and on evaluations of the Contractor's Monthly Applications for Payment, and shall issue Certificates of Payment for amounts due on forms provided by the State Engineer. A Certificate of Payment constitutes a representation by the A/E to the Owner, based upon the inspections and the information provided by the Contractor in the Application, that the Project has progressed to the point indicated; that to the best of the A/E's knowledge, information and belief, the quality of the work on the Project is in accordance with the Contract Documents; and that the Contractor is entitled to payment in the amount certified.
- 4.9 The A/E shall have authority to reject work on the Project which does not conform to the Contract Documents. Whenever the A/E considers it necessary or advisable for implementation of the intent of the Contract Documents, the A/E will have authority to recommend to the Owner additional inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such work is fabricated, installed or completed. However, neither this authority of the A/E nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the A/E to any Construction Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons performing portions of the work on the Project.
- 4.10 The A/E shall review and approve or take other appropriate action on Shop Drawings, Product Data and Samples submitted by Construction Contractors to determine if they conform with the design concept for the Project and with the information provided in the Contract Documents, and submit these documents or information to the Owner indicating the A/E's approval or comments with reasonable promptness so as to cause no delay to the prosecution of the Project.
- Approval or acceptance of a specific item shall not necessarily indicate the A/E's approval of an assembly of which the item is a component. When professional certification of equipment is required by the Contract Documents, the A/E will be entitled to rely upon that certification to determine that the materials, systems, or equipment will meet the performance criteria required in the Contract Documents.
- 4.11 The A/E will conduct, at the time and place approved by the Owner, with representatives of the State agencies involved in the Project and the Contractor, inspections to establish dates of Project acceptance and completion. The A/E shall have other A/Es, Structural, Mechanical, or Electrical Engineers, or other consultants in their employ in attendance at this and at various progress inspections as may be necessary to evaluate whether the work completed on the Project is in conformance with the Contract Documents. The A/E will receive and forward to the Owner, with comments on completeness or acceptability, those warranties, operation manuals, and other documents required by the Contract Documents and assembled by the Contractor.
- 4.12 The A/E will review the final estimate for final payment to the Contractor and provide a Certificate of Final Payment to the Owner.
- 4.13 The A/E will provide to the Owner or the Contractor, upon written request in the form of a Request for Information, interpretations and decisions in writing, or in the form of drawings, on matters concerning performance under the Contract Documents, and execution or performance of the Work on the Project. Response to such requests shall be made with reasonable promptness and within any time limits agreed upon. The final decision on all such questions shall be made by the State Engineer.

- 4.14 The A/E will prepare Change Orders in accordance with Article 14, and will have authority to order minor changes in the Work as provided in Sub-Article 14.6.
- 4.15 The duties, responsibilities and limitations of authority of the A/E as the Owner's representative during construction as set forth in the Contract Documents will not be modified or extended without written consent of the Owner, the Contractor and the A/E.
- 4.16 In case of the termination of the employment of the A/E, the Owner shall appoint a replacement A/E whose status under the Contract Documents shall be that of the former A/E.

Article 5

OWNER'S RIGHTS AND RESPONSIBILITIES

- 5.1 Information and Services Required of the Owner.
- 5.1.1 The Owner shall furnish a survey describing the legal limitations and utility locations for the site of the project.
- 5.1.2 The Owner shall secure and pay for necessary easements, and other property rights required for the construction of the Project.
- 5.1.3 Information under the Owner's control shall be furnished by the Owner with reasonable promptness after receipt from the Contractor of a written request for such information.
- 5.1.4 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, 2 sets of paper prints of Drawings and 3 sets of Specifications necessary for the execution of the Work.
- 5.1.5 The Owner may forward instructions to the Contractor through the A/E or give instructions through the State Engineer.
- 5.1.6 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Work by the Owner or by separate contractors, Payments and Completion, and insurance in Articles 8, 10, 11 and 13.
- 5.2 Owner's Right to Stop the Work: If the Contractor fails to correct defective Work as required by Article 15 or fails to carry out the Work in accordance with the Contract Documents in any material respect, the Owner, in addition to its other remedies, by a written order signed by the State Engineer or by the State Engineer's designated representative may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.
- 5.3 Owner's Right to Carry Out the Work: If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents in any material respect and fails within three working days after receipt of written notice from the Owner or in such time as may be established in written notice from Owner to commence and continue correction of such default or neglect with diligence and promptness, or if the Work is not being performed properly or in accordance with the scheduling provisions of the Contract Documents in any material respect, whether or not the Contractor is in default, the Owner may, after the expiration of such notice period and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the A/E's and State Engineer's additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner upon demand. If, in the sole judgment of the Owner, an emergency exists as a result of the Contractor's default, neglect or failure to correct defective work, which in the Owner's opinion, requires more immediate corrective action than the Contractor is able to provide, then the Owner may, without notice to the Contractor, perform such corrective work or cause it to be performed by others. The Owner shall also have the right to carry out the Work, or any part thereof, during the period of any work stoppage without terminating the Contract. If the Owner wishes to exercise this right it will give the Contractor three days notice of its intent to do so. In any such case, an appropriate deductive Change Order shall be issued in accordance with Article 14,

the amount of which shall not exceed an amount which equals the estimated direct cost, including the State Engineer's fees, of performing the work which the Owner elects to perform and the proportionate amount of the Contractor's fee associated therewith.

- 5.4 Owner's Right to Access for Observation or Other Work: The Owner reserves the right of access to any part of the Work, at any time, for the purpose of observation, or testing, or to install other work, either with its own forces or with separate contractors. Such access is not to be construed to mean partial occupancy by Owner, and no claim for additional compensation by the Contractor because of such access or installation of work will be considered. Contractor shall cooperate with Owner during Owner's access or performance of work.

ARTICLE 6

CONTRACTOR'S RESPONSIBILITIES

- 6.1 Review of Contract Documents: The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Owner and the A/E any error, inconsistency or omission he may discover. The Contractor shall not be liable to the Owner or the A/E for any damage resulting from any such errors, inconsistency or omission he may discover and report, nor for any damage resulting from any such errors, inconsistencies or omissions which he could not reasonably have discovered. The Contractor shall perform no portion of the work at any time without Construction Documents or, where required, Shop Drawings, Product Data or Samples for such portions of the Work bearing the A/E's appropriate action stamp.
- 6.2 Supervision and Construction Procedures.
- 6.2.1 The Contractor shall supervise and direct the Work, using the skill and attention necessary to complete the Work in a workmanlike manner. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the contract. Neither the Owner nor the A/E shall have control over, or responsibility for, any such matters.
- 6.2.2 Nothing contained in the Contract Documents shall be interpreted by implication or otherwise as a direction by the A/E or the Owner to the Contractor as to construction means, methods, techniques, sequences and procedures. If there is express reference to such means, methods, techniques, sequences and procedures, it is solely for the purpose of insuring that the Work will be produced in accordance with the desired objectives as set forth in the Construction Documents but such express reference shall in no way relieve the Contractor of his responsibilities in connection therewith. If the Contractor does not wish to accept the responsibility for any means, techniques, sequences or procedures which are expressly set forth in the Construction Documents, then the contractor shall notify the A/E in writing of the actual means, methods, techniques, sequences and procedures which he will employ on the Work if these differ from those expressly referred to in the Construction Documents. All loss, damage or liability or cost of correcting defective Work arising from the employment of any construction means, methods, techniques, sequences or procedures shall be borne by the Contractor notwithstanding that any of the same shall have been referred to expressly in the Construction Documents.
- 6.2.3 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors, Sub-subcontractors, materialmen and suppliers and their agents and employees, and other persons performing any of the Work.
- 6.2.4 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the A/E in his administration of the Contract, by the use or occupancy of part of the Work by the Owner as provided in Sub-Article 5.4, by the performance of work related to the Project by others as provided in Sub-Article 8.1, or by inspections, tests or approvals required or performed under Sub-Article 9.7 by persons other than the Contractor.
- 6.2.5 The Contractor shall retain a competent Registered Professional Engineer or Registered Land Surveyor, acceptable to the Owner and A/E, who shall establish the exterior lines and required elevations of all buildings and structures to be erected on the site and shall establish sufficient lines and grades for the construction of associated work such as, but not limited to, roads, utilities and site grading. The Engineer or Land Surveyor shall certify as to the actual location of the constructed facilities in relation to property lines, building lines, easements, and other restrictive boundaries.

- 6.2.6 The Contractor shall establish the building grades, lines, levels, column, wall and partition lines required by the various Subcontractors in laying out their work.
- 6.2.7 The Contractor shall coordinate and supervise the work performed by Subcontractors to the end that the work is carried out without conflict between trades or jurisdictional disputes and so that no Subcontractor, at any time, causes delay to the general progress of the Work. The Contractor and all Subcontractors shall at all times afford each other Subcontractor, any separate contractor, and the Owner, every reasonable opportunity for the installation of work and the storage of materials, and shall provide access to and the use of necessary loading dock and hoist facilities, adequate storage room and necessary utilities and other services.
- 6.2.8 Wherever the work of a Subcontractor is dependent upon the work of other Subcontractors, or the Contractor, the Contractor shall require the Subcontractor to:
- 6.2.8.1 Coordinate his work with the dependent work;
 - 6.2.8.2 Provide necessary dependent data and requirements;
 - 6.2.8.3 Supply and/or install items to be built into dependent work of others;
 - 6.2.8.4 Make provisions for dependent work of others;
 - 6.2.8.5 Examine dependent drawings and specifications;
 - 6.2.8.6 Examine previously placed dependent work;
 - 6.2.8.7 Check and verify dependent dimensions of previously placed work;
 - 6.2.8.8 Notify Contractor of previously placed dependent work or dependent dimensions which are unsatisfactory or will prevent a satisfactory installation of his work; and
 - 6.2.8.9 Not proceed with his work until the unsatisfactory dependent conditions have been corrected.

Installation of Work by a Subcontractor in any given area shall constitute acceptance by the Subcontractor and Contractor of the previously placed dependent work.

6.3 Labor and Materials.

- 6.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The word "provide" shall mean furnish and install complete, including connections, unless otherwise specified. All connection charges, assessments or inspection fees which may be imposed by any public agency or utility company are included in the Contract Sum and shall be the Contractor's responsibility, except the final water and sewer connection charges which shall be paid by the Owner.
- 6.3.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him. The Contractor shall be responsible to maintain and observe, and to require his Subcontractors to maintain and observe, sound labor practices, and shall require each Subcontractor to take all steps reasonably necessary to avoid labor disputes or stoppages.
- 6.3.3 Except in the event of emergency, no substantial field operations shall be performed outside of regular working hours without the prior notification of the A/E and the Owner. The Contractor will not be entitled to additional compensation for work performed outside of regular working hours except as otherwise expressly agreed in writing by the Owner prior to the performance of such overtime work. Additional compensation for such authorized overtime shall be limited to the direct cost of the premium portion only of such authorized overtime. No additional indirect cost or fee shall be included.
- 6.3.4 Substitutions
- 6.3.4.1 The products, materials and equipment of manufacturers referred to in the Specifications and on the Drawings are intended to establish the standard of quality and design required by the A/E; however, products, materials and equipment manufacturers, other than those specified, may be used, if equivalent and approved in writing by the A/E.

- 6.3.4.2 It is deemed that the term 'or approved equal' is included after all products, materials and equipment referred to in the Specifications or on the Drawings.
- 6.3.4.3 The Owner in consultation with the A/E will be the sole judge of equivalency of proposed substitute products, materials, and equipment. The A/E will make written recommendation of acceptance or rejection to the Owner. The Owner will then authorize the A/E to issue to the Contractor written approval or rejection of the substitution.
- 6.3.4.4 If the Contractor desires to use a substitute item, he shall make application to the A/E in writing in sufficient time (having regard to the progress of the Work, the period of delivery of the goods concerned and adequate time for the Owner's and A/E's review) stating and fully identifying the proposed substitute, cost changes (if any), and submitting substantiating data, sample, brochures, etc. of item proposed. It is the Contractor's responsibility to provide sufficient evidence by tests or other means to support any request for approval of substitution.
- 6.3.4.5 Prior to proposing any substitute item, the Contractor shall satisfy himself that the item he proposes is, in fact, equal to that specified, that it will fit into the space allocated, that it affords comparable ease of operation, maintenance and service, that its appearance, longevity and suitability for the climate and use are comparable to that specified, and that the substitution is in the Owner's best interest.
- 6.3.4.6 The burden of proof that a proposed substitution is equal to a specified item shall be upon the Contractor, who shall support his request with sufficient test data and other means to permit the State Engineer and A/E to make a fair and equitable decision on the merits of the proposal. Any item by a manufacturer other than those cited in the Contract Documents, or of brand name or model number or of generic species other than those cited in the Contract Documents will be considered a substitution.
- 6.3.4.7 Materials and methods proposed as substitutions for specified items shall be supported by certification of their acceptance for use by an authority, person or persons having jurisdiction over the use of the specified material or method.
- 6.3.4.8 Acceptance of substitutions shall not relieve the Contractor from responsibility for compliance with all the requirements of the Construction Documents. The Contractor shall be responsible at his own expense for any changes in other parts of the work of his Contract or the work of other contractors caused by his substitutions, including cost of all design and redesign services related thereto incurred by the A/E and his consultants.
- 6.3.4.9 The Contract completion time shall not be extended by any circumstances resulting from a proposed substitution, nor shall the Contractor be entitled to any compensation for any delay caused thereby or related thereto.
- 6.3.4.10 All costs for the evaluation of proposed substitutions, whether approved or not, shall be borne by the Contractor.
- 6.3.5 All materials and equipment shall be delivered, handled, stored, installed and protected to prevent damage in accordance with best current practice in the industry, in accordance with manufacturers' specifications and recommendations, and in accordance with Contract Document requirements. The Contractor will store packaged materials and equipment in their original and sealed containers, marked with the brand and manufacturer's name, until ready for use, and deliver materials and equipment in ample time to facilitate inspections and tests prior to installation. The term 'delivery' in reference to any item specified or indicated, means the unloading and storing with proper protection at the project site. Damaged materials or equipment will be rejected and removed from the site by the Contractor.
- 6.3.6 Before ordering materials, equipment, or performing Work, the Contractor shall verify indicated dimensions. If a discrepancy exists, the Contractor shall notify the A/E of same immediately. The A/E will then clarify the intended design. The Contractor shall take field measurements required for the proper fabrication and installation of the Work. Upon commencement of any item of Work, the Contractor shall be

responsible for dimensions related to such item of Work.

6.4 Guarantees/Warranty.

- 6.4.1 The Contractor guarantees and warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the A/E or Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This guarantee/warranty is not limited by the provisions of Sub-Article 15.2.
- 6.4.2 The Contractor will indemnify the Owner against loss, including loss of use and lost revenues resulting from a breach of the Contractor's guaranty and warranty under Sub-Article 6.4.1, whether the loss arises before or after the Owner's acceptance of the Project.
- 6.4.3 Where the contract documents provide for equipment and material warranties in addition to the Contractor's guarantees' and warranty contained in Sub-Article 6.4.1, such warranties shall at a minimum:
- 6.4.3.1 Provide that the term of the warranty shall start on the date of substantial completion of the project or the date the Owner takes beneficial occupancy of any portion of the project that requires the use or start-up of the warranted equipment or material, whichever date occurs first.
- 6.4.3.2 Provide for complete repair or replacement of defective equipment or material;
- 6.4.3.3 Provide all materials, shipping, and labor necessary to repair or replace defective equipment or material at no expense to the Owner;
- 6.4.3.4 Provide that any replacement parts used in repairing or replacing defective equipment or material shall be new or in a like-new condition.
- 6.4.3.5 Provide for the complete repair or replacement of defective equipment or material within two weeks after receiving written notice of the defect, provided however, that the Owner can, at its sole discretion, grant an extension of time for good cause shown; and
- 6.4.3.6 Provide for no limitation of liability should the Contractor and/or manufacturer fail to repair or replace defective equipment or material within the time specified in Sub-Article 6.4.3.4 or should the remedy of repair or replacement otherwise fail.
- 6.4.3.7 Be construed under South Dakota law.
- 6.4.3.8 Provide that any legal action brought on the warranty shall be brought only in a South Dakota court.

- 6.5 Taxes: The Contractor shall pay all sales, consumer, use, excise, and other similar taxes for the Work or portions thereof which are to be provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective.

6.6 Permits, Fees and Notices.

- 6.6.1 The Contractor shall secure and pay for all permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required at the time the bids are received. The State does not require that inspection and license fees be paid to a municipality for work performed on State property.
- 6.6.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall indemnify the Owner and the A/E against all costs, fines and damages, and all actions, claims and proceedings, due to its failure to do so.

- 6.6.3 The Contractor and its Subcontractors shall acquaint themselves with all codes governing their work and shall complete the work in conformance with all codes governing their work.
- 6.6.4 It is not the responsibility of the Contractor to make certain that the Contract Documents are in accordance with applicable laws, statutes, building codes and regulations. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Owner and the A/E in writing, and any necessary changes shall be accomplished by appropriate modification.
- 6.6.5 If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner and the A/E, he shall assume full responsibility therefor and shall bear all costs attributable thereto.
- 6.7 Superintendent: The Contractor shall employ a competent superintendent and necessary assistants all of whom are acceptable to the Owner and who shall be in attendance at the Project site during the progress of the Work. The Superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be so confirmed on written request in each case. The Superintendent shall not be changed without the Owner's consent.
- 6.8 Construction Progress Schedule.
- 6.8.1 The Contractor shall, within 5 days, or within such time as determined by the A/E, after date of Notice to Proceed, prepare and submit to the A/E for approval a reasonable schedule showing the critical path, order in which the Contractor proposes to carry on the work and, the date on which he will start the several salient features (including procurement of materials, plant and equipment). The progress schedule shall indicate appropriately the percentage of work scheduled for completion at any time. If at any time the sequence of work is modified, the Construction Progress Schedule shall be updated.
- 6.8.2 The Construction Progress Schedule shall reflect the time required for the preparation and processing of shop drawings and submittals and the lead time required in connection with the procurement of manufactured or processed materials and equipment.
- 6.8.3 The Contractor shall furnish sufficient forces, construction plant, and equipment, and shall work such hours, including night shifts, overtime operations, and Sunday and holiday work, as may be necessary to insure the prosecution of the work in accordance with the approved progress schedule.
- 6.8.4 Whenever major portions of the Work fall behind the planned schedule, the Owner and A/E shall be notified and advised of action being taken to return the project to its original schedule and such action shall be indicated on the Construction Progress Schedule which shall then be reissued. If, in the opinion of the A/E and Owner, the Contractor is not taking adequate steps to improve or maintain the progress of the work, the A/E and Owner may require him to increase the number of shifts, and/or overtime operations, days of work, and/or the amount of construction plant, all without additional cost to the Owner.
- 6.9 Documents and Samples at the Site: The Contractor shall maintain at the site for the Owner one record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record all changes made during construction, and approved Shop Drawings, Product Data and Samples. These shall be available to the A/E and Owner and shall be delivered to A/E for the Owner upon completion of the Work.
- 6.10 Shop Drawings, Product Data and Samples.
- 6.10.1 Shop Drawings are drawings, diagrams, schedules or other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.
- 6.10.2 Product Data are illustrations, standard schedules, performance charts, instructions brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.
- 6.10.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

- 6.10.4 The Contractor shall submit a schedule for submittal of Shop Drawings, Product Data and Samples to the A/E for review. The Contractor shall review, approve and submit to the A/E, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the A/E or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents, in accordance with the schedule reviewed by the A/E.
- 6.10.4.1 The A/E reserves the right to review Shop Drawings, Product Data, Samples and submittals in a sequence consistent with the sequence of erection, installation and assembly of the various elements of the Work.
- 6.10.4.2 The Contractor's identification of Shop Drawings, Product Data and Samples shall include verification of information required in Sub-Articles 6.10.9.2 and 6.10.10.2.
- 6.10.4.3 No extension of time will be granted, nor will any consideration be given to claims arising out of the Contractor's failure to submit any Shop Drawing, Product Data, Samples or related submittals according to the schedule or otherwise in a manner which does not allow adequate lead time for A/E's review, or does not allow ample time for revision, resubmission and subsequent review by the A/E as required.
- 6.10.4.4 Composite Drawing: In the interest of coordination and expediting the work in critical areas, i.e. exterior wall components, mechanical/electrical systems, and other areas so requested by the A/E, the Contractor shall prepare and submit, to the A/E for review, Composite Drawings embodying the Work of the various trades and/or Subcontractors involved. After review, the Contractor shall distribute prints or reviewed Composite Drawings to affected trades and/or Subcontractors. The Contractor shall require that the involved trades and/or Subcontractors cooperate in preparation of the Composite Drawings to assure proper coordination between trades and/or Subcontractors. The participating trades and/or Subcontractors shall indicate their approval on these drawings.
- 6.10.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all materials, field measurement, and field construction criteria related thereto, checked the Shop Drawings, Product Data, and Samples for complete dimensional accuracy; that he has checked to insure that work contiguous with and having bearing on the work shown on the Shop Drawings is accurately and clearly shown, that he has checked the Shop Drawings against the Composite Drawings prepared by the Contractor, that the Work has been coordinated and that the equipment will fit into the assigned spaces, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Construction Documents.
- 6.10.5.1 Any Shop Drawing, Product Data or Sample submitted without Contractor's approval will not be processed for review by the A/E, but will be returned to the Contractor for his compliance with the above procedures, in which event it will be deemed that the Contractor has not complied with the provisions herein specified and the Contractor shall bear the risk of all delays as if no Shop Drawing, Product Data and Sample had been submitted.
- 6.10.5.2 Shop Drawings shall bear a coordination and approval stamp signed by the Contractor and each contiguous Subcontractor, which shall confirm the representations set forth in Sub-Article 6.10.5. Shop Drawings shall bear the seal of a registered professional engineer or A/E when required by the Specifications or State Law.
- 6.10.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Construction Documents by the A/E's approval of Shop Drawings, Product Data or Samples under Sub-Articles 4.10 and 6.10.9 unless the Contractor has specifically informed the A/E in writing of such deviation at the time of submission and the A/E has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data or Samples by the A/E's approval thereof. Any deviation shall also be indicated on such Shop Drawing, Product Data, Sample, or related submittal by circling or other approved means.

- 6.10.7 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the A/E on previous submittals. Unless such written notice has been given, the A/E's Action on a resubmitted Shop Drawing, Product Data, or Sample shall not constitute Review and Action of any changes not requested on the prior submittal.
- 6.10.8 No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been approved by the A/E as provided in Sub-Article 6.10.9. All such portions of the Work shall be in accordance with approved submittals.
- 6.10.8.1 No Shop Drawing, Product Data or Sample shall be issued to the field without the A/E's Action Stamp affixed thereto.
- 6.10.9 Shop Drawing & Product Data Procedures
- 6.10.9.1 Shop Drawing Requirements: Shop Drawings shall show design, materials (kind, thickness and finish), dimensions, connections, rough openings, routing details, and other details necessary to insure that they accurately interpret Contract Drawings and Specifications and also show adjoining work in such detail as required to provide proper connection with same. Shop Drawings shall be numbered consecutively and insofar as possible shall be uniform in size.
- 6.10.9.2 Identification: All Shop Drawings and Product Data shall be identified with the name of the Project, Project Number, building or buildings for which the Shop Drawings and Product Data are being submitted, and shall contain the A/E's name, Contractor's name, Subcontractor's name, date of submittal, drawing number, revision, if any, as well as the Specification Section under which the Work is to be performed and the Drawing and detail numbers that relate to the Shop Drawings and Product Data.
- 6.10.9.3 Transmittals: All Shop Drawings and Product Data shall be accompanied by a letter of transmittal from the Contractor setting forth the same identification information as required above under Sub-Article 6.10.9.2. Contractor shall number transmittals consecutively in sequence with the sample transmittals and shall indicate the Submittal Procedure number being followed. Transmittal shall also indicate if Shop Drawing is resubmittal and note A/E's file number for original submittal.
- 6.10.9.4 Submittal Procedures: The Contractor shall submit copies of Shop Drawings and Product Data to the A/E in accordance with the Submittal Procedures listed below.
- 6.10.9.4.1 Shop Drawings and Product Data shall be sent by the Contractor to the Architect/Engineering team.
- 6.10.9.4.2 Shop Drawings and Product Data can be sent via an electronic method (email or other electronic platform) or via original paper copy. Contract, Architect/Engineer, and Owner shall agree on submittal method (email, other electronic platform, original paper copy, etc.).
- 6.10.9.4.3 Shop Drawings and Product Data shall be clearly legible and physical product samples shall be provided whenever necessary.
- 6.10.9.5 A/E's Distribution & Stamp: Following the A/E's review of each Shop Drawing and Product Data submission, the A/E will retain a copy of the submittal for their records as well as return a copy to the Contractor and Owner with the A/E's stamp and signature affixed thereto, annotated as follows:
- 6.10.9.5.1 "A Action": "A Action" means the submission is in general conformance with the design concept. Construction, fabrication and/or manufacture can proceed subject to the provision that the Work shall be in accordance with the requirements of the Construction Documents. Final acceptance of the Work shall be contingent upon such compliance.
- 6.10.9.5.2 "B Action": "B Action" means the submission is in general conformance with the design concept subject to notations by the A/E on the returned Shop Drawings. Construction, fabrication and/or manufacture can proceed subject to the provision

that the Work shall be carried out in compliance with all annotations and/or corrections indicated on the returned Shop Drawings and Product Data and in accordance with the requirements of the Construction Documents. Final acceptance of the Work shall be contingent upon such compliance.

6.10.9.5.3 "C Action": "C Action" means that the Contractor shall revise and resubmit the Shop Drawings and Product Data in accordance with all annotations and/or corrections indicated therein. Construction, fabrication and/or manufacture cannot proceed. Shop Drawings and Product Data bearing "C Action" stamp shall not be permitted on the Project Site.

6.10.9.5.4 "D Action": "D Action" means that the submission is rejected for nonconformance with the design concept and the Contractor shall make a new submittal which shall comply with the requirements of the Construction Documents. Construction, fabrication and/or manufacture cannot proceed. Shop Drawings and Product Data bearing "D Action" stamp shall not be permitted on the Project Site.

6.10.9.6 Contractor's Distribution: When transparencies are returned "A Action" or "B Action", the Contractor shall obtain and provide such number of prints to the Subcontractor as may be required by the Subcontractor for his distribution. The Contractor shall have copies of all "A Action" or "B Action" Shop Drawings and Product Data at the Project Site at all times and shall make them available to the A/E's representatives.

6.10.9.7 Cost of Submittal and Distribution: All charges in connection with the delivery of Shop Drawings and Product Data to the A/E shall be paid by the Contractor. All charges in connection with the distribution of Shop Drawings and Product Data to the Contractor shall be paid by the Contractor.

6.10.10 Samples Procedures

6.10.10.1 Sample Requirements: Where possible, all samples required for a particular Specification Section shall be submitted together.

6.10.10.1.1 Samples shall be submitted from the same source which will supply the actual job. Samples shall be of adequate size to show quality, type, color, range, finish, texture and other specified characteristics.

6.10.10.1.2 Samples of materials or products which are normally furnished in containers or packages, which bear descriptive labels and/or application or installation instructions, shall be submitted with such labels and/or instructions.

6.10.10.2 Identification: All Samples shall be labeled, tagged, or otherwise clearly identified. Labels or tags shall set forth the name of the Project, the project number, buildings for which the Sample is being submitted, A/E, Contractor, Subcontractor, and/or supplier, the name of the manufacturer, fabricator, or processor, the trade designation, grade and quality of the material or product, the date of submittal, and specific identification of each sample and a precise reference to the Specification Article and Sub Article wherein the material, product, or element of the Work is specified. Each label or tag shall have sufficient clear space to permit the application of the approval stamp of the Contractor, and the action stamp of the A/E.

6.10.10.3 Transmittals: All samples shall be accompanied by a letter of transmittal from the Contractor setting forth the same identification information as required above under Sub-Article 6.10.4.2.

Contractor shall number transmittals consecutively in sequence with the Shop Drawings and Product Data transmittals. Where appropriate, test data and/or manufacturers' certificates shall be referenced in and forwarded with the letter of transmittal. Samples without accompanying certificates or test data will be returned without action.

6.10.10.4 Submittal Procedure: The Contractor shall submit the number of samples as indicated below:

6.10.10.4.1 In the event that a range of variations in texture, graining, color or other characteristics may be anticipated in furnished materials, assemblies, or elements of the Work, a sufficient number of samples of such materials or products shall be submitted to indicate the full range of characteristics which will be present in the materials or products proposed for the Work. Any such materials or products delivered or erected prior to approval of full range samples shall be subject to rejection.

6.10.10.4.2 All Samples shall be submitted in triplicate to the A/E's home office, or where directed by the A/E, except as otherwise set forth in other Sections of the Contract Documents.

6.10.10.5 A/E's Distribution & Stamp: Following the A/E's review of each Sample submission, the A/E will return one set of each submission to the Contractor with the A/E's stamp and signature affixed thereto and annotated in a manner conforming to the convention established in Sub- Article 6.10.9.5.

6.10.10.6 Contractor's Distribution: When Samples are returned 'Action A' or 'Action B', the Contractor shall retain such Samples in a suitable place at the Project Site for use by the Contractor, his Subcontractors, the A/E and his authorized representatives to insure that all work is being installed in accordance with these Samples. The remaining Samples will be retained by the A/E.

6.10.10.7 Cost of Submittal and Distribution: All charges in connection with the delivery of Samples to the A/E's home office or where directed by A/E (and all charges in connection with the subsequent distribution thereof by the A/E) shall be paid by the Contractor.

6.11 Use of Site.

6.11.1 The Contractor shall confine operations at the Site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the Site with any unnecessary or surplus materials or equipment or debris.

6.11.2 Notwithstanding the designation of construction limits or the indication of temporary fences or barricades, the provisions of the Contract Documents governing certain portions or phases of the Work may require that certain operations be carried out beyond such designated limits. Trenching, utility work, site development, landscaping and all other work, if required beyond such designated limits, shall be scheduled in such a manner as to cause or occasion a minimum of inconvenience or disturbance or interference with the normal operation of the Owner, abutters, and the public. The Contractor shall obtain the Owner's prior approval for such operations, prosecute such operations expeditiously and restore the affected area and other areas needed for access to their original condition immediately upon completion of such operations, unless otherwise specified herein.

6.11.3 All operations, including pumping, draining and control of surface and ground water shall be carried out so as to avoid endangering the Work of any adjacent facility or property, or interrupting, restricting or otherwise infringing or interfering with the use thereof.

6.11.4 The Contractor shall confine operations at the site to work related activities. The Contractor shall not use the site for lodging or as a personal residence.

6.12 Cutting and Patching of Work.

6.12.1 The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

6.12.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors or adjacent facilities by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and of such separate contractor. The Contractor shall not unreasonably withhold from the Owner or any separate contractor his consent to cutting or otherwise altering the Work.

- 6.12.3 Structural elements of the Work shall not be cut, patched or otherwise altered or repaired without prior written authorization by the A/E.
- 6.12.4 Authorization to proceed with remedial operations for any damaged or defective element or portion of the Work shall not constitute a limitation or a waiver of the A/E's right to require the removal and replacement of any work which fails to fulfill the requirements of the Contract Documents.
- 6.13 Cleaning Up.
- 6.13.1 The Contractor at all times shall keep the Site and related streets free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as his tools, construction equipment, machinery and surplus materials. All waste and rubbish shall be removed from the Site at least weekly and more often if necessary.
- 6.13.2 If the Contractor fails to maintain a clean and safe Project and/or fails to clean up at the completion of the Work, the Owner may do so as provided in Sub-Article 5.3 and the cost thereof shall be charged to the Contractor.
- 6.14 Communications: Except where otherwise directed by the A/E or otherwise provided in the Contract Documents, the Contractor shall forward all communications to the Owner through the A/E.
- 6.15 Royalties and Patents: The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the A/E and Owner in writing.
- 6.16 Indemnification.
- 6.16.1 To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the Owner, the A/E and its consulting engineers, and their respective successors, agents and employees from and against all claims, damages, liabilities, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (including the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any tortious act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligations shall not be construed to negate, abridge or otherwise reduce any other right or obligation or indemnity which would otherwise exist as to any party or person described in this Sub-Article 6.16.
- 6.16.2 In any and all claims against the Owner, the A/E or any of its consultants, and their respective successors, agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Article 6.16 shall not be limited in any way by any limitation on the amount or type of damages, compensations or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 6.16.3 The obligations of the Contractor under this Sub-Article 6.16 shall not extend to indemnification of the A/E or other design consultants employed by him, his consultant, agents or employees for damages, claims, losses or expenses arising out of: (a) the preparation or approval by the A/E or his design consultants of maps, drawings, opinions, reports, Change Orders, designs or specifications, or (b) the giving of or the failure to give directions or instructions by the A/E or his design consultants provided such giving or failure to give is the primary cause of the damage, claim, loss or expense.
- 6.16.4 The Contractor agrees to defend, indemnify and save the Owner, and A/E, or any of its consulting engineers, and their respective successors, agents or employees harmless from all costs, liabilities, damages or expenses, including reasonable attorneys' fees, incurred by them, by virtue of any claim or

claims whatsoever filed by any Subcontractor, Sub-subcontractor, mechanic, laborer or materialman making claims arising from the Work by, through, or under the Contractor. The Contractor also hereby agrees to defend, indemnify and hold harmless, protect, and defend the Owner, the A/E and its consulting engineers, and their respective successors, agents or employees from and against any liability, claim, judgment, loss, damage, including but not limited to direct, indirect and incidental and consequential damages, attorneys fees, court costs and expense of collection, occasioned in whole or in part by the failure of the Contractor, its Subcontractor, or Sub-subcontractors to comply with any of the terms or provisions of the Contract Documents.

6.16.5 This article does not require the Contractor to indemnify the Owner, its officers, agents, or employees from claims or liability arising solely from the acts or omissions of the Owner, its officers, agents, or employees.

6.17 Default.

6.17.1 The Contractor shall be in default of the Contract if:

6.17.1.1 Contractor refuses or fails to prosecute the Work in accordance with the Contract Documents in any material respect;

6.17.1.2 Contractor fails to make proper payment to Subcontractors or for materials or labor (provided Owner shall have paid to Contractor any payments due from Owner in connection with such materials or labor);

6.17.1.3 Contractor disregards laws, ordinances, rules, building codes and regulations or orders of any public authority having jurisdiction;

6.17.1.4 Contractor fails to coordinate its work with other contractors and Subcontractors as required under Article 8 of these General Conditions;

6.17.1.5 Contractor fails to comply with the scheduling requirements of the Contract;

6.17.1.6 Contractor fails to promptly replace rejected material or correct rejected workmanship; or

6.17.1.7 Contractor fails in any material respect to observe any other terms, provisions, conditions, covenants and agreements in the Contract to be observed and performed on the part of the Contractor.

6.17.2 In the event of any default by Contractor under the Contract, Owner shall have the right to take such measures as it deems necessary to correct the default, at the Contractor's sole cost and expense and to deduct such costs, including but not limited to the State Engineer's and A/E's fees, as it may incur from amount otherwise owing to the Contractor, or to terminate the Contract in accordance with Sub-Article 16.2 of the General Conditions in addition to any and all other remedies that Owner may now or hereafter have. If the amounts owing to the Contractor are insufficient to cover the Owner's cost of corrections, the Contractor shall pay such amount promptly upon demand.

Article 7

SUBCONTRACTORS

7.1 Definitions.

7.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his subcontractors.

7.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub- subcontractor or an authorized representative thereof.

7.2 Award of Subcontracts and Other Contracts for Portions of the Work. The Contractor shall conduct an investigation of each of its proposed Subcontractor's capabilities to assure each is responsible and has the requisite experience, skill, physical plant, and financial strength necessary to perform each Subcontractor's respective Work. The Contractor shall not contract with any Subcontractor that is not responsible or does not have the requisite experience, skill, physical plant, and financial strength necessary to perform its part of the Work.

- 7.3 Subcontractual Relations.
- 7.3.1 The Contractor shall not include any provisions in its Contracts with its Subcontractors which will in any way prejudice the rights of the Owner and the Architect/Engineer under the Contract between the Owner and the Contractor.
- 7.3.2 The Subcontract agreement shall require the Subcontractor to consent to any assignment of the Subcontract to the Owner in the event of a default by the Contractor hereunder.
- 7.3.3 Nothing in Article 7 shall be construed to create a privity of Contract between the Owner and any Subcontractor.

Article 8
WORK BY OWNER OR BY SEPARATE CONTRACTORS

- 8.1 Owner's Right to Perform Work and to Award Separate Contracts.
- 8.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with such work. Such work may include Work assigned to the Contractor under the Contract Documents which Work is not being performed properly or in accordance with the scheduling provisions of the Contract Documents, whether or not the Contractor is in default under Sub-Article 6.17 and whether or not the Owner has terminated the Contract under Sub-Article 16.2. If the Owner elects to exercise this right it will do so upon reasonable notice to the Contractor. There shall be an appropriate adjustment in amounts payable to the Contractor to reflect the Work undertaken by the Owner, which the parties shall confirm by Change Order in accordance with Article 14. If the Contractor claims that delay is involved because of such action by the Owner, he shall make such claim as provided elsewhere in the Contract Documents.
- 8.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.
- 8.1.3 The Owner will provide for the coordination of the work, of his own forces and of each separate contractor with the Work of the Contractor, who shall cooperate therewith as provided in Sub-Article 8.2.
- 8.2 Mutual Responsibility.
- 8.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity and all required facilities for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his Work with theirs as required by the Contract Documents.
- 8.2.2 If any part of the Contractor's Work depends for proper execution or results upon the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the A/E any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to report shall constitute an acceptance of the Owner's or separate contractor's work as fit and proper to receive his Work, except as to defects which may subsequently become apparent in such work by others.
- 8.2.3 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefor.
- 8.2.4 Should the Contractor wrongfully cause damage to the work or property of the Owner or of a separate Contractor, or to other work on the site, the Contractor shall promptly remedy such damage as provided in Sub-Article 12.2.5.
- 8.2.5 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues or initiates a litigation proceeding against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall participate in the defense of such proceedings at the Contractor's expense, and if any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court costs which the Owner has incurred.

- 8.3 Owner's Right to Clean Up: If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up the Project, the Site and related streets and walks on a routine basis as required by Sub-Article 6.13, the Owner may clean up and charge the cost thereof to the contractors responsible therefore as the Owner shall determine to be just.

Article 9

MISCELLANEOUS PROVISIONS

- 9.1 Governing Law: The Contract shall be governed by South Dakota Law.
- 9.2 Successors and Assigns: The Owner and the Contractor each binds himself, his successors, assigns and legal representatives to the other party hereto and to the successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Owner, nor shall the Contractor assign any money due or to become due to him hereunder, without the previous written consent of the Owner.
- 9.3 Written Notice: All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been given if sent pursuant to Article VII of the Agreement for Construction.
- 9.4 Claims for Damages: Should either party to the Contract suffer injury or damage because of any act or omission of the other party or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within 14 days after the first observance of such injury or damage.
- 9.5 Performance and Labor and Material Payment Bond: Before commencing the Work, the Contractor shall provide a Performance and Labor and Material Payment Bond in accordance with the requirements of the Instructions to Bidders.
- 9.6 Rights and Remedies.
- 9.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. This provision relates particularly to the Contractor's obligations under Sub-Article 15.2.2.
- 9.6.2 No action or failure to act by the Owner, A/E or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.
- 9.7 Tests.
- 9.7.1 If the Construction Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the A/E and Owner timely notice of its readiness so the A/E and Owner may observe such inspection, testing or approval. The Contractor shall perform and bear all costs of such inspections, tests and approvals, unless otherwise provided.
- 9.7.1.1 Where certain testing and inspection requirements are set forth in the various Sections of the Construction Documents to be performed at the expense of the Owner, the Owner will retain the services of testing laboratories, agencies, or consultants, to perform such tests or inspections and render such services as may be required to verify that the work fulfills the requirements and intent of the Construction Documents. Such services will be performed in a manner consistent with the requirements of the Owner and the various agencies having jurisdiction over the Work and in accordance with reasonable standards of architectural and engineering practice.
- 9.7.1.2 The Owner reserves the right to modify the scope of or to re-allocate any of the testing and inspection services specified in the various Sections of the Construction Documents to be performed by a testing laboratory, agency or consultant retained by the Owner in connection with the Work when it can be satisfactorily established that such adjustment in scope is consistent with

the intent of the Construction Documents. In the event that the Contractor shall not concur with such modification of scope or re-allocation of such services, he shall immediately notify the A/E and Owner in writing.

- 9.7.2 If the A/E determines that any Work requires special inspection, testing, or approval which Sub-Article 9.7.1 does not include, he will upon written authorization from the Owner, order the performance of such services by qualified independent testing laboratories, agencies or consultants as may reasonably be required or instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as provided in Sub-Article 9.7.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Construction Documents, the Contractor shall bear all costs thereof, including the cost of the tests, correction of the Work, the cost of retesting, and compensation for the A/E's additional services made necessary by such failure; otherwise the Owner shall bear such costs, and an appropriate Change Order shall be issued.
- 9.7.2.1 If A/E's observation or any inspection or testing undertaken pursuant to Sub-Article 9.7 reveals a failure in any one of a number of identical or similar items or elements incorporated in the Work to comply with (1) the requirements of the Construction Documents or, (2) with respect to the Performance of the Work, with laws, ordinances, rules, regulations, building codes or orders of any public authority having jurisdiction, the A/E will have the authority to order inspection and/or testing of all such items or elements of the Work, or of a representative number of such items or elements of the Work, as he may in his reasonable opinion consider necessary or advisable, and the Contractor shall bear all costs thereof, including the cost of the tests, correction of the Work, the cost of retesting, and the A/E's additional services, if any are required, made necessary thereby. However, neither the A/E's authority to act under Sub-Article 9.7 nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the A/E to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work.
- 9.7.3 Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by him to the A/E and the Owner.
- 9.7.3.1 The Contractor shall obtain and deliver promptly to the Owner any certificates of final inspection of any part of his Work or operating permits for any mechanical or electrical apparatus, such as elevators, escalators, boilers, air compressors, fire alarms, etc., which may be required by law to permit full use and occupancy of the premises by the Owner. Except as is otherwise provided in Sub-Article 10.1.3, receipt of such permits or certificates by the Owner shall be a condition precedent to Completion of the Work.
- 9.7.3.2 Copies of reports issued as a result of services performed at the expense of the Owner pursuant to the provisions of this Article will be distributed to all parties to the Contract.
- 9.7.4 If the A/E or owner is to observe the inspections, tests or approvals required by the Contract Documents, they will do so promptly and, where practicable, at the source of supply.
- 9.7.5 In connection with testing and inspection services performed at the expense of the Owner, the Contractor shall provide Samples of materials and/or elements of the Work required as test specimens and shall provide incidental labor and facilities at the site reasonably required in support of such services.
- 9.7.6 The cost of testing services required solely for the convenience of the Contractor in his scheduling and performance of the Work shall be borne by the Contractor.
- 9.7.7 The cost of testing services related to remedial operations performed to correct deficiencies in the Work shall be borne by the Contractor.
- 9.7.8 If, during the course of the performance of any testing, inspection, control, balancing, adjusting, or similar work by the Contractor or an agent of the Contractor, it is the opinion of the A/E that the Contractor or said agent has failed to perform such work in a satisfactory manner, the Contractor shall, at his own expense, retain the services of a service organization which is satisfactory to the A/E for the performance of such work.

9.8 Litigation.

- 9.8.1 Unless otherwise specifically provided in this Agreement, all claims, counter-claims, disputes or other matters in question between the Owner and the Contractor arising out of, or relating to this Agreement, or the breach thereof, will be decided by direct negotiations, by non-binding mediation if the parties mutually agree, or in a circuit court of competent jurisdiction within the State of South Dakota. Notice of a request for mediation shall be sent in writing to the other party to this Agreement within a reasonable time after the claim, dispute, or other matter in question has arisen. If the party receiving notice of request does not agree to mediation in writing within 10 calendar days, it will be deemed that the parties do not mutually agree to mediate the matter. If the parties agree to mediate, a mediator to hear the dispute will be agreed upon by the parties. If agreement on a mediator cannot be reached, the State shall select the mediator.
- 9.8.2 The Contractor shall carry on the Work and maintain its progress during any dispute or litigation proceedings, and the Owner shall continue to make payments to the Contractor to the extent required by the Contract Documents and South Dakota Law.

Article 10
TIME

10.1 Definitions.

- 10.1.1 The Contract Time is the period of time allotted in the Construction Contract for Substantial Completion of the Work as defined in Sub-Article 10.1.3, including authorized adjustments thereto.
- 10.1.2 The date of commencement of the Work is the date established in the Notice to Proceed.
- 10.1.3 The date of Substantial Completion of the Work is the date certified by the A/E when construction is sufficiently completed in accordance with the Contract Documents so that the Owner can occupy and utilize the Project for the use for which it is intended, and such Work is fully completed in accordance with the Contract Documents except for minor items, adjustments or corrections which have no material effect upon the utilization, function or intrinsic values of the entire Project, including all of its mechanical, electrical and other systems and facilities.
- 10.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically designated.

10.2 Progress and Completion.

- 10.2.1 All time limits stated in the Contract Documents, including the Construction Completion Schedule, are of the essence of the Contract.
- 10.2.2 The Contractor shall begin the Work on the date of commencement as defined in Sub-Article 10.1.2. He shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

10.3 Delays and Extensions of Time.

- 10.3.1 If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the Owner or the A/E, or by any employee of either, or by changes in the Construction Completion Schedule required by the Owner, or by any separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes not caused by the labor practices of the Contractor or any Subcontractor in contravention of applicable labor practices, fire, unusual delay in transportation, severe and unusual weather conditions not reasonably anticipatable, unavoidable casualties, or any other causes beyond the Contractor's control and not occurring due to the fault or neglect of the Contractor, any Subcontractor or any other person for whose acts the Contractor is responsible, then the Contract Time shall be extended by Change Order for such reasonable time as the Owner shall determine, or the Owner may elect to require the Contractor to accelerate the Work, in which case the Contract Sum shall be increased by a Change Order in the amount of the direct cost to the Contractor (exclusive of overhead and profit of necessary over-time labor).

- 10.3.2 Any claim for extension of time shall be made in writing to the Owner with a copy to A/E not more than 10 days after the commencement of the delay; otherwise it shall be waived. In the case of continuing delay only one claim is necessary. The Contractor shall provide an estimate of the probable effect on such delay on the progress of the Work.
- 10.3.2.1 Such claims shall set forth in detail the nature of the circumstances which form the basis for each such claim, the date upon which each such alleged cause of delay began, or began to affect the timely prosecution of the Work, and ended, or ceased to have an adverse effect upon the timely prosecution of the Work, and the number of days extension of time requested as a consequence of each such alleged cause of delay. The Contractor shall provide such supporting documentation as the Owner may require, including, where appropriate, a revised Construction Completion Schedule indicating all of the activities affected by the circumstances which form the basis for the claim.
- 10.3.2.2 The Contractor shall not be entitled to a separate extension of time as a consequence of each one of a number of causes of delay which may have a concurrent or interrelated effect on the progress of the Work.
- 10.3.2.3 The Owner shall have the right to defer his decision or decisions with reference to any claim or claims for an extension of time made pursuant to the provisions of this Article until the facts or circumstances which form the basis for such claim or claims may be fully assessed to the Owner's reasonable satisfaction.
- 10.3.2.4 Notwithstanding the provisions of Sub-Article 10.3.2, claims for an extension of time arising out of authorized changes in the Work shall be made in writing prior to or concurrent with the submission of the Contractor's proposal pursuant to such change. No extension of time arising out of changes in the Work will be granted subsequent to the date upon which the Contractor is authorized to proceed with such change or changes in the Work unless specific provisions governing a subsequent determination of an extension of time have been incorporated in such authorization to proceed with such change or changes in the Work. No claim for damages or separate compensation for delay arising from such change in the Work shall be recognized or be deemed valid, it being understood that any additional cost to the Contractor arising from such change shall be included in the amended Contract Sum set forth in such Change Order.
- 10.3.2.5 Time extensions will not be granted for rain, wind, snow, or other natural phenomena of normal intensity for the locality where work is performed. Determinations of the extent of delay attributable to unusual weather phenomena shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climactic range during the same period on the calendar. National Oceanic and Atmospheric Administration National Weather Service statistics for the locality or area where the work is performed shall be used to determine the five (5) year average weather conditions. Time extensions for weather delays do not entitle the Contractor to "extended overhead" recovery.
- 10.3.3 If no agreement is made stating the dates upon which interpretations as provided in Sub-Article 4.13 shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretations until 15 days after written request is made for them, and not then unless such claim is reasonable.
- 10.3.4 Should the contractor fail to substantially complete the work within the time agreed upon in the contract documents, or within such extra time as may have been allowed by increases in the contract or by formally approved extensions granted by the owner, the contractor and the contractor's surety shall be liable for and shall pay the owner the sums stipulated in the agreement for construction as liquidated damages for each calendar day of delay until the work is substantially complete. This sum is not a penalty but is liquidated damages due the owner from the contractor by reason of inconvenience to the public, added cost of engineering and supervision, and other items which have caused an expenditure of public funds resulting from the contractor's failure to complete the work within the time specified in the contract. In addition to liquidated damages, if any delay on the part of the contractor, any subcontractor or sub-subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable results in any claim by third parties against the owner or the A/E arising out of such

delay, the contractor shall pay, satisfy, and discharge all losses, damages and expenses arising out of such claims, including attorneys' fees, and shall indemnify and hold harmless the owner and the A/E and their agents and employees from and against all costs, fees, losses, damages, and expenses arising out of such claims enforced against the owner or the A/E.

10.3.5 No extension of time will be granted to the Contractor for any delay other than those described in Sub-Article 10.3.1.

10.3.5.1 Should the Contractor fail, refuse or neglect to supply a sufficiency of workmen or to deliver the materials with such promptness as to prevent delay in the progress of the Work, or fail in any material respect diligently to commence and prosecute the Work and to proceed in accordance with the approved construction schedule, or if the different parts thereof are not commenced, prosecuted, finished, delivered or installed in such manner as will insure substantial completion in accordance with the approved Construction Completion Schedule, or if the Contractor shall fail in the performance of any of his obligations under this Contract in any material respect, the Owner shall have the right to direct the Contractor, upon 3 days notice at the Contractor's cost and expense, to furnish such additional labor and to expedite deliveries of materials (or the Owner may furnish such labor and expedite such deliveries at the cost of the Contractor), which labor or expediting shall, in the Owner's opinion, be sufficient to speed up and complete the Work in accordance with the Construction Completion Schedule.

10.3.5.2 If such additional labor shall not be available, the Owner shall have the right to direct the Contractor at the latter's own cost and expense, to work overtime to such an extent as will be sufficient, in the Owner's opinion, to speed up and complete the Work as herein provided.

10.3.6 The Contractor's right to make a claim or claims for an extension of time, as provided in Sub-Article 10.3.1, shall not preclude the Contractor's right to make a claim for delay damages arising out of the Owner's significant interference, by action or inaction, with the Contractor's Work.

10.4 Beneficial Occupancy.

10.4.1 The Owner shall have the privilege of Beneficial Occupancy and the use and benefit of designated areas, subdivisions or portions of the Project prior to completion and acceptance of the entire Project, provided that such Beneficial Occupancy shall not unduly interfere with the Contractor's operations nor unduly delay him in completing the entire Work. Such occupancy and use shall be further subject to the provisions set forth herein and the provisions of SDCL § 5-18B-13.

10.4.2 In the event that the Owner desires to exercise the privilege of Beneficial Occupancy, he shall give reasonable notice to the A/E and the Contractor. If the A/E determines that such proposed occupancy is reasonable and proper, the Contractor shall cooperate with the Owner in providing services and facilities reasonably required for the health, safety and comfort of the occupants and other parties lawfully present and/or entering or leaving the premises. Mutually acceptable arrangements shall be made between the Owner and the Contractor with regard to procedures, terms and conditions governing the operation and maintenance of such services and facilities as may be utilized for the benefit of the Owner. The Owner will assume proportionate and reasonable responsibility for operation of systems, equipment and/or utilities required to provide such services, in part or in total, including proportionate and reasonable expenses of operation incidental thereto. No such Beneficial Occupancy shall accelerate the commencement of any warranty period on any system but only on the particular components being utilized.

10.4.3 The Owner's Beneficial Occupancy or use of such designated areas, subdivisions, or portion of the Work shall not constitute acceptance of systems, materials, or elements of the Work which are not in accordance with the requirements of the Contract Documents; nor relieve the Contractor from his obligations to complete the Work; nor for responsibility for loss or damage due to or arising out of defects in, or malfunctioning of, systems, materials, equipment, or elements of the Work; nor from other unfulfilled obligations or responsibilities of the Contractor under the Contract. If, however, damage results solely from any act of the Owner, the Owner will assume its proportionate responsibility for such damage.

Article 11
PAYMENTS AND COMPLETION

- 11.1 Contract Sum: The Contract Sum is stated in the Agreement for Construction.
- 11.2 Schedule of Values: Before the first Application for Payment, the Contractor shall submit to the Owner and A/E a schedule of values allocated to the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Owner and A/E may require. The format and number of copies of such Applications for Payment shall be as directed by the Owner and the A/E. This schedule, unless objected to by the Owner, shall be used as a basis for the Contractor's Applications for Payment.
- 11.3 Monthly Application for Payment.
- 11.3.1 No later than the 5th day of each month the Contractor shall submit to the A/E his monthly itemized application for Payment. The Contractor shall not submit more than one pay application per month. The monthly Application for Payment shall be on AIA Document G702 and supported by such data substantiating the Contractor's right to partial payment as the Owner or A/E may require; including but not limited to receipts, releases, and waivers of liens.
- 11.3.1.1 In applying for payment, the Contractor shall submit his monthly payment estimate based upon the approved schedule of work for the project, itemized in such form and supported by such evidence as will show his right to the payment claimed. Claims made on account of materials delivered and suitably stored at the site, but not incorporated in the work, shall be conditioned upon submission by the Contractor of Bills of Sale or such other procedure as will establish the Owner's title to such material or otherwise adequately protect the Owner's interest.
- 11.3.1.2 If the Contractor chooses to apply for payment for materials which cannot be incorporated into the Work, and cannot be stored on the site, he may do so provided the following conditions are met:
- Unless otherwise agreed to by the Owner, the material shall be stored in a bonded or insured commercial warehouse within a geographic radius of 15 miles of the construction site, with the Owner being listed on the bond or insurance certificate as the sole beneficiary in the case of loss or damage to the stored materials. The Contractor shall be responsible for all storage, insurance or transportation costs associated with the materials. Conditions of insurance will apply to applicable portions of Sub-Article 11.3.1.2. Contractor shall provide the Owner with bills of sale or such other documents as will establish the ownership of the materials.
- 11.3.2 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article as "liens"; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other person performing Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.
- 11.3.3 Monthly applications received after the 5th day of the month will be treated as if submitted on the 5th day of the following month.
- 11.4 Recommendation for Payment.
- 11.4.1 By the 15th of each month, the A/E will review the Contractor's Monthly Application for Payment and make his certification to the Owner with a copy to the Contractor, for such amount as the A/E believes is properly due, or notify the Contractor in writing his reasons for withholding a Certificate as provided in Sub-Article 11.6.1.
- 11.4.2 The issuance of a Certification for Payment will constitute a representation by the A/E to the Owner, based on his observations at the site as provided in Sub-Article 4.3 and the data comprising the Monthly Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents

(subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the result of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate); and that the A/E believes that the Contractor is entitled to payment in the amount recommended. However, by issuing a Certification for Payment, the A/E shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the moneys previously paid on account of the Contract Sum. The Owner will not be bound by the amount stated in the A/E's Certification for Payment in making determinations of amounts properly payable to the Contractor.

11.5 Progress Payments.

11.5.1 Based upon his review of the Monthly Application for Payment, and the A/E's Certification, the Owner shall make progress payments to the Contractor in such amounts as the Owner reasonably determines are properly due less the aggregate of previous payments in each case. Payment of amounts determined to be due by the Owner under each Monthly Application for Payment shall be due to the Contractor 20 days after the 15th of each month. unless the A/E's certification was delayed by following the procedures of Article 11.6.1. In such case, payment shall be 25 days after the 15th of each month. The Owner shall at all times retain an amount sufficient to complete the Work pursuant to SDCL §§ 5-18B-11 and 5-18B-13. If the Owner retains any portion of a certified progress payment that is properly due and undisputed beyond the time for payment specified herein and for reasons other than those required by statute, the Owner shall owe and pay the Contractor four percent (4%) interest compounded annually on the retained amount starting from the date payment first becomes due under this article.

11.5.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled reflecting any amounts actually withheld, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall not withhold retainage from its Subcontractors unless retainage is withheld from the Contractor by the Owner. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

11.5.3 The Owner shall, on request, furnish to any Subcontractor, if practicable, information regarding the percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the Owner on account of Work done by such Subcontractor.

11.5.4 Neither the Owner nor the A/E shall have any obligation to pay or to see to the payment of any moneys to any Subcontractor except as may otherwise be required by law.

11.5.5 No Certification for Payment, nor any progress payment, nor any partial or entire use or occupancy of the Project by the Owner, shall constitute acceptance or approval of any Work not in accordance with the Contract Documents.

11.6 Payments Withheld.

11.6.1 The A/E may decline to certify the full payment of the amount requested by the Contractor in his monthly application to the extent necessary to reasonably protect the Owner. If the A/E is unable to certify payment in the amount of the Application, he will, within 10 days after receipt of the monthly application, notify the Contractor in writing the reasons he cannot make such a certification. If the Contractor and the A/E cannot agree on a revised amount within five days of A/E sending written notice, the A/E will promptly issue a Certification for Payment for the amount for which he is able to certify to the Owner pursuant to Sub-Article 11.4.2. The A/E may also decline to certify payment because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certification for Payment previously issued, and the Owner may withhold payment of all or any part of an Application for Payment, to such extent as may be necessary to protect the Owner from loss because of:

11.6.1.1 Defective work not remedied;

11.6.1.2 Third party claims filed or reasonable evidence indicating probable filing of such claims;

11.6.1.3 Failure of the Contractor to make payments properly to subcontractors or for labor,

- materials or equipment;
- 11.6.1.4 Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- 11.6.1.5 Damage to the Owner or another contractor;
- 11.6.1.6 Reasonable evidence that the Work will not be completed within the Contract Time;
- 11.6.1.7 Failure to carry out the Work in accordance with the Contract Documents;
- 11.6.1.8 A lien or attachment is filed and such lien is not discharged within 5 days of demand from the Owner;
- 11.6.1.9 Failure of the Contractor and/or of the Mechanical or Electrical Subcontractors to comply with the mandatory requirements for maintaining "up-to-date" Record Drawings;
- 11.6.1.10 Incomplete or otherwise inadequate Application for Payment; or
- 11.6.1.11 Reasonable evidence that the Contractor is in material breach of his obligations under the Contract.

11.6.2 When the above grounds in Sub Article 11.6.1 are removed, payment shall be made for amounts withheld because of them.

11.7 Substantial Completion.

11.7.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is Substantially Complete as defined in Sub Article 10.1.3 the Contractor shall prepare for submission to the A/E and Owner a list of items to be completed or corrected. The failure to include any item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the A/E and Owner on the basis of an inspection determines that the Work or designated portion thereof is Substantially Complete, the A/E will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities and damage to the Work, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties and Guarantees required by the Contract Documents shall commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

11.7.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the A/E, the Owner shall make payment, reflecting adjustment for defective or incomplete work, if any, for such Work or portion thereof, as provided in the Contract Documents. Double the amount necessary to complete the Work shall be retained by the Owner pursuant to SDCL § 5-18B-13.

11.8 Final Completion and Final Payment.

11.8.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the A/E and Owner will promptly make such inspection and, when they find the Work acceptable under the Contract Documents and the Contract fully performed, the A/E will promptly issue a final Certificate for payment stating that to the best of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in said final Certificate, is due and payable. The A/E's Final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Sub-Article 11.8.2 have been fulfilled.

11.8.2 The final payment shall not become due until the Contractor submits to the A/E and Owner (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety to final payment, (3) if required by the Owner, other data establishing payment or satisfaction of all such obligation, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Owner, (4) an Unemployment Compensation Contribution Certificate from the South Dakota Department of Labor, and (5) a full and complete release of the Owner from all liability under the Contract and otherwise, except to the extent provided in Sub-

Article 11.8.4. If the Contractor fails to furnish such releases or waivers of liens as the Owner reasonably requires to determine that there are no outstanding liens, the Owner may require that Contractor, as a condition of final payment to furnish a bond satisfactory to the Owner to indemnify the Owner against any such liens. Cost of such bond shall be borne by the Contractor. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- 11.8.3 Owner shall make final payment of all sums due to the Contractor 30 days after the completion and acceptance of the project by the Owner and Contractor's compliance with Article 11.8.2 above. If the Owner fails to make final payment to the Contractor within the time specified herein, the Owner shall pay the Contractor interest at the rate of four percent (4%) compounded annually on the amount retained starting from the date final payment first becomes due.
- 11.8.4 The acceptance of final payment by the Contractor shall constitute a complete and unconditional waiver and release of any and all claims by the Contractor of whatever nature, and regardless whether they are then known or unknown, and a complete and unconditional release of the Owner and every person for whom the Owner is responsible for any and all matters related to the Contract or otherwise, except those claims which have been made in writing and identified by the Contractor as not having been settled at that time.

Article 12

PROTECTION OF PERSONS AND PROPERTY

- 12.1 Safety Precautions and Programs: The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work, and for safeguarding all adjacent properties and facilities.
- 12.2 Safety of Persons and Property.
 - 12.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:
 - 12.2.1.1 All employees on the Work and all other persons who may be affected thereby;
 - 12.2.1.2 All the Work and all materials and equipment to be incorporated therein, whether in storage or off the site, under the care, custody or control of the Contractor and any of his Subcontractors or Sub-subcontractors; and
 - 12.2.1.3 Other property at the site or adjacent thereto, including but not limited to, work of the Owner or of separate contractors, trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
 - 12.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss, and shall indemnify the Owner and the A/E and save them harmless against all claims, penalties, actions and proceedings relating thereto or the Contractor's failure so to comply.
 - 12.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.
 - 12.2.4 When the use or storage of any hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.
 - 12.2.5 The Contractor shall promptly remedy all damage or loss to any property referred to in Sub- Articles 12.2.1.2 and 12.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible under Sub-Articles 12.2.1.2 and 12.2.1.3,

except damage or loss attributable to the acts or omissions of the Owner or A/E or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to his obligations under Sub-Article 6.16.

- 12.2.6 The Contractor shall designate a responsible member of his organization at the Site whose duty shall be the prevention of accidents. This person shall be qualified as a safety supervisor by experience, training, or education and shall have the responsibility to insure and enforce safety requirements on behalf of the Contractor and shall be designated by the Contractor in writing to the Owner and the A/E.
 - 12.2.7 The Contractor shall issue weekly safety reports to the Owner and the A/E attesting to conditions on the Site relating to safety and to actions taken.
 - 12.2.8 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.
 - 12.2.9 The structure of the Project is designed to support the loads of the finished building. No provision is included for stresses or loads imposed by construction operations. If the Contractor desires to place such loads in excess of the design load shown on drawings, he shall submit drawings and calculations prepared by, and bearing the seal of a professional structural engineer of the proposed method for supporting such loads for the A/E's review and approval. No loading of any kind in excess of design loads shall be placed on any part of the building structure prior to the A/E's approval of submitted drawings and calculations. The costs of the A/E's review shall be borne by the Contractor.
 - 12.2.10 The Contractor shall prepare a written report setting forth the circumstances and details related to any accident or occurrences involving death, bodily injury, sickness, disease, personal injury, and/or loss or injury to or destruction of tangible property. Such reports shall be forwarded promptly to the insurance carriers, the A/E and the Owner.
- 12.3 Emergencies: In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss and shall as promptly as conditions permit notify the insurance carriers, Owner, and A/E of the nature of the emergency and circumstances related thereto. Immediately thereafter, the Contractor shall prepare a written report setting forth in detail the action taken and describing in detail all circumstance and conditions which are related to such action.

Article 13 INSURANCE

- 13.1. At all times during the term of this Agreement, Contractor shall obtain and maintain in force insurance coverage of the types and with the limits as follows:
 - 13.1.1. Commercial General Liability Insurance:
equivalent form of coverage **with a limit of not less than one million dollars (\$1,000,000) for each occurrence.** If such insurance contains a general aggregate limit it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit. The insurance policy shall name the State of South Dakota, its officers and employees, as additional insureds, but liability coverage is limited to claims not barred by sovereign immunity. The State of South Dakota, its officers and employees do not hereby waive sovereign immunity for discretionary conduct as provided by law.
 - 13.1.2. Business Automobile Liability Insurance:
Contractor shall maintain business automobile liability insurance or equivalent form **with a limit of not less than one million dollars (\$1,000,000) for each accident.** This insurance shall include coverage for owned, hired and non-owned vehicles.
 - 13.1.3. Worker's Compensation Insurance:
Contractor shall procure and maintain workers' compensation and employers' liability insurance **as required by South Dakota or Federal law.**

13.1.4. Builder's Risk Insurance:

Contractor shall maintain builder's risk insurance **with a limit of not less than the full value of this Agreement** upon any building, structure, equipment and appliance in the process of construction or installation under state contract and upon all materials on site, until such time as the building, structure, equipment and appliances have been finally accepted by the Owner and the contract completed. This insurance shall include the interest of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Work and shall insure against loss by physical damage including, without duplication of coverage, fire, flood, extended coverage, theft, vandalism, malicious mischief, and collapse.

13.1.5. Installation Floater Insurance:

Contractor shall maintain installation floater insurance **with a limit of not less than the full value of Specialized Equipment and Material** upon specialized equipment and material not covered under the Builder's Risk Insurance in the process of construction or installation under state contract and upon all materials on site, until such time as the building, structure, equipment and appliances have been finally accepted by the Owner and the contract completed. This insurance shall include the interest of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Work and shall insure against loss by physical damage including, without duplication of coverage, fire, flood, extended coverage, theft, vandalism, malicious mischief, and collapse.

Before beginning work under this Agreement, Contractor shall submit insurance policies to the State Engineer for review and approval, and shall furnish the State with properly executed Certificates of Insurance which shall clearly evidence all insurance required in this Agreement including naming the State, its officers and employees, as additional insureds, as set forth above. In the event of a substantial change in insurance, issuance of a new policy, cancellation or nonrenewal of the policy, Contractor agrees to provide immediate notice to the State and provide a new certificate of insurance showing continuous coverage in the amounts required. Contractor shall furnish copies of any changed or new insurance policies if requested by the State.

Article 14 CHANGES IN THE WORK

- 14.1 Change Orders: A Change Order is a written order to the Contractor signed by the Owner, issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time.
- 14.2 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents. No later than the 5th day of each month, the A/E will process a written change order to include all outstanding RFPs.
- 14.3 The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more of the following ways:
- 14.3.1 By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. Such lump sum proposals shall be supported by a completely detailed analysis of the proposed change subdivided into the Work of the Contractor and/or the Work of each Subcontractor and/or Sub-subcontractors involved in the proposed change, as applicable, with each such subdivision further broken down into the following elements:
- 14.3.1.1 Number of man-hours of labor to be performed by each trade, craft or classification of employee involved in the proposed change.
- 14.3.1.2 The hourly rate for each such trade, craft or classification of employee, including the appropriate wage supplement for social security, old age and unemployment contributions, and such other employee benefits as may be established by statute or by written agreement negotiated by and between organizations representing such crafts or trades and representatives of their employers.

- 14.3.1.3 The estimated quantity of each item or element of material and/or equipment entering into the proposed change.
- 14.3.1.4 The unit cost of each such item or element of material and/or equipment.
- 14.3.1.5 Rental of items or units of construction plant and equipment with a schedule of the period or periods of use of such item or unit in connection with the proposed change.
- 14.3.1.6 Rental terms and rates for each such item or unit of construction plant and equipment. Rental for equipment shall be based on the following:
 - 14.3.1.6.1 Hourly rental rates shall be based on 80% of the applicable rates for equipment listed in the 'Green Book', latest edition, (published by the Associated Equipment Distributors, 615 West 22nd Street, Oakbrook, Illinois, 60523).
 - 14.3.1.6.2 Hourly rental rates for equipment not listed in the 'Green Book' shall be based on 100% of the applicable rates for equipment listed in the 'Blue Book', latest edition (published by Dataquest, 1290 Ridder Park Drive, San Jose, California, 95131).
 - 14.3.1.6.3 Hourly rental rates determined from the 'Green Book' or 'Blue Book' includes all items of cost and expense to the Contractor, including gas, oil, maintenance, repairs, insurance, and transportation to and from construction site.
- 14.3.1.7 Power and/or other utilities entering into the proposed change.
- 14.3.1.8 Rates and terms applicable to such power and/or other utilities.
- 14.3.1.9 Additional premiums, if applicable, for the extension of insurance and bond coverages as required herein to the proposed change.
- 14.3.1.10 Applicable federal, state and local taxes.
- 14.3.1.11 Indirect Cost and Fee computed as a percentage override applied to net cost in accordance with the provisions of this Article.
- 14.3.2 By unit prices stated in the Contract Documents or subsequently agreed upon;
- 14.3.3 By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee;
- 14.3.4 By the method provided in Sub-Article 14.3.12.
- 14.3.5 The Contractor shall require that the itemized analysis of each portion of the proposed change to be performed by a Subcontractor and/or Sub-subcontractor be prepared by each such Subcontractor and/or Sub-subcontractor in accordance with the format established herein. Copies of all such itemized analysis shall be appended to the Contractor's itemized analysis of the proposed change in the Work.
- 14.3.6 For purposes of calculating Indirect Cost and Fee in relation to Change Orders, the net cost of a proposed change in the Work shall include, and unless otherwise agreed in writing prior to the performance of the proposed change, shall be limited to the fair and reasonable estimated cost of the total of all of the individual items, elements, or components involved in proposed change in the Work (including adds and deducts) as set forth in Sub-Articles 14.3.1.1 through 14.3.1.8.
- 14.3.7 For each portion of a proposed net additive change in the Work to be performed directly by the Contractor, the cost to Owner shall include an increment for the Indirect Cost and Fee of the Contractor associated with such portion of proposed change of 8% of the net cost of the Work.
- 14.3.8 For each portion of a proposed net additive change in the Work to be performed directly by a Subcontractor, in addition to an increment or increments for Subcontractor's Indirect Cost and profit

associated therewith of 8%, the cost to the Owner shall include a supplementary increment or increments for Contractor's Indirect Cost and Fee associated therewith of 6% of the net cost of the Work.

- 14.3.9 In computing Indirect Cost and Fee, the percentage for Indirect Cost and Fee shall be taken on basic wage only. No percentage override shall be taken on Social Security, Old Age and Unemployment contributions, contributions to Industry funds, education, and Training Funds and/or similar wage supplements, contributions or benefits.
- 14.3.10 Items, elements or components of changes in the Work or proposed changes which shall be classified as Indirect Cost and excluded from net cost shall include, but shall not necessarily be limited to:
- 14.3.10.1 All classifications of administrative, supervisory, and clerical personnel not engaged manually in the performance of the Work, including timekeepers, clerks, watchmen, and security personnel.
- 14.3.10.2 Miscellaneous expense, job burden, and/or other generalized categories of cost or expense.
- 14.3.10.3 Use of small tools and miscellaneous materials.
- 14.3.10.4 Insurance other than insurance coverage required herein.
- 14.3.11 In changes in the Work involving both additions to and deductions in the Work, or any portion or element thereof, or the relocation or rearrangement of items, portions or elements thereof, or the substitution of any items, portions or elements thereof, such additions and deductions shall be balanced, and the Contractor's Fee computed on the same basis for deductions as well as additions. If at the request of the A/E and/or the Owner a number of unrelated changes in the Work are set forth individually, summarized and totaled in a single Change Order for reasons of administrative convenience, the amount or amounts of individual deductive changes in the Work set forth therein shall, in any event, be balanced against the amount or amounts of individual additive changes in computing the Contractor's Fee for the purpose of adding and deducting.
- 14.3.12 If none of the methods set forth in Sub-Articles 14.3.1, .3.2 or .3.3 is agreed upon, the Contractor, provided he receives a written order signed by the Owner, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Owner on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for the Contractor's Fee. In such case, and also under Sub-Articles 14.3.3 and .3.4 above, the Contractor shall keep and present, in such form as the Owner may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order, at the end of each day, and will submit to the Owner or his designated representative: (a) daily time slips showing the name of each workman employed on such work, the number of hours which he is employed thereon, the character of his duties, and the wages and benefits to be paid to him and on his behalf, and (b) a memorandum of the equipment used in the performance of such Work, together with the rental claimed therefor. Unless otherwise provided in the Contract Documents, cost shall be limited to the following: cost of materials, including sales tax and cost of delivery; cost of labor, including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; worker's or workmen's compensation insurance; bond premiums; rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change. Pending final determination of cost to the Owner, payments on account shall be made on the basis of amounts reasonably estimated by the Owner. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract sum will be the amount of the actual net cost as confirmed by the A/E and agreed to by the Owner. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance or credit for the Contractor's Fee shall be figured on the basis of the net increase, or decrease, if any, with respect to that change.
- 14.4 Differing Site Conditions
- 14.4.1 The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the A/E of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

14.4.2 The A/E shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, the Contract Sum shall be adjusted as provided in this Article, provided that the work has been ordered in writing by Owner and A/E as provided in Sub-Article 14.1 above. There shall be included in the adjustment to the Contract Sum under the preceding sentence a reasonable allowance for any extraordinary increase in Indirect Cost borne by the Contractor because of such additional work.

14.5 Claims for Additional Cost.

14.5.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the A/E and Owner a written notice thereof within 10 days after the occurrence of the event giving rise to such claim except where claim is made in connection with deviations in Shop Drawing or Sample submittals, in which case claim shall be made in writing to the A/E concurrently with such submittals. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Sub-Article 12.3. No such claim shall be valid unless so made. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

14.5.2 If the Contractor claims that additional cost is involved because of, but not limited to, (1) any written interpretation pursuant to Sub-Article 4.13, (2) any order by the Owner to stop the Work pursuant to Sub-Article 5.2 where the Contractor was not at fault, (3) any written order for a minor change in the Work issued pursuant to Sub-Article 14.6, or (4) any deviation in Shop Drawing or Sample submittals from the requirements of the Contract Documents, the Contractor shall make such claim as provided in Sub-Article 14.5.1.

14.6 Minor Changes in the Work: The A/E will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

Article 15

UNCOVERING AND CORRECTION OF WORK

15.1 Uncovering of Work.

15.1.1 If any portion of the Work should be covered contrary to the request of the A/E or the Owner, or the requirements specifically expressed in the Contract Documents, it must, if required in writing by the A/E or the Owner, be uncovered for his observation and shall be replaced at the Contractor's expense.

15.1.2 If any other portion of the Work has been covered which the A/E or the Owner has not specifically required to observe prior to being covered, the A/E or the Owner may request to see such Work and it shall be uncovered by the Contractor. If such work be found in accordance with the Construction Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such work be found not in accordance with the Construction Documents, the Contractor shall pay such costs unless it be found that this condition was caused by the Owner or a separate contractor as provided in Article 8, in which event the Owner shall be responsible for the payment of such costs.

15.2 Correction of Work.

15.2.1 The Contractor shall promptly correct all Work rejected by the A/E as defective or as failing to conform to the Construction Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for the A/E's additional services and the Office of the State Engineer fees made necessary thereby.

15.2.2 If, at any time after the Owner's acceptance of the fully completed Project any of the Work is found not to have been provided in conformance with the Construction Documents, or, if within one year after such acceptance any of the Work is otherwise found to be faulty or defective, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so. The Contractor shall also repair or

replace any part of the Work which is damaged by the defective condition or the remedial Work. This obligation shall survive termination of the Contract, subject to the terms of any applicable statute of limitations. The Owner shall give such notice promptly after discovery of the condition.

- 15.2.3 The Contractor shall remove from the Site all portions of the Work which are defective or non- conforming and which have not been corrected under Sub-Articles 6.4.1, 15.2.1 and 15.2.2, unless removal is waived by the Owner.
 - 15.2.4 If the Contractor fails to correct defective or non-conforming Work as provided in Sub-Articles 6.4.1, 15.2.1 and 15.2.2, the Owner may correct it in accordance with Sub-Article 5.3.
 - 15.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the A/E, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within 10 days thereafter, the Owner may upon 10 additional days written notice sell such Work at auction or a private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the A/E's additional services made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due to the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner upon demand.
 - 15.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction removal.
 - 15.2.7 Nothing contained in this Article shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Sub- Article 6.4 hereof. The establishment of any time period prescribed by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor liability with respect to his obligations other than specifically to correct the Work.
- 15.3 Acceptance of Defective or Non-Conforming Work: If the Owner prefers to accept defective or non- conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

Article 16

TERMINATION OF THE CONTRACT

- 16.1 Termination by the Contractor: If the Work is stopped for a period of 90 days under an order of any court or any public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the Contractor, then the Contractor may, upon 7 additional days written notice to the Owner and the A/E, terminate the Contract and recover from the Owner payment for all Work executed to the termination date, together with reasonable demobilization costs. The Contractor shall have no other right to terminate the Contract for any reason.
- 16.2 Termination by the Owner.
 - 16.2.1 If the Contractor is in default under the Contract Documents, the Owner may, without prejudice to any other right or remedy and upon written notice to the Contractor, terminate the contract.

Prior to termination of the Contract, the Owner shall give the Contractor and his surety 10 calendar days written notice, during which the Contractor and/or his surety may rectify the cause of the termination. If rectified to the satisfaction of the Owner within said 10 days, the Owner may rescind its notice of termination. If not rectified, the termination for cause shall become effective at the end of the 10 day

notice period. In the alternative, the Owner may postpone the effective date of the termination notice, at its sole discretion, if it should receive reassurances from the Contractor and its surety that the causes of termination will be remedied in a time and manner which the Owner finds acceptable. If at any time more than 10 days after the notice of termination, the Owner determines that the Contractor or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause by giving written notice to the Contractor and its surety. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

Notice of termination, whether initial or given after a period of postponement, may be served upon the Contractor and the surety by mail or any other means at their last known places of business in South Dakota or elsewhere, by delivery to any officer or management/supervisory employee of either wherever they may be found, or, if no such officer, employee or place of business is known or can be found by reasonable inquiry within 3 days, by posting the notice at the job site. Failure to accept or pick up registered or certified mail addressed to the last known address shall be deemed to be delivery.

Upon termination of the Contract, the Owner shall take possession of the premises and of all materials, tools, appliances, equipment, and other facilities on the Project, wherever stored, and may finish the Work by whatever method he may deem expedient. The Contractor shall assign Subcontracts to the Owner or to a designated substitute contractor promptly upon request. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished and the Owner has determined its damages owing to the Contractor's default.

16.2.2 If the costs of finishing the Work, including compensation for the A/E's and Office of the State Engineer's additional services made necessary by the Contractor's default, and all other damages suffered by the Owner on account of the Contractor's default, exceed the unpaid balance of the Contract Sum, the Contractor shall pay the difference to the Owner, and this obligation for payment shall survive the termination of the Contract. If the costs of finishing the Work are less than the unpaid portion of the contract Sum, the Owner shall pay the unpaid balance of any amount properly owing to the Contractor for all Work executed to the date of termination, less actual damages. The Owner will not be obligated to pay any further amount on account of Direct Cost, Indirect Cost or Fee.

16.2.3 If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the Owner.

16.3 Termination for Convenience.

16.3.1 The Owner may terminate this Contract at any time without cause, in whole or in part, upon giving the Contractor notice of such termination. Upon such termination, the Contractor shall immediately cease Work and remove from the project site all of its labor forces and such of its materials as Owner elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:

- (1) All amounts then otherwise due under the terms of this Contract,
- (2) Amounts due for work performed subsequent to the latest Request for Payment through the date of termination,
- (3) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled to any compensation for lost profits or for any other type of contractual compensation or damage other than those provided by the preceding sentence. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature.

16.3.2 In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

SECTION 00 01 10
INDEX OF TECHNICAL SPECIFICATIONS

PART 1 – GENERAL

1.1 Technical Specifications

A. The specification sections listed below form a part of the contract.

<u>Section No.</u>	<u>Title</u>
00 01 00	Index of Technical Specifications
00 01 07	Professional Seals
00 01 15	List of Drawing Sheets
00 60 00	Project Forms
00 63 13	Request for Information/Instruction (RFI) Form
00 63 14	Supplemental Instruction (SI) Form
00 63 54	Request for Proposal (RFP) Form
00 63 60	CCO Proposal Spreadsheet Form
00 63 63	Construction Change Order (CCO) Form
00 65 00	Closeout Forms
00 65 16	Certificate of Substantial Completion
00 65 19	Certificate of Completion Form
00 73 00	Supplementary Conditions
00 73 63	Security Requirements
01 01 00	General
01 14 00	Work Restrictions
01 18 00	Project Utilities
01 23 00	Alternates
01 32 16	Project Schedules
01 33 00	Submittal Procedures
01 33 23	Shop Drawings Product Data and Samples
01 35 26	Safety Requirements
01 35 30	Security Requirements
01 40 00	Quality Requirements
01 42 16	Definitions
01 42 00	Sources for Reference Publications
01 45 00	Quality Control
01 50 00	Temporary Facilities
01 60 00	Product Requirements
01 74 19	Construction Waste Management
01 74 20	Waste and Recycling Tracking Form
01 76 00	Protecting Installed Construction
01 78 00	Closeout Submittals
01 78 23	Operation & Maintenance Data
02 41 19	Selective Demolition
07 92 00	Joint Sealants
08 11 13	Steel Doors & Frames
08 43 13	Aluminum-Framed Storefronts
08 71 00	Door Hardware
08 81 00	Glazing
09 05 61	Common Work Results for Floor Preparation
09 65 00	Resilient Flooring, Base, and Accessories
09 68 13	Carpet Tile
09 91 10	Exterior Painting
09 91 23	Interior Painting and Coatings
10 14 00	Signage
28 13 53	IP Network Compatible Intercom

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION

00 01 07
PROFESSIONAL SEALS

PART 1 – GENERAL

- 1.1 Professional Certifications
 - A. Architect of Record
 - 1. FEH Design
 - 2. 1201 4th Street, Suite 201
 - 3. Sioux City, IA 51101
 - 4. Phone No. 712-252-3889
 - 5. Brittney Ruba
 - 6. License No. 15584
 - 7. Expiration: 1/31/2026
 - 8. Divisions: 01, 02, 07, 08, 09, 10

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION

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00 01 15
LIST OF DRAWINGS

PART 1 – GENERAL

1.1 SUMMARY

This section lists the drawings for the project.

1.2 PROJECT DRAWINGS

<u>Sheet No.</u>	<u>Title</u>
Sioux Falls RTI	
A-101	Title Sheet
A-102	Demolition Plan and Notes
A-103	Floor Plan
A-104	Door Schedule and Notes
A-105	Door and Frame Elevations and Details
Sioux Falls UTES	
A-201	Title Sheet
A-202	Demolition Plan and Notes
A-203	Floor Plan
A-204	Door Schedule, Door Elevations, and Notes
A-205	Door Details

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION 00 01 15

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00 60 00
PROJECT FORMS

PART 1 – GENERAL

1.1 GENERAL

- A. This section outlines required documentation to be provided to the AE and Owner at the beginning of the project.

1.2 PRE-CONSTRUCTION PROJECT SUBMITTALS

The following submittals are required prior to or at the Pre-Construction meeting:

- A. Agreement for Construction:
1. Contractor shall make a copy for their records, sign, and return the original contract to the SD Dept. of the Military within 10 days of transmittal.
- B. Performance and Payment Bond:
1. Contractor shall submit a Performance and Payment Bond within five (5) calendar days after submittal of the signed contract.
 2. Performance and Payment Bond must be reviewed and approved by the South Dakota Attorney General's Office prior to issuance of the Notice to Proceed.
 - a. Contractor will be required to submit revised Performance and Payment Bonds if errors are found during review process.
- C. Insurance
1. Contractor shall provide a full copy of each policy for review and approval by the State.
 2. Certificates of Insurance must list "State of South Dakota" and "South Dakota Department of the Military" as additionally insured.
- D. Contractor's Statement of Skills and Capabilities
1. Contractor shall have a current year's statement on file with the SD Dept. of the Military.
- E. Contractor's Affirmative Action Plan
1. Contractor's with fifty (50) or more employees must provide AAP
 2. Contractors with fewer than fifty (50) employees shall provide a formal letter stating number of employees and exemption from this requirement
- F. Contractor's Letter indicating they are not Debarred or Suspended
- G. Contractor's and Subcontractor's Statement of Experience & Qualifications per various Technical Specification requirements.
- H. Contractor's Material Supplier's Statement of Experience & Qualifications per various Technical Specification requirements.
- I. List of Subcontractors and Material Suppliers (AIA G805)
- J. Schedule of Values (AIA G702 & G703)

1.4 POST NOTICE TO PROCEED SUBMITTALS

The following submittals are required within 10 calendar days from issuance from the Notice to Proceed:

- A. Project Progress Schedule
1. Refer to section 01 32 16 - Project Schedule for requirements.
- B. Draft Real Property Data – Form 1354
1. Refer to section 01 32 16 - Project Schedule for requirements.
- C. Accident Prevention Plan
1. Refer to section 01 35 26 - Safety Requirements for requirements.
- D. No Smoking Policy
1. Refer to section 01 14 00 – Work Restrictions.
- E. Construction Waste Management Plan
1. Refer to section 01 74 19 – Construction Waste Management.
- F. Employee Access Lists (EAL) for Contractor and all Subcontractors and Suppliers
1. EAL's shall be submitted to the SD Dept. of the Military prior to or at the Pre-Construction Meeting.
 2. Background checks take a minimum of 10 days to process.
 3. No work may begin until the Contractor's designated supervisors have passed a background check.
 4. No additional days will be granted to the Contractor for delays resulting in the Contractor's delayed submittal or in ability to provide personnel that can pass a background check.
 5. Refer to section 01 35 26 - Safety Requirements for requirements.

1.4 ADDITIONAL POST AWARD SUBMITTALS

- A. Shop Drawings
 - 1. Submit to AE for review and approval
 - 2. Owner shall be copied on all submittals
 - 3. Refer to section 01 33 23 - Shop Drawings Product Data and Samples for requirements.
- B. First Application for Payment
 - a. Shall be submitted within 30 days of the NTP
- C. Monthly Progress Payments
- D. Lien Waivers
 - 1. Contractor shall include Lien Waivers signed by Sub-Contractors and Suppliers included with Monthly Progress Payments for projects \$250,000 or more.
- E. RFI'S
- F. RFP'S
- G. CCO'S
- H. Inspection, test, and other periodic reports as required in various Technical Specifications.

PART 2 – PRODUCTS

2.1 FACILITY PROPERTY BREAKDOWN:

- A. The South Dakota Department of the Military is required to identify certain disposed or new assets along with associated costs of said assets.
- B. The South Dakota Department of the Military will provide a Form 1354 to track all new assets, associated quantities, and associated overall cost of each asset.
- C. Within 10 calendar days of Notice to Proceed, the Contractor shall submit the estimated quantity and the cost of each on the provided form as accurately as possible.

2.2 BUILDER DATA COLLECTION

- A. Contractor shall provide photographs, equipment name plate data (make, model, serial number, etc.), type, size, and quantity of each for all of the following installed assets:
 - 1. Building Envelope
 - a. Store Front Doors
 - b. Doors
- B. BUILDER Data collection will be required throughout the project with final documentation provided prior to or at the Substantial Completion Inspection.

PART 3 – EXECUTION – Not Used

END 00 60 00

00 63 13
REQUEST FOR INFORMATION/INSTRUCTION (RFI)

RFI NO. _____

Project Name: _____ Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES _____

Project No. _____ 466527 & 467009 _____

Date of RFI Submittal: _____

Date Response Needed by: _____

SUBJECT:

Description Issue/Item of Concern

Contractor's Project Manager: _____
Name Printed

Contractor's Project Manager: _____
Signature

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00 63 14
SUPPLEMENTAL INSTRUCTION (SI)

Supplemental Instruction No. _____

Response to RFI No(s). _____

Date of RFI Submittal: _____

Project Name: _____ Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES

Project No. _____ 466527 & 467009

SUBJECT:

Description Issue/Item of Concern

AE/SD DOM Project Manager: _____
Name Printed

AE/SD DOM Project Manager: _____
Signature

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00 63 54
REQUEST FOR PROPOSAL (RFP)

Request for Proposal No. _____

Date: _____

Project Name: Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES

Project No. 466527 & 467009

Please submit an itemized cost breakdown for changes in contract sum and contract time resulting from the following proposed modification(s) to the Contract Documents, within **ten (10) calendar days or less**:

Proposed Modification(s):

RFI #X - Please provide a cost to (Description of scope of work)

The total amount requested for RFI#X is: \$_____

RFI #X - Please provide a cost to (Description of scope of work)

The total amount requested for RFI#X is: \$_____

RFI #X - Please provide a cost to (Description of scope of work)

The total amount requested for RFI#X is: \$_____

The total amount requested for all RFI's is: \$_____

Number of additional working days requested are _____.

Indicate the number of additional working days which will be required to complete the scope of work in all RFI's indicated above. If no change in contract time, state "none".

Enclosure(s): Itemized Cost Proposal(s)
Shop Drawings

Contractor's Representative: _____
Name Printed

Contractor's Representative: _____
Signature

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00 63 60
CONSTRUCTION CHANGE ORDER PROPOSAL WORKSHEET

RFP No. _____

Date: _____

Project Name: **Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES**

Project No. 466527 & 467009

Item Description	%	General	Sub	
Subcontractor Work				
General Contractor Work				
General Contractor Total:		\$0.00		
Prime OH & Profit - General Contractor Only:	8.00%	\$0.00		
Subcontractor Total:			\$0.00	
Prime OH & Profit on Subcontractors:	6.00%	\$0.00		Net Cost
Total:		\$0.00	\$0.00	\$0.00
Bond:	1.00%			\$0.00
Builder's Risk:	0.21%			\$0.00
Contractor Excise Tax:	2.04%			\$0.00
Net Proposed Cost:				\$0.00

** Cost breakdowns and quotes are attached hereto

NOTE to Prime Contractor: Attach proposals from all Subcontractors when submitting to the Architect/Engineer for approval. Must be a complete, itemized breakdown of all labor and material similar to that shown above. Subcontractor sales tax can either be charged by the Sub or the Prime, but not both.

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00 63 63
CONSTRUCTION CHANGE ORDER

Construction Change Order No. _____

Project Name: Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES

Project No. 466527 & 467009

Contractor: _____

You are hereby authorized and directed to make the changes to your contract with the State of South Dakota covering the above project, as described below.

Request for Proposal #X

Total: +/- \$XX,XXX.XX

- **Description of Work**
 - Unforeseen Conditions: Add/Deduct \$x,xxx.xx
 - Owner Directed: Add/Deduct \$x,xxx.xx

Request for Proposal #X

Total: +/- \$XX,XXX.XX

- **Description of Work**
 - Unforeseen Conditions: Add/Deduct \$x,xxx.xx
 - Owner Directed: Add/Deduct \$x,xxx.xx

Additional Contract Days and Revised Substantial Completion Date: # of Days OR "0" - SC Date

Additional Contract Days and Revised Final Completion Date: # of Days OR "0" - Final Comp. Date

For labor, material and any other necessary costs to make the change or for omitting labor and material and any other costs, you will be allowed the additions or deductions to the amount of your contract as follows:

ORIGINAL CONTRACT AMOUNT	\$ <u>XX,XXX.XX</u>
CONTRACT AMOUNT TO DATE	\$ <u>XX,XXX.XX</u>
ADDITION TO CONTRACT	\$ <u>XX,XXX.XX</u>
DEDUCTION FROM CONTRACT	\$ <u>XX,XXX.XX</u>
NET CHANGE TO CONTRACT	\$ <u>XX,XXX.XX</u>
NET CONTRACT AMOUNT	\$ <u>XX,XXX.XX</u>

It is hereby understood that the provisions of the contract will not be otherwise changed or affected by this order.

RECOMMENDED BY:
DEPARTMENT OF THE MILITARY

STATE OF SOUTH DAKOTA
DEPARTMENT OF THE MILITARY

CULLEN B. JORGENSEN (Date)
Engineering Manager

MARK R. MORRELL (Date)
Major General (SD), SDNG
The Adjutant General

ACCEPTED BY:
CONSTRUCTION COMPANY

NAME (Date)
Title

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**SECTION 00 65 00
CLOSEOUT FORMS**

PART 1 – GENERAL

1.1 GENERAL

- A. This section outlines required documentation to be provided to the AE and Owner at the conclusion of the project. Final payment will not be made to the Contractor prior to receipt of all closeout forms.

1.2 REQUIRED SUBMITTALS

- A. Training Plan
- B. Construction Waste & Recycled Materials Forms
- C. Hazardous Material Disposal Forms
- D. Recycled Material Weight Tickets
- E. Waste Weight Tickets
- F. Record Drawings
- G. O&M Manuals
- H. Real Property Data – Form 1354 (Final)
- I. Pre-Substantial Completion Punch List
- J. Commissioning Issues Log
- K. Formal Notice of Substantial Completion
- L. Certificate of Substantial Completion
- M. Punch List Verification
- N. Formal Notice of Final Project Completion
- O. Unemployment Contribution Certificate
- P. Final Application for Payment

PART 2 – PRODUCTS

2.1 TRAINING PLAN

- A. Contractor shall submit their training plan in accordance with section 01 78 23 - Operation & Maintenance Data within this project manual.
- B. Contractor shall submit their written training plan a minimum of 30 calendar days prior to scheduling training.
- C. All training must be completed prior to the Substantial Completion Inspection.

2.2 CONSTRUCTION WASTE & RECYCLED MATERIALS FORMS

- A. Refer to section 01 74 19 - Construction Waste Management for requirements.
- B. All weight tickets shall be provided to the Owner with the notice of substantially complete or prior.

2.3 HAZARDOUS MATERIAL DISPOSAL FORMS

- A. Refer to section 01 74 19 - Construction Waste Management for requirements.
- B. All weight tickets shall be provided to the Owner with the notice of substantially complete or prior.

2.4 RECORD DRAWINGS

- A. Work included:
 - 1. Throughout progress of the work, the Contractor shall maintain, at the job or site, an accurate record of changes in the Contract Documents. The record of changes shall be kept current at all times and shall be accessible for periodic review by the AE and/or the Dept. of the Military.
 - 2. Transfer the recorded changes to a set of Record Documents to be provided to the AE prior to the final payment.
- B. Accuracy of records:
 - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
 - 2. Accuracy of records shall be such that future searches for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.
- C. Entries on Drawings

1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
2. Date all entries.
3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
4. In the event of overlapping changes, use different colors for the overlapping changes.
5. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, is shown schematically and is not intended to portray precise physical layout.
 - a. Final physical arrangement is determined by the Contractor, subject to the AE's approval.
 - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items shown only schematically on the Drawings. This layout will be shown on the Record Drawings.
 - c. The AE may waive the requirements for conversion of schematic layouts where, in the AE's judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the AE.
6. Show on the Record Drawings, the following:
 - a. Clearly identify the item by note, such as "cast iron drain", "galv. water", and the like.
 - b. Show, by the symbol or note, the vertical location of the item ("under slab", "in ceiling plenum", "exposed", and the like).
 - c. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.
- D. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the work, both concealed and visible, to enable future modification of the work to proceed without lengthy and expensive site measurement, investigation and examination.
- E. Review and submittal:
 1. Contractor shall have Record Documents submitted in final form to the AE prior to or as an attachment with the notice of being substantially complete.

2.5 O&M MANUALS

- A. The Contractor shall prepare Operation and Maintenance Manuals in accordance with section 01 78 23 - Operation & Maintenance Data within this project manual.
- B. Draft manuals shall be provided to the AE in sufficient time for thorough review.
- C. Contractor shall submit FINAL Operation and Maintenance Manuals to the AE prior to or as an attachment with the notice of being substantially complete.

2.6 REAL PROPERTY DATA – FORM 1354 (FINAL)

- A. The Contractor shall submit the Final Form 1354 data to the Owner prior to or as an attachment with the notice of being substantially complete.

2.7 BUILDER DATA

- A. The Contractor shall all project installed asset data to the Owner prior to or as an attachment with the notice of being substantially complete.
 1. Data collected shall conform to the requirements identified in Paragraph 2.2 of Section 00 60 00.

2.8 PRE-SUBSTANTIAL COMPLETION PUNCH LIST

- A. The AE may request a pre-substantial completion inspection punch list. This will consist of the AE and Contractor conducting a brief inspection of the project site to identify work items that need to be addressed or corrected before the project may be considered substantially complete.
- B. The Contractor shall record the items identified and generate a log of such items. The log shall note what was done to correct the identified issue, the Contractor that corrected the issue, and the date correction was completed.
- C. Contractor shall submit the pre-substantial completion punch list log prior to or as an attachment with the notice of being substantially complete.

2.9 COMMISSIONING ISSUES LOG

- A. During initial commissioning verification process the Commissioning Agent will develop a log of all issues found. The Commissioning Agent will provide a list of all items that need to be addressed to the Contractor.
- B. The Contractor shall create a log to track all items. The log shall indicated what was done to correct the identified issue, the Contractor that corrected the issue, and the date correction was completed.

- C. The Contractor shall have all identified issues resolved prior to requesting the Substantial Completion Inspection. The Contractor shall provide the Commissioning Issues Log to the Commissioning Agent and Owner for verification that all items have been completed.

2.10 FORMAL NOTICE OF SUBSTANTIAL COMPLETION

- A. Once the Contractor believes they have met the requirements of Contract Documents and are substantially complete in accordance with the definition in General Conditions 10.1.3, the Contractor shall submit a formal letter to the AE and Owner stating the project is substantially complete and ready for a substantial completion inspect.
- A. If the AE agrees that the project appears ready for the substantial completion inspection per Article 10 to the General Conditions, the AE shall recommend to the Dept. of the Military that a substantial completion inspection be conducted.
- B. If the Dept. of the Military agrees that the work is substantially complete they will schedule the substantial completion inspection within two (2) weeks of receipt of the AE's recommendation.
 - 1. Should the Contractor fail to submit any documentation required prior to or with the notice of being substantially complete the Substantial Completion Inspection will be delayed until submitted. Calendar days will continue to be counted against the project should Contractor fail to submit required documents on time.

2.11 CERTIFICATE OF SUBSTANTIAL COMPLETION

- A. Following the substantial completion inspection the AE will generate a punch list identifying all items noted during the inspection which require correction or attention by the Contractor.
- B. The AE will then draft the Certificate of Substantial Completion, attached the punch list, sign the certificate, and send the Certificate of Substantial Completion to the Contractor. The certificate shall be provided to the Contractor no more than 7 calendar days from the substantial completion inspection date.
 - 1. The following are considered acceptable Certificate forms:
 - A. Specification Section 00 65 16 – Certificate of Substantial Completion Form
 - B. EJCDC C-625 – Certificate of Substantial Completion
 - C. AIA G704 – Certificate of Substantial Completion
 - 2. The certificate shall indicate the date in which the project was determined to be substantially complete, reference the punch list of items to be completed or corrected, and whether the entire project or specific portions of the project are considered substantially complete.
- C. Within 10 calendar days from determination that the project is substantially complete the Contractor shall provide the signed Certificate of Substantial Completion to the Owner.

2.12 PUNCH LIST VERIFICATION

- A. The Contractor shall provide the AE and Owner verification that all identified punch list items have been corrected/completed. This shall be done by producing a document identifying each punch list item, indicate what was done to correct the identified issue, the Contractor that corrected the issue, and the date correction was completed.
- B. The Contractor shall provide the punch list verification documentation to the AE and Owner as an attachment to their formal request for final inspection.

2.13 FORMAL NOTICE OF FINAL PROJECT COMPLETION

- A. The Contractor shall submit a formal letter to the AE and Owner requesting final inspection per Article 11 of the General Conditions.
- B. If the AE agrees that the project appears ready for the final inspection, the AE shall recommend to the Dept. of the Military that the final inspection be scheduled.
- C. If the Dept. of the Military agrees that the work is complete and in full compliance with the contract documents, they will schedule the final inspection within two (2) weeks of receipt of the AE's recommendation.

2.14 CERTIFICATE OF COMPLETION

- A. If the project is determined to be fully complete in accordance with the Contract Documents the AE will prepare the Certificate of Completion Specification Section 00 65 19 – Certificate of Completion Form.
- B. The AE shall provide the certificate to the Contractor no more than 5 calendar days from the final completion inspection date.

- C. Within 10 calendar days from determination that the project is fully complete the Contractor shall provide the signed Certificate of Completion to the Owner.

2.15 UNEMPLOYMENT CONTRIBUTION CERTIFICATE

- A. The Contractor shall include with their final application for payment a State of South Dakota Unemployment Contribution Certificate.
- B. Final payment will not be processed until the certificate is provided to the Owner.

2.16 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall comply with the requirements established in General Condition's section 11.8.
- B. Once all work is fully complete and all required documentation has been submitted and approved the Contractor shall submit their Application for Final Payment.
- C. Included with the submittal shall be AIA Forms G706, G706A and G707 (or equivalent forms) and any other documentation required within the project manual.

PART 3 – EXECUTION

3.1 SUBSTANTIAL COMPLETION INSPECTION

- A. Reference Articles 10 and 11 of the General Conditions.
- B. The Substantial Completion Inspection will be conducted to review work of all trades.
 - 1. The Contractors is responsible to ensure all Subcontractors are present for the substantial completion inspection. Failure to have all Subcontractors present may be cause for the Dept. of the Military to postpone the substantial completion inspection.
- C. All parties will gather at the scheduled time and location as designated by the meeting invite. Instructions will be provided to the group as a whole.
- D. Based on project size, the inspection will be conducted as one group reviewing all aspects of the project or broken into multiple groups based on trade.
 - 1. Should the inspection be broken into multiple groups all participants will reconvene at the end of the inspection to discuss findings.
- E. The AE shall record all items of work that need to be corrector or completed in accordance with the Contract Documents.
- F. The AE and Owner will determine overall consensus if the project is substantially complete.
- G. Participants will determine the dollar value associated with all work items identified that need to be corrected or completed.
- H. In accordance with SD Codified Law twice the value of the remaining work will be withheld from payment.
- I. The AE will consolidate all item identified for correction or completion into a "Punch List".
- J. The AE shall provide the consolidated Punch List to the Contractor within 7 calendar days from the date of the inspection.

3.2 FINAL COMPLETION INSPECTION

- A. Reference Articles 10 and 11 of the General Conditions.
- B. A Final Completion Inspection will be conducted to review all items identified on the Punch List.
 - 1. It is the Contractors responsibility to assure all Subcontractors with work listed on the "punch list" are present for the final inspection. Failure to have all Subcontractors present may be cause for the Dept. of the Military to postpone the final inspection.
- C. All parties will gather at the scheduled time and location as designated by the meeting invite.
- D. All items on the Punch List will be inspected to ensure they have been completed in accordance with the Contract Documents.
- E. The project will only be determined to be Final Complete if all items have been corrected/completed in accordance with the Contract Documents.
 - 1. The Contractor's failure to complete all items prior to the Final Completion Inspection will require additional inspections to be conducted.
 - 2. The Contractor shall pay each AE fees for re-inspection of the project site due to their failure to complete all item prior to requesting a Final Completion Inspection.
- F. Once the project has been determined to be fully complete a Certificate of Completion will be prepared by the AE and circulated for signatures.

END SECTION 00 65 00

00 65 16
CERTIFICATE OF SUBSTANTIAL COMPLETION FORM

Project:	Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES
Project No.:	466527 & 467009
Contractor:	
Architect/Engineer:	FEH Design
Owner:	South Dakota Department of the Military

This [preliminary][final] Certificate of Substantial Completion applies to:

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

DATE
Date of Substantial Completion

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.

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 shall be as provided in the Contract, except as amended as follows:

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

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

The following documents are attached to and made a part of this Certificate: **Punch List dated xx/xx/xxxx.**

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.

Contractor

Representative

Date

Architect/Engineer

Representative

Date

South Dakota Department of the Military

Owner

Engineering Manager

Date

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00 65 19
CERTIFICATE OF COMPLETION FORM

Project:	Replace Exterior Doors – Sioux Falls RTI & Replace Exterior Doors – SF UTES
Project No.:	466527 & 467009
Contractor:	
Architect/Engineer:	FEH Design
Owner:	South Dakota Department of the Military

Scope of work covered by this acceptance is applicable only to the work identified in the substantial completion acceptance form(s) dated: _____.

Date of Completion

FINAL COMPLETION

The work performed under this contract has been inspected and found to be complete. This constitutes the Owner's acceptance for Final Completion for the **ENTIRE** contract amount. The Date of Final Completion of the Project is hereby established as set forth above. In accordance with the General Conditions of the Contract, this is to confirm the results of the Final Completion inspection(s).

The Contractor has completed the list of items identified on the Pre-Final and Final punch list(s) that the inspection team required corrected or completed before final acceptance of the Work in accordance with the General Conditions.

Work accepted with incomplete punch list items or failure of the Owner or other parties to identify Work that does not comply with the Contract Documents or is defective in operation or workmanship does not constitute a waiver of the Owner's rights under the Contract or relieve the Contractor of its responsibility for performance or warranties.

In accordance with the General Conditions, the Date of Final Completion is that Date jointly certified by the Architect/Engineer, Owner, and Contractor that the Work is completed and the Contract is fully satisfied according to the Contract Documents. Completion of all Work is a condition Precedent to the Contractor's right to receive Final Payment.

The **CONTRACTOR** has completed/corrected the items identified on all referenced punch list(s) and the requirements of the Contract are fully satisfied according to the Contract Documents.

Contractor

Representative

Date

The **ARCHITECT/ENGINEER** agrees that the Work noted in this Final Acceptance is completed in accordance with the Contract Documents.

Architect/Engineer

Representative

Date

The **OWNER** accepts the Work designated herein to be in accordance with the requirements for Final Completion. Except as provided in the Contract Documents, the South Dakota Department of the Military accepts the Project as complete and accepts responsibility for security, maintenance, and utilities except for Builder's Risk, which is hereby terminated upon the Effective Date of this Acceptance, all other Contractor provided insurance remains in effect through the Warranty period.

South Dakota Department of the Military

Owner

Engineering Manager

Date

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00 73 00
SUPPLEMENTARY CONDITIONS

PART 1 – GENERAL

1.1 DESCRIPTION

This section identifies modifications, clarifications, and additions to Section 00 00 07 – General Conditions. The Contractor is responsible for ensuring compliance with all requirements and providing proper documentation to verify and certify such requirements.

1.2 SPECIAL CONDITIONS

A. General

1. All references to State Engineer shall be changed to refer to the Department of the Military's Engineering Manager.

B. Article 1 – Definitions

1. Paragraph 1.1 Owner – Add the following:
 - a. The Department of the Military and its representatives acting through a Joint Powers Agreement with the Bureau of Administration.

C. Article 6 – Contractor's Responsibilities

1. Paragraph 6.7 – Superintendent – Add the following:
 - a. The Contractor shall provide qualifications/resume for their proposed project Superintendent within 5 business days following the date on the signed construction contract.
 - b. The State shall inform the Contractor of acceptance or non-acceptance of the proposed project Superintendent's qualifications within 2 full business days after receipt of qualifications/resume. The Superintendent must also pass a background check conducted by the SDARNG for full acceptance.
 - c. Qualifications/resume shall clearly indicate the Superintendent's education and experience.
 - 1) Experience shall clearly indicate the title of the position(s) held, dates position was held, list of projects in a Superintendent role with project value, detailed description of duties conducted, and owner contact information for past projects.
 - d. Should the Contractor decide to change the project Superintendent during the project, the Contractor must notify the State and obtain a qualification and background check approval prior to officially making such a change in personnel.

D. Article 7 – Subcontractors

1. Paragraph 7.2 - Award of Subcontracts and Other Contracts for Portions of the Work Award of Subcontracts and Other Contracts for Portions of the Work – Add the following:
 - a. The Contractor may not contract with any potential subcontractor or sub-subcontractor that I'd currently suspended or debated from doing business with the State of South Dakota.

1.3 ADDITIONAL PROCUREMENT REQUIREMENTS

A. Build America, Buy America

1. The Contractor covenants and agrees that it will comply with The Infrastructure Investment and Jobs Act (IIJA). Pub. L. No. 117-58, which includes the Build America, Buy America Act. Pub. L. No. 117-58, 70901-52. No funds may be obligated to this project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.
2. Additional information may be found at the GSA website, BuyAmerican.gov
3. No special waivers will be considered. Only General Applicability Waivers will be accepted as published by the Government.

B. Recycled Content

1. The Contractor covenants and agrees that it will use and/or install products composed of the highest percent of recovered material or biobased content practicable, or at least meet, but may exceed, the minimum recovered materials or biobased content of an EPA or USDA designated product.
2. Product Supplier Directory for EPA purchasing recommendations related to Recovered Materials Advisory Notice is available at <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>
3. USDA designated items are available at <http://www.biopreferred.gov>
4. Exemptions
 - a. Only products identified in the construction documents to be of virgin material.
 - b. Should the Contractor encounter difficulties finding products produced in the United States or wishing to use a product not containing recovered material meeting or exceeding the EPA recovered content guidelines, a waiver may be requested.

- 1) Waivers will require review and approval from National Guard Bureau and will take an extensive period of time for review and approval.
- 2) Contractor is made aware of this requirement as additional time will not be granted for waiver of noncompliant products.
- 3) Written justification and documented approval must be included in the shop drawing submittal.

C. Or Equal Clause

Requests for such approval must be consistent with Instructions to Bidders paragraph 8, Article 6.3.4 General Conditions to Agreement of Construction, and must be made in writing to the AE, not later than 10 days prior to the bid opening. This "prior" approval of material or equipment as equal to that specified will be made in writing in the form of an addendum issued by the AE to all plan holders of record. The base bid and any alternate shall be based on materials only as specified or approved.

It is the sole responsibility of the Contractor to document to the satisfaction of the AE that proposed material, item, or piece of equipment is equal or better than that identified on the plans or in the specifications. The requirements of this Article shall be strictly enforced. Failure of the Contractor or Subcontractors to identify and submit in writing requests for approval not later than 10 days prior to the bid opening shall not be just cause for future request for or expectation of acceptance for substitution during the construction period.

1.3 SPECIAL CONTRACT REQUIREMENTS

- A. The Contractor covenants and agrees that it will comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330), as supplemented by Department of Labor regulations (29 CFR Part 5). As applied to this project, the Contract Work Hours and Safety Standards Act specifies that no laborer or mechanic doing any part of the work contemplated by this project shall be required or permitted to work more than 40 hours in any work week unless paid for all additional hours at not less than 1 1/2 times the basic rate of pay.
- B. The Contractor covenants and agrees that it will comply with Executive Order 11246 of September 24, 1965 entitled "Equal Employment Opportunity," as amended by Department of Labor regulations (41 CFR Chapter 60).
- C. The Contractor covenants and agrees that no person shall be denied benefits, or otherwise be subjected to discrimination in connection with the Contractor's performance under this contract, on the grounds of race, religion, color, national origin, gender or handicap. Accordingly, and to the extent applicable, the Contractor covenants and agrees to comply with the following:
 1. Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq.), and DoD regulations issued thereunder (32 CFR Part 300);
 2. Executive Order 11246 and Department of Labor regulations issued thereunder (41 CFR Part 60);
 3. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794) and DoD regulations issued thereunder (32 CFR Part 56); and
 4. The Age Discrimination Act of 1975 (42 U.S.C. § 6101 et seq.) and regulations issued thereunder (45 CFR Part 90).
- D. The Contractor covenants and agrees that it will comply with provisions of the Drug-Free Work Place Act of 1988 (Public Law 100-690, Title V, Subtitle D; 41 U.S.C. § 701 et seq.) and will maintain a drug-free workplace. The Final Rule, Government-Wide Requirements for Drug-Free Workplace (Grants), issued by the Office of Management and Budget and the Department of Defense (32 CFR Part 28, Subpart f) to implement provisions of the Drug-Free Work Place Act of 1988, is incorporated by reference and the Contractor covenants and agrees to comply with provisions thereof, including amendments to the Final Rule that may hereafter be issued.
- E. The Contractor covenants and agrees that it will comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874), as supplemented in Department of Labor regulations (29 CFR Part 3). As applied to this project, the Copeland "Anti-Kickback" Act makes it unlawful to induce, by force, intimidation, threat of procuring dismissal from employment, or otherwise, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment.

1.4 DISCREPANCIES, ERRORS AND OMISSIONS

- A. In the event any error, omission or discrepancy in or between drawings and specifications exists or appears to exist, Contractor shall not attempt to profit from such obviously unintentional error, but shall have same explained or adjusted by the AE before submitting their proposal/bid. In the event such clarification is not obtained, the Contractor shall be deemed to have estimated the work as follows:

1. Discrepancies between the drawings and specifications, the specifications shall govern.
2. Discrepancies between the schedule and drawings, the schedules shall govern.
3. Discrepancies between plan drawings and approved shop drawings, the plan drawings shall govern.
4. Discrepancies between drawings, the drawing at the larger scale shall govern.
5. Materials shown on drawings but not described in specifications, the drawings shall govern.
6. Discrepancies between manufacturer's printed installation instructions and the project specifications, the manufacturer's installation instructions shall govern provided the manufacturer's requirements are more stringent than that specified.

1.5 ENGINEERING AND LAYOUT

- A. The Contractor shall provide competent engineering services of layout and execute the work in accordance with the contract requirements. The Contractor shall verify the figures shown on the survey before undertaking any construction work and shall be responsible for the accuracy of the finished work.
- B. The AE has established or will establish such general reference points as will, in his judgment, enable the Contractor to proceed with the work. If the Contractor finds that any previously established reference points have been destroyed or displaced, The Contractor shall promptly notify the AE.
- C. The Contractor shall protect and preserve the established bench marks and monuments and shall make no changes in locations without the written approval of the AE. Any bench marks and monuments which may be lost or destroyed or which required shifting because of necessary changes in grades or locations shall, subject to prior approval by the AE, be replaced and accurately located by the Contractor.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END SECTION

SECTION 00 73 63
SECURITY REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL

Included in this section are the Contractor's responsibilities to ensure construction sites and SDARNG property remain secure at all times during the construction process.

1.2 SECURITY

- A. Job site security is the responsibility of the Contractor. The Contractor shall take all necessary, prudent, and reasonable actions to secure the project site and the construction limits, including temporary enclosures and storage facilities, against unauthorized entry and theft. An equivalent security level and measures of the adjacent facility shall be maintained.
- B. The Contractor is advised current national "Force Protection Condition" (FPCON) ratings are applicable to all SDARNG facilities statewide. At any time the FPCON level may be increased to a heightened level requiring additional security measures.

Increased security levels may include, but are not limited to, limited personnel access, thorough entry screening of all personnel, random vehicle searches, parking limitations, and other measures may also be enforced. Cooperation with the Dept. of the Military and local SDARNG personnel with respect to FPCON issues is essential and compliance with FPCON measures directed are mandatory for the Prime Contractor, subcontractors, vendors, and suppliers, all employees of those entities, and any other person or persons having business regarding the work of the project who require access to the SDARNG facility.

FPCON measures directed and deemed necessary but which cause delay to the project or which have a negative impact upon the Prime Contractor's abilities to perform the work shall be subject to consideration as Changes in the Work in accordance with Article 14 of the General Conditions to Agreement for Construction.

1.3 FACILITY ACCESS

- A. The Contractor shall submit a SDARNG Contractor Access Application for the individual identified at the Contractor's Superintendent for the project. The Superintendent will be required to pass a background check for unescorted access to the SDARNG project site. The Contractor will be required to have a Superintendent that is able to pass a background check. The Superintendent must be onsite during all time's additional employees or Subcontractors are onsite. The Superintendent is ultimately responsible for all project site security and related issues.
- B. The Contractor shall submit an Employee Access List (EAL) identifying each employee's name and driver's license number or other form of government issued ID number. Only employees on the EAL will be permitted to work on the project site. This list must be kept current throughout the duration of the project. Employees entering the facility may be required to temporarily surrender a government-issued photo ID, such as a driver's license, to verify access clearance.
- C. The Dept. of the Military may, at its sole option, issue to the Contractor one or more proximity cards programmed to allow access to the facility. If such a card(s) is issued, the Contractor shall be responsible to assure only authorized employees utilize the card. The Contractor shall promptly notify the Dept. of the Military in the event the card is lost or damaged in a manner that it cannot be used. The Contractor shall pay \$5.00 for each lost or damaged card. All cards shall be returned to the Dept. of the Military upon completion of the project.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION

**01 01 00
GENERAL**

PART 1 – GENERAL

1.1 PROJECT LOCATION

- A. Facilities are located at
 - 1. RTI, 803 W. National Guard Drive, Sioux Falls, SD 57104
 - 2. UTES, 3800 E. Benson Road, Sioux Falls, SD 57104
- B. Interested bidders should contact the SD Dept. of the Military Project Manager, Kelly Eitreim, at (605) 737-6273 or kelly.eitreim@state.sd.us to make arrangements for access to the facility for site visits.
- C. Pre-bid walk-thru meeting will be held on February 22, 2024 at 11:00 AM CT RTI site.

1.2 PROJECT DESCRIPTION

- A. Project Scope of Work Includes:
 - 1. On the two SD Dept. of the Military project an exterior door replacement is being bid on. Removal and replacement of existing exterior doors/frames/hardware. Associated construction with demolition, patching, painting and caulking.
- B. Building will be occupied during construction. Contractor shall avoid undue disturbance to building occupants.
- C. Contractor shall not block or obstruct building exits in any way.
- D. Storage areas for materials will be provided within close proximity to the buildings. Exact location will be discussed in greater detail at the preconstruction meeting.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END SECTION 01 01 00

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01 14 00
WORK RESTRICTIONS

PART 1 – GENERAL

1.1 GENERAL

- A. This section outlines special site-specific requirements that the Contractor must comply with when working on South Dakota Department of the Military/SDARNG projects.

1.2 SPECIAL SITE CONDITIONS

A. Tobacco Free Environment Policy:

1. In accordance with the Governor's Executive Order 2006-04; Effective July 1, 2006, smoking and the use of all tobacco products will be prohibited on all real property or portions thereof owned by the State of South Dakota under the direction and control of the Governor and all real property leased by the state. This policy applies to employees, clients, Contractors, visitors, and includes all vehicles, parking lots and walkways leading into facilities.
2. Smoking is prohibited within and outside of all buildings, except in designated smoking areas. This applies to existing buildings, buildings under construction and buildings under renovation. Discarding tobacco materials other than into designated tobacco receptacles is considered littering and is subject to fines.
3. The Project Manager will identify designated smoking areas.
4. No Smoking Policy
The Contractor shall provide a written No Smoking Policy to the SD DOM Project Manager. This policy shall be provided to the Project Manager before, at, or no later than 10 calendar days from the date of the Notice to Proceed. The policy shall incorporate State of South Dakota requirements and the Contractor's plan for oversight and enforcement of the policy.

B. Work Hours

1. Regular working hours are established as:
 - a. Readiness Center or Training Facilities: 6:30AM to 5:00PM Monday through Friday.
 - b. Some facilities are not open on Monday's. Contractor may be limited to working a Tuesday through Friday (10-hour days) schedule or limited to working in common areas access areas.
 - c. Maintenance Shops: 6:30AM to 5:00PM Tuesday through Friday.

C. Work Outside Regular Hours

Work outside regular working hours will be permitted in non-secure areas. Work within secure areas shall be coordinated with the Project Manager no less than 7 calendar days prior to such work to allow arrangements to be made. Make utility cutovers after normal working hours or on Saturdays, Sundays, Mondays, and holidays unless directed otherwise.

C. Occupied and Existing Building[s]

1. The Contractor shall be working in an existing building or around existing buildings which are occupied. Do not enter the building[s] without prior approval of the Project Manager.
2. The existing buildings and their contents must be kept secure at all times.
3. Provide temporary closures as required to maintain security as directed by the Contracting Officer.
4. Provide dust covers or protective enclosures to protect existing work that remains, and Government material during the construction period.
5. Relocate movable furniture away from the Contractor's working area as required to perform the work, protect the furniture, and replace the furniture in its original location[s] upon completion of the work. Leave attached equipment in place, and protect it against damage, or temporarily disconnect, relocate, protect, and reinstall it at the completion of the work.

1.3 WORK ON CAMP RAPID

- A. Only employees listed on an approved Employee Access List will be granted access onto Camp Rapid.
- B. Contractor shall comply with the requirement set forth in section 01 35 30 - Security Requirements of this project manual.
- C. The Contractor shall contact the Dept. of the Military project manager on matters regarding traffic control, access to Camp Rapid, and other similar matters related to the site.

1.4 WORK ADJACENT TO AIRPORTS

- A. The Contractor is advised that an area of the construction site is in close proximity to active runways, taxiways, and other aircraft operating areas. As a result, the Contractor will be required to comply with the applicable safety requirements set by the Airport and the Federal Aviation Administration (FAA).

- B. The Contractor is advised that the Airport and/or the FAA Air Traffic Control Tower (ATCT) may require the Contractor to schedule his work to minimize impacts to airport operations.
- C. An area of the construction site is located within the area of and is under the control of the Airport (generally noted as within the airport security fence). For work in this area, the Contractor is responsible to coordinate his work in advance with the Airport and with the ATCT, and for his full compliance with Airport and ATCT safety and security standards.
- D. The Airport is required to prevent unauthorized access and to ensure that proper badging and escort procedures are followed. The construction Contractor will need to coordinate all security and access issues with the Airport. The Contractor must ensure that his personnel remain within the limits of construction at all times that they are on the site. The Contractor must ensure that any access gates used to gain access to the construction site remained locked unless in use. When the access gate is in use, the Contractor will be required to provide one employee at the gate to control access and egress.
- E. The Contractor shall take all necessary measures to ensure that construction materials and debris are not blown by winds such that aviation/flight hazards result.
- F. The Airport and the ATCT requires 72 hour advance notification of the use of any cranes on the construction site, and to comply with all crane operation safety requirements established by the Regional Airport. Boom heights greater than 100' above the ground will not be allowed without special written permission by the Airport. When not in use, crane booms will be lowered.
- G. All construction shall be carried out in accordance with FAA Advisory Circular 150/5370-2C "Operational Safety on Airports during Construction". It is the Contractor's sole responsibility to ensure the requirements of this Advisory are fully complied with.
- H. The Contractor shall establish and maintain radio contact with the FAA Air Traffic Control Tower (ATCT), as required by the Airport, using radios provided by the Contractor.
- I. All construction equipment must be marked and lighted in accordance with FAA Advisory Circular 70/7460-1J, "Observation Marking and Lighting", Chapters 3, 4, 5, and 13. It is the Contractor's sole responsibility to ensure the requirements of this Advisory are fully complied with.
- J. The Contractor shall be responsible for locating utility lines and hand digging to locate FAA cabling and shall provide adequate provisions to protect all FAA cables exposed during the proposed work. The Contractor is responsible for advising the Airport and the ATCT, in writing, if cable relocation is required, and to fully coordinate any cable relocations with the Airport and ATCT to minimize any impact to airport operations. Any damage to Airport and/or FAA cables, access roads, or facilities shall be immediately repaired, to the satisfaction of the Airport and/or the FAA, at the Contractor's sole expense.
- K. The Contractor shall be responsible for erecting and maintaining lighting and barriers around the construction area, as may be required by the Airport and/or the ATCT.
- L. The Contractor shall strictly avoid driving on runways, taxiways, ramps, and aprons. If for any reason, the Contractor leaves dirt and debris on these surfaces, they shall be immediately cleaned, to the satisfaction of the Regional Airport and/or the ATCT.

1.4 UTILITY CUTOVERS AND INTERRUPTIONS

- A. Make utility cutovers and interruptions after normal working hours or on Saturdays, Sundays, Mondays, and Government holidays. Conform to procedures required in paragraph WORK OUTSIDE REGULAR HOURS.
- B. Ensure that new utility lines are complete, except for the connection, before interrupting existing service.
- C. Interruption to water, sanitary sewer, storm sewer, telephone service, electric service, air conditioning, heating, fire alarm, and compressed air are considered utility cutovers pursuant to the paragraph WORK OUTSIDE REGULAR HOURS.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END SECTION 01 14 00

**01 18 00
PROJECT UTILITIES**

PART 1 – GENERAL

1.1 SUMMARY

This section covers Utility Locate Services and the availability of utilities to the Contractor in order to complete the scope of work included with the project.

1.2 UTILITY LOCATES

- A. The Contractor shall contact SD One Call and ensure utilities are marked prior to any excavation taking place. The Contractor shall provide a copy of each SD One Call utility request submitted for record keeping purposes.
- B. Contractor shall coordinate and pay for a private locate service to mark all utility locations on State of South Dakota property or leased property on which public utilities will not conduct locates. The Contractor shall submit the private utility locator's employee information to include company name, employee name, and date of birth, and driver's license number for a background check and clearance prior to being able to conduct work at a SDARNG facility.

1.3 WATER

- A. The Owner will furnish all water required for use on the project.
- B. The Contractor shall provide all means of conveying water to place where required, including temporary valves, meters, pipe, etc., and remove any such temporary means when their purpose has been served.
- C. If necessary the Mechanical Contractor shall provide a temporary water connection for the use of all Contractors at the job site and on each floor as the project progresses. They will expedite the permanent water service and furnish outlets for use of all Contractors.

1.4 ELECTRICITY

- A. The Contractor may utilize existing electrical infrastructure within the facility. Any specialty electrical needs for equipment shall be arranged, installed, maintained, and removed by a licensed electrical contractor.

1.5 HEAT

- A. The Contractor will furnish, install, maintain, and be responsible for the costs associated with all temporary equipment and materials necessary to provide temporary heating services to the location of construction.
- B. The Contractor may utilize existing building HVAC heating systems and sources without making any modifications to the existing HVAC heating systems. Heating energy, and costs associated with HVAC heating system operation, will be provided by the Owner.
- C. The Contractor may not use Owner furnished electricity identified in paragraph 1.4 above for heating purposes of spaces larger than 400 SF.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION 01 18 00

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01 23 00
ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes Administrative and procedural requirements for Alternates.
 - 1. Acceptance or rejection of each Alternate is at discretion of the State. None, any, or all Alternates may be accepted or rejected by the State.
- B. Requirements and descriptions for products and scopes of Work identified as Alternates in the Drawings and Specifications and listed as "Bid Alternative "on the Bid Proposal Form.
- C. Included in this Section: non-technical descriptions of Alternates listed by number only on the Bid Proposal.
- D. Included in other Sections: technical specifications for work revising or adding/deducting from Base Bid work by Alternates.
- E. Unless otherwise specifically provided, the work described in Alternates shall be completed with no increase in Contract Time.
- F. The additional cost or credit for each Alternate shall represent the total adjustment to the contract sum associated with said Alternate.
- G. All labor, material, equipment, accessories, and incidental items required for a complete installation shall be included, whether or not specifically mentioned as part of the Alternate. Contractor shall perform necessary modifications or adjustments to affected adjacent work, whether new or existing, in order to fully and properly integrate the Alternate work into the Project. These necessary modifications and adjustments shall be included in the Alternate.

1.2 GENERAL REQUIREMENTS FOR ALTERNATES

- A. Coordination:
 - 1. Determine the full effect on the Work of implementing each Alternate, including coordination, modification or adjustment of portions of the Work. Contract Amount included on the Bid Form for each Alternate includes the cost for all work required to incorporate the Alternate.
 - 2. To enable the State to compare total costs where alternative materials and methods might be used or where scope of Work might be altered, Bid Alternate Work items have been established as described in this Section.
 - 3. Unless otherwise noted, Alternates may be accepted in any order the State decides until the Construction Budget is reached.
- A. Contract Amount included in Base Bid and as stated in executed Agreement shall include all costs for Work described in Contract Documents.
- C. Bid Proposal Form or other means prescribed for submission of proposed cost of Work shall include line items for each Alternate described in this Section. No Alternates other than as described in this Section shall be submitted, except in accordance with product options and substitutions provisions specified in Section 01 25 00, Substitution Procedures.
- D. Each Alternative is identified herein by number. This identification shall be used whenever referring to Work described in Alternate and when submitting cost proposals and payment requests.
- E. Alternative construction described in Alternates and revised scopes of Work shall be performed only when such Alternate is made a part of the Work by specific provision in the Contractor Agreement.
- F. If the State elects to proceed on the basis of one or more of the described Alternates, Contractor shall make all modifications to Work as required to provide products complete, in place and fully functional, including all labor, equipment, services and incidental consumables necessary to apply, install and finish Work described in Alternate in accordance with requirements specified in related product Sections of these Specifications.
- G. Cost for Alternates shall be complete and include all net increases and decreases in Contract Amount for Work described in Alternate and for all changes in related Work. No claims for additional costs will be honored other than as stated in cost proposal for each Alternate.

PART 2 - PRODUCTS AND EXECUTION

2.1 SCHEDULE OF ALTERNATES

- A. **Bid Package #1 - Additive Alternate Bid No. 1 – Move AI Phone.**
 - 1. Base Bid condition: Leave existing AI phone where it is located. The existing AI phone is to be connected to new Door 16 for controls.

2. Alternate Bid condition: Remove existing AI phone from existing location and salvage for reinstallation. Add blank plate over existing wall boxes. Reinstall existing AI phone on AL-2 frame on 1'-4" center break metal post. Connect the AI phone to new Door 16 for controls.
3. Location in contract documents: Drawing Sheets A-102, A-103, & A-105. Section 28 13 53.

END OF SECTION

01 32 16
PROJECT SCHEDULES

PART 1 – GENERAL

1.1 SUMMARY

- A. The Contractor shall develop a Critical Path Method (CPM) plan and schedule demonstrating fulfillment of the contract requirements (Project Schedule), and shall keep the Project Schedule up-to-date in accordance with the requirements of this section and shall utilize the plan for scheduling, coordinating and monitoring work under this contract (including all activities of subcontractors, equipment vendors and suppliers). Conventional Critical Path Method (CPM) technique shall be utilized to satisfy both time and cost applications.
- B. Construction Progress Schedule shall comply with the requirements set forth in General Conditions Article 6 of the Agreement for Construction.

1.2 CONTRACTOR'S REPRESENTATIVE

- A. The Contractor shall designate an authorized representative responsible for the Project Schedule including preparation, review and progress reporting with and to the Dept. of the Military (DOM) Project Manager.
- B. The Contractor's representative shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the requirements of this specification section.

1.3 PROJECT SCHEDULE SUBMITTAL

- A. Contractor shall prepare and submit Construction Progress Schedules in accordance with the General Conditions Article 6 to the Agreement for Construction.
- B. Original Submittal:
 - 1. Within 10 calendar days after receipt of Notice to Proceed, the Contractor shall submit for the Project Manager's review.
 - 2. Each activity/event on the computer-produced schedule shall contain as a minimum, but not limited to, activity/event ID, activity/event description, duration, early start date, early finish date, late start date, late finish date and total float.
 - 3. Work activity/event relationships shall be restricted to finish-to-start and start-to-start without lead or lag constraints.
 - 4. Activity/event date constraints, not required by the contract, will not be accepted unless submitted to and approved by the Project Manager.
 - 5. The complete working Project Schedule shall reflect the Contractor's approach to scheduling the complete project and shall meet the detailed requirements.
- C. Progress Schedules
 - 1. Shall be prepared in accordance with the requirements set forth in this section for the original project schedule and shall be distributed for review at each project progress meeting.

1.4 PROJECT SCHEDULE DETAILED REQUIREMENTS

- A. Level of Detail Required
Develop the Project Schedule to the appropriate level of detail to address major milestones and to allow for satisfactory project planning and execution. Failure to develop the Project Schedule to an appropriate level of detail will result in its disapproval. The Project Manager will consider, but is not limited to, the following characteristics and requirements to determine appropriate level of detail:
- B. Activity Durations
Reasonable activity durations are those that allow the progress of ongoing activities to be accurately determined between update periods. Less than 2 percent of all non-procurement activities may have Original Durations (OD) greater than 30 calendar days.
- C. Design and Permit Activities
Include design and permit activities with the necessary conferences and follow-up actions and design package submission dates. Include the design schedule in the project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. Provide at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. Also include review and correction periods associated with each item.
- D. Procurement Activities
Include activities associated with the critical submittals and their approvals, procurement, fabrication, and delivery of long lead materials, equipment, fabricated assemblies, and supplies. Long lead procurement activities are those with an anticipated procurement sequence of over 90 calendar days.

E. Mandatory Tasks

Include the following activities/tasks in the initial project schedule and all updates.

- a. Submission, review and acceptance of Preconstruction Submittals (individual activity for each).
- b. Submission, review and acceptance of features require design completion Submission, review and acceptance of design packages.
- c. Submission of mechanical/electrical/information systems layout drawings.
- d. Long procurement activities
- e. Submission and approval of O&M manuals with Training Videos.
- f. Submission and approval of as-built drawings.
- g. Submission and approval of DD1354 data and installed equipment lists.
- h. Submission and approval of BUILDER Data
- i. Submission and approval of Build America, Buy America Certification
- j. Submission and approval of EPA and USDA Recycled Content Certifications
- k. Submission and approval of testing and air balance (TAB).
- l. Submission of TAB specialist design review report.
- m. Submission and approval of Fire Protection specialties.
- n. Submission and approval of Building Commissioning Plan, test data, and reports: Develop the schedule logic associated with testing and commissioning of mechanical systems to a level of detail consistent with the contract commissioning requirements. All tasks associated with all building testing and commissioning will be completed prior to submission of building commissioning report and subsequent contract completion.
- o. Air and water balancing.
- p. Building commissioning - Functional Performance Testing.
- q. Controls testing plan submission.
- r. Controls testing.
- s. Performance Verification testing.
- t. Other systems testing, if required.
- u. Contractor's pre-final inspection.
- v. Correction of punch list from Contractor's pre-final inspection.
- w. Owner's pre-final inspection.
- x. Correction of punch list from Owner's pre-final inspection.
- y. Final inspection.

1.5 PROGRESS REPORTING

- A. The Contractor shall accurately update the Project Schedule and all other data required and provide this information to the AE and Project Manager three work days in advance of the scheduled progress meeting.
- B. Job progress will be reviewed to verify:
 1. Actual start and/or finish dates for updated/completed activities/events.
 2. Remaining duration for each activity/event started, or scheduled to start, but not completed.
 3. Logic, time and cost data for change orders, and supplemental agreements that are to be incorporated into the Project Schedule.
 4. Changes in activity/event sequence and/or duration which have been made.
 5. Completion percentage for all completed and partially completed activities/events.
 6. Logic and duration revisions required by this section of the specifications.
 7. Activity/event duration and percent complete shall be updated independently.
- C. The Contractor, AE, and Project Manager shall review the schedule at the progress meeting and mutually agree on current progress, delays, and adjustments.
- D. After completion of the joint review, the contractor shall generate an updated computer-produced calendar-dated schedule and submit to the AE and Project Manager.

1.6 PAYMENT TO THE CONTRACTOR

- A. The Contractor shall be entitled to a monthly progress payment upon approval of estimates as determined from the currently approved updated project schedule. Monthly payment requests shall include: a listing of all agreed upon project schedule changes and associated data; and an electronic file (s) of the resulting monthly updated schedule.
- B. Approval of the Contractor's monthly Application for Payment shall be contingent, among other factors, on the submittal of a satisfactory monthly update of the project schedule.

1.7 RESPONSIBILITY FOR COMPLETION

- A. If it becomes apparent from the current revised monthly progress schedule that phasing or contract completion dates will not be met, the Contractor shall execute some or all of the following remedial actions:
 - 1. Increase construction manpower in such quantities and crafts as necessary to eliminate the backlog of work.
 - 2. Increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment, or any combination of the foregoing to eliminate the backlog of work.
 - 3. Reschedule the work in conformance with the specification requirements.
- B. Prior to proceeding with any of the above actions, the Contractor shall notify and obtain approval from the AE and Project Manager for the proposed schedule changes. If such actions are approved, the representative schedule revisions shall be incorporated by the Contractor into the Project Schedule before the next update, at no additional cost.

1.8 ADJUSTMENT OF CONTRACT COMPLETION

- A. The contract completion time will be adjusted only for causes specified in this contract. Request for an extension of the contract completion date by the Contractor shall be supported with a justification, CPM data and supporting evidence as the AE and Project Manager may deem necessary for determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract.
- B. Submission of proof based on revised activity/event logic, durations (in work days) is obligatory to any approvals. The schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved in this request. The Project Manager's determination as to the total number of days of contract extension will be based upon the current computer-produced calendar-dated schedule for the time period in question and all other relevant information.
- C. The Contractor shall submit each request for a change in the contract completion date to the Project Manager in writing accordance with the contract documents and procedures.
- D. All delays due to non-work activities/events such as RFI's, Weather, and similar non-work activities/events shall be analyzed on a month by month basis.

1.9 FAILURE TO ACHIEVE PROGRESS

Should the progress fall behind the approved project schedule for reasons other than those that are excusable within the terms of the contract, the Project Manager may require provision of a written recovery plan for approval. The plan must detail how progress will be made-up to include which activities will be accelerated by adding additional crews, longer work hours, extra workdays, etc.

- A. Artificially Improving Progress
Artificially improving progress by means such as, but not limited to, revising the schedule logic, modifying or adding constraints, shortening activity durations, or changing calendars in the project schedule is prohibited. Indicate assumptions made and the basis for any logic, constraint, duration and calendar changes used in the creation of the recovery plan. Any additional resources, manpower, or daily and weekly work hour changes proposed in the recovery plan must be evident at the work site and documented in the daily report along with the Schedule Narrative Report.
- B. Failure to Perform
Failure to perform work and maintain progress in accordance with the supplemental recovery plan may result in an interim and final unsatisfactory performance rating and may result in corrective action directed by the Project Manager pursuant to the provisions of the General Conditions of the contract.
- C. Recovery Schedule
Should the Project Manager find it necessary, submit a recovery schedule.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION 01 32 16

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01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Submittal Information

The Project Manager may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

B. Project Type

The Contractor's Quality Control (CQC) System Manager are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

The Contractor and the Designer of Record (DOR), if applicable, are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

C. Submission of Submittals

Schedule and provide submittals requiring Owner approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

A. Submittal Descriptions

Submittal requirements are specified in the technical sections.

1. Preconstruction Submittals

Submittals that are required prior to or commencing with the start of work on site. Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract. Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

- a. Certificates Of Insurance
- b. Surety Bond
- c. List Of Proposed Subcontractors
- d. List Of Proposed Products
- e. Submittal Register
- f. Schedule Of Values
- g. Accident Prevention Plan
- h. Work Plan
- i. Quality Control (QC) plan
- j. Environmental Protection Plan

2. Shop Drawings

- a. Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.
- b. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.
- c. Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

3. Product Data

- a. Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

- b. Samples of warranty language when the contract requires extended product warranties.
- 4. Samples
 - a. Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.
 - b. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.
 - c. Field samples and mock-ups constructed on the project site establish standards ensuring work can be judged. Includes assemblies or portions of assemblies that are to be incorporated into the project and those that will be removed at conclusion of the work.
- 5. Design Data
 - a. Design calculations, mix designs, analyses or other data pertaining to a part of work.
 - b. Design submittals, design substantiation submittals and extensions of design submittals.
- 6. Test Reports
 - a. Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Unless specified in another section, testing must have been within three years of date of contract award for the project.
 - b. Report that includes findings of a test required to be performed on an actual portion of the work or prototype prepared for the project before shipment to job site.
 - c. Report that includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.
 - d. Investigation reports
 - e. Daily logs and checklists
 - f. Final acceptance test and operational test procedure
- 7. Certificates
 - a. Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must be dated after award of project contract and clearly name the project.
 - b. Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor. The document purpose is to further promote the orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.
 - c. Confined space entry permits
 - d. Text of posted operating instructions
- 8. Manufacturer's Instructions
 - a. Preprinted material describing installation of a product, system or material, including special notices and (SDS) concerning impedances, hazards and safety precautions.
- 9. Manufacturer's Field Reports
 - a. Documentation of the testing and verification actions taken by manufacturer's representative at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or instructions. The documentation must be signed by an authorized official of a testing laboratory or agency and state the test results; and indicate whether the material, product, or system has passed or failed the test.
 - b. Factory test reports.
- 10. Operation and Maintenance Data
 - a. Data provided by the manufacturer, or the system provider, including manufacturer's help and product line documentation, necessary to maintain and install equipment, for operating and maintenance use by facility personnel.
 - b. Data required by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.
 - c. Data incorporated in an operations and maintenance manual or control system.
- 11. Closeout Submittals
 - a. Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.
 - b. Submittals required for Guiding Principle Validation (GPV) or Third Party Certification (TPC).

- c. Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.
- B. Approving Authority
Office or designated person authorized to approve the submittal.
- C. Work
As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce submittals.

1.3 PREPARATION

- A. Transmittal Form
Transmit each submittal, except sample installations and sample panels to the office of the approving authority using the transmittal form prescribed by the Project Manager. Include all information prescribed by the transmittal form and required in paragraph IDENTIFYING SUBMITTALS. Use the submittal transmittal forms to record actions regarding samples.
Use the ENG Form 4025-R transmittal form for submitting both Owner-approved and information-only submittals. Submit in accordance with the instructions on the reverse side of the form. These forms or similar forms are included in the eCMS software that the Contractor is required to use for this contract. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.
- B. Identifying Submittals
The Contractor's Quality Control Manager must prepare, review and stamp submittals, including those provided by a subcontractor, before submittal to the Owner. Identify submittals, except sample installations and sample panels, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:
 - 1. Project title and location
 - 2. Construction contract number
 - 3. Dates of the drawings and revisions
 - 4. Name, address, and telephone number of Subcontractor, supplier, manufacturer, and any other Subcontractor associated with the submittal.
 - 5. Section number of the specification by which submittal is required
 - 6. Submittal description (SD) number of each component of submittal
 - 7. For a resubmission, add alphabetic suffix on submittal description, for example, submittal 18 would become 18A, to indicate resubmission
 - 8. Product identification and location in project.
- C. Submittal Format
 - 1. Format of Preconstruction Submittals
When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document. Provide data in the unit of measure used in the contract documents.
 - 2. Format for Shop Drawings
Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.
 - a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.
 - b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.
Present shop drawings sized 8 1/2 by 11 inches as part of the bound volume for submittals. Present larger drawings in sets. Submit an electronic copy of drawings in PDF format.

- c. Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph IDENTIFYING SUBMITTALS.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Owner contract number in the margin, immediately below the title block, for each drawing.

Reserve a blank space, on the right-hand side of each sheet for the Owner disposition stamp.
- 3. Format of Product Data

Present product data submittals for each section as a complete, bound volume. Include a table of contents, listing the page and catalog item numbers for product data. Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

 - a. Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of Certificates. Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.
 - b. Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Project Manager. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.
 - c. Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will not be accepted for expedition of the construction effort. Submit the manufacturer's instructions before installation.
- 4. Format of Samples
 - 1. Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

 - a. Sample of Equipment or Device: Full size.
 - b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
 - c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
 - d. Sample of Linear Devices or Materials: 10-inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
 - e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.
 - f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
 - g. Sample Panel: 4 by 4 feet.
 - h. Sample Installation: 100 square feet.
 - b. Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use. Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation but remove the notation at the final clean-up of the project.

- c. Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation. When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.
- 5. Format of Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper. Provide a bound volume for submittals containing numerous pages.
- 6. Format of Test Reports

Provide reports on 8 1/2 by 11 inch paper in a complete bound volume. By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.
- 7. Format of Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper. Provide a bound volume for submittals containing numerous pages.
- 8. Format of Manufacturer's Instructions

Present manufacturer's instructions submittals for each section as a complete, bound volume. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for Certificates. Submit the manufacturer's instructions before installation.

 - a. Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Project Manager. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.
- 9. Format of Manufacturer's Field Reports

Provide reports on 8 1/2 by 11 inch paper in a complete bound volume. By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.
- 10. Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.
- 11. Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document. Provide data in the unit of measure used in the contract documents.
- D. Source Drawings for Shop Drawings
 - 1. Source Drawings

The entire set of source drawing files (DWG) will not be provided to the Contractor. Request the specific Drawing Number for the preparation of shop drawings. Only those drawings requested to prepare shop drawings will be provided. These drawings are provided only after award.
 - 2. Terms and Conditions
 - a. Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Owner. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Owner, its agents, or its subconsultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Owner harmless against all damages, liabilities, or costs, including

reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

- b. These electronic source drawing files are not construction documents. Differences may exist between the source drawing files and the corresponding construction documents. The Owner makes no representation regarding the accuracy or completeness of the electronic source drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. The Contractor is responsible for determining if any conflict exists. In the event that a conflict arises between the signed and sealed construction documents prepared by the Owner and the furnished source drawing files, the signed and sealed construction documents govern. Use of these source drawing files does not relieve the Contractor of the duty to fully comply with the contract documents, including and without limitation the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction data related to this contract, remove all previous indication of ownership (seals, logos, signatures, initials and dates).

E. Electronic File Format

- 1. Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Project Manager. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Project Manager. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature or a scan of a signature.
- 2. E-mail electronic submittal documents smaller than 10MB to an e-mail address as directed by the Project Manager. Provide electronic documents over 10 MB on an optical disc or through an electronic file sharing system such as the AMRDEC SAFE Web Application located at the following website:
<https://safe.amrdec.army.mil/safe/>.

1.4 QUANTITY OF SUBMITTALS

- A. Number of Preconstruction Submittal Copies
Unless otherwise specified, submit three sets of administrative submittals.
- B. Number of SD-02 Shop Drawing Copies
Submit three copies of submittals of shop drawings requiring review and approval by a QC organization.
Submit three copies of shop drawings requiring review and approval by the Project Manager.
- C. Number of SD-03 Product Data Copies
Submit in compliance with quantity requirements specified for shop drawings.
- D. Number of Samples
 - 1. Submit two samples, or two sets of samples showing the range of variation, of each required item. One approved sample or set of samples will be retained by the approving authority and one will be returned to the Contractor.
 - 2. Submit one sample panel or provide one sample installation where directed. Include components listed in the technical section or as directed.
 - 3. Submit one sample installation, where directed.
 - 4. Submit one sample of nonsolid materials.
- E. Number of Design Data Copies
Submit in compliance with quantity requirements specified for shop drawings.
- F. Number of Test Report Copies
Submit in compliance with quantity and quality requirements specified for shop drawings, other than field test results that will be submitted with QC reports.
- G. Number of Certificate Copies
Submit in compliance with quantity requirements specified for shop drawings.
- H. Number of Manufacturer's Instructions Copies
Submit in compliance with quantity requirements specified for shop drawings.

- I. Number of Manufacturer's Field Report Copies
Submit in compliance with quantity and quality requirements specified for shop drawings other than field test results that will be submitted with QC reports.
- J. Number of Operation and Maintenance Data Copies
Submit three copies of O&M data to the Project Manager for review and approval.
- K. Number of Closeout Submittals Copies
Unless otherwise specified, submit three sets of administrative submittals.

1.5 INFORMATION ONLY SUBMITTALS

Submittals without a "G" designation must be certified by the QC manager and submitted to the Project Manager for information-only. Provide information-only submittals to the Project Manager a minimum of 14 calendar days prior to the Preparatory Meeting for the associated Definable Feature of Work (DFOW). Approval of the Project Manager is not required on information only submittals. The Project Manager will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. Normally, submittals for information only will not be returned. However, the Owner reserves the right to return unsatisfactory submittals and require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Project Manager from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Owner laboratory or for check testing by the Owner in those instances where the technical specifications so prescribe.

1.6 PROJECT SUBMITTAL REGISTER AND DATABASE

A sample Project Submittal Register showing items of equipment and materials for when submittals are required by the specifications is provided as "Appendix A - Submittal Register."

A. Submittal Management

Prepare and maintain a submittal register, as the work progresses. Use an electronic submittal register program furnished by the Owner. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Owner; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required. Maintain a submittal register for the project in electronic format with the following fields completed, to the extent that will be required by the Owner during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

Column (f): Lists the approving authority for each submittal.

The database and submittal management program will be furnished to the Contractor on a writable compact disk (CD-R), for operation on a Windows-based personal computer.

Thereafter, the Contractor is to track all submittals by maintaining a complete list, including completion of all data columns and all dates on which submittals are received by and returned by the Owner.

B. Design-Build Submittal Register

The Designer of Record develops a complete list of submittals during design and identify required submittals in the specifications, and use the list to prepare the Submittal Register. The list may not be all inclusive and additional submittals may be required by other parts of the contract. Complete the submittal register and submit it to the Project Manager for approval within 30 calendar days after Notice to Proceed. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. Coordinate the submit dates and need dates with dates in the Contractor prepared progress schedule. Submit monthly or until all submittals have been satisfactorily completed, updates to the submittal register showing the Contractor action codes and actual dates with Owner action codes. Revise the submittal register when the progress schedule is revised and submit both for approval.

- C. Preconstruction Use of Submittal Register
Submit the submittal register as an electronic database, using the submittal management program furnished to Contractor. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register database submitted with the QC plan and the project schedule:
 - Column (a) Activity Number: Activity number from the project schedule.
 - Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.
 - Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.
 - Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.
- D. Contractor Use of Submittal Register
Update the following fields in the Owner-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.
 - Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.
 - Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.
 - Column (l) Date submittal transmitted.
 - Column (q) Date approval was received.
- E. Approving Authority Use of Submittal Register
Update the following fields:
 - Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.
 - Column (l) Date submittal was received.
 - Column (m) through (p) Dates of review actions.
 - Column (q) Date of return to Contractor.
- F. Action Codes
Entries for columns (j) and (o) are to be used as follows (others may be prescribed by the Transmittal Form):
 - 1. Owner Review Action Codes
 - "A" - "Approved as submitted"; "Completed"
 - "B" - "Approved, except as noted on drawings"; "Completed"
 - "C" - "Approved, except as noted on drawings; resubmission required"; "Resubmit"
 - "D" - "Returned by separate correspondence"; "Completed"
 - "E" - "Disapproved (See attached)"; "Resubmit"
 - "F" - "Receipt acknowledged"; "Completed"
 - "G" - "Other (Specify)"; "Resubmit"
 - "X" - "Receipt acknowledged, does not comply with contract requirements"; "Resubmit"
 - 2. Owner Review Action Codes
 - "A" - "Approved as submitted"
 - "AN" - "Approved as noted"
 - "RR" - "Disapproved as submitted"; "Completed"
 - "NR" - "Not Reviewed"
 - "RA" - "Receipt Acknowledged"
 - 3. Contractor Action Codes
- G. Delivery of Copies
Submit an updated electronic copy of the submittal register to the Project Manager with each invoice request, unless a paper copy is requested by the Project Manager. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.7 VARIATIONS

Variations from contract requirements require Project Manager approval pursuant to contract Clause FAR 52.236-21 Specifications and Drawings for Construction and will be considered where advantageous to the Owner.

A. Considering Variations

Discussion of variations with the Project Manager before submission of a variation submittal will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. For variations that include design changes or some material or product substitutions, the Owner may require an evaluation and analysis by a licensed professional engineer hired by the contractor.

Specifically point out variations from contract requirements in a transmittal letter and variation submittal. Failure to point out variations may cause the Owner to require rejection and removal of such work at no additional cost to the Owner.

B. Proposing Variations

1. When proposing variation, deliver a submittal, clearly marked as a "VARIATION" to the Project Manager, with documentation illustrating the nature and features of the variation including any necessary technical submittals and why the variation is desirable and beneficial to Owner. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.
2. The Project Manager will indicate an approval or disapproval of the variation request; and if not approved as submitted, will indicate the Owner's reasons, therefore. Any work done before such approval is received is performed at the Contractor's risk."
3. Specifically point out variations from contract requirements in a transmittal letter and variation submittal. Failure to point out variations may cause the Owner to require rejection and removal of such work at no additional cost to the Owner.
4. Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for any variations and note such variations on the submittal.

The Owner reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

C. Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

D. Review Schedule Extension

In addition to the normal submittal review period, a period of 14 calendar working days will be allowed for the Owner to consider submittals with variations.

1.8 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals. Allow an additional 7 calendar working days for review and approval of submittals for food service equipment and refrigeration and HVAC control systems.

- A. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Owner reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.
- B. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Project Manager does not relieve the Contractor of supplying submittals required by the contract documents but that have been omitted from the register or marked "N/A."
- C. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.
- D. Project Manager review will be completed within 7 calendar working days after the date of submission.
- E. Except as specified otherwise, allow a review period, beginning with receipt by the approving authority, that includes at least 15 working days for submittals for QC manager approval and 20 working days for submittals where the Project Manager is the approving authority. The period of review for submittals with Project Manager approval begins when the Owner receives the submittal from the QC organization.
- F. For submittals requiring review by a Owner fire protection engineer, allow a review period, beginning when the Owner receives the submittal from the QC organization, of 30 working days for return of the submittal to the Contractor.
- G. At the Preconstruction conference, provide the following schedule of submittals for approval by the Project Manager:
- H. A schedule of shop drawings and technical submittals required by the specifications and drawings. Indicate the specification or drawing reference requiring the submittal; the material, item, or process for which the submittal is required; the division number and identifying title of the submittal; the anticipated submission date, and the approval need date.
- I. A separate schedule of other submittals required under the contract but not listed in the specifications or drawings. Indicate the contract requirement reference, the type or title of the submittal, the anticipated submission date, and the approval need date (if approval is required).

- J. Reviewing, Certifying, and Approving Authority
- K. The QC Manager is responsible for reviewing all submittals and certifying that they are in compliance with contract requirements. The approving authority on submittals is the QC Manager unless otherwise specified. At each "Submittal" paragraph in individual specification sections, a notation "G" following a submittal item indicates that the Project Manager is the approving authority for that submittal item. Provide an additional copy of the submittal to the Owner Approving authority
- L. Constraints
- M. Conform to provisions of this section, unless explicitly stated otherwise for submittals listed or specified in this contract. Submit complete submittals for each definable feature of the work. At the same time, submit components of definable features that are interrelated as a system. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, the submittal will be returned without review. Approval of a separate material, product, or component does not imply approval of the assembly in which the item functions.
- N. QC Organization Responsibilities
 - 1. Review submittals for conformance with project design concepts and compliance with contract documents.
 - 2. Process submittals based on the approving authority indicated in the submittal register.
 - a. When the QC manager is the approving authority, take appropriate action on the submittal from the possible actions defined in paragraph APPROVED SUBMITTALS.
 - b. When the Project Manager is the approving authority or when variation has been proposed, forward the submittal to the Owner, along with a certifying statement, or return the submittal marked "not reviewed" or "revise and resubmit" as appropriate. The QC organization's review of the submittal determines the appropriate action.
 - c. Ensure that material is clearly legible.
 - d. Stamp each sheet of each submittal with a QC certifying statement or an approving statement, except that data submitted in a bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.

- 1) When the approving authority is the Project Manager, the QC organization will certify submittals forwarded to the Project Manager with the following certifying statement:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated within the project is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Owner approval.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Certified by QC Manager _____, Date _____"
(Signature)

- 2) When approving authority is the QC manager, the QC manager will use the following approval statement when returning submittals to the Contractor as "Approved" or "Approved as Noted."

"I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated within the project is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is approved for use.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Approved by QC Manager _____, Date _____"
(Signature)

- e. Sign the certifying statement or approval statement. The QC organization member designated in the approved QC plan is the person signing certifying statements. The use of original ink for signatures is required. Stamped signatures are not acceptable.

- f. Update the submittal register as submittal actions occur, and maintain the submittal register at the project site until final acceptance of all work by the Project Manager.
- g. Retain a copy of approved submittals and approved samples at the project site.
- h. For "S" submittals, provide a copy of the approved submittal to the Owner Approving authority.

1.9 OWNER APPROVING AUTHORITY

When the approving authority is the Project Manager, the Owner will:

- A. Note the date on which the submittal was received from the QC manager.
- B. Review submittals for approval within the scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- C. Identify returned submittals with one of the actions defined in paragraph REVIEW NOTATIONS and with comments and markings appropriate for the action indicated.
- D. Upon completion of review of submittals requiring Owner approval, stamp and date submittals. One copy of the submittal will be retained by the Project Manager and one copy of the submittal will be returned to the Contractor.
- E. Review Notations
Submittals will be returned to the Contractor with the following notations:
 - 1. Submittals marked "approved" or "accepted" authorize proceeding with the work covered.
 - 2. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.
 - 3. Submittals marked "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.
 - 4. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.
 - 5. Submittals marked "receipt acknowledged" indicate that submittals have been received by the Owner. This applies only to "information-only submittals" as previously defined.

1.10 DISAPPROVED SUBMITTALS

- A. Make corrections required by the Project Manager. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Project Manager as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Owner to require rejection and removal of such work at the Contractor's expense.
- B. If changes are necessary to submittals, make such revisions and resubmit in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.11 APPROVED SUBMITTALS

- A. The Project Manager's approval of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory. the design, general method of construction, materials, detailing, and other information appear to meet the Solicitation and Accepted Proposal.
- B. Approval or acceptance by the Owner for a submittal does not relieve the Contractor of the responsibility for meeting the contract requirements or for any error that may exist, because under the Quality Control (QC) requirements of this contract, the Contractor is responsible for ensuring information contained within each submittal accurately conforms with the requirements of the contract documents.
- C. After submittals have been approved or accepted by the Project Manager, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.12 APPROVED SAMPLES

- A. Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, provide assurance that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.
- B. Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon completion of the contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.
- C. Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make as that material. The Owner reserves the right to disapprove any material or equipment that has previously proved unsatisfactory in service.
- D. Samples of various materials or equipment delivered on the site or in place may be taken by the Project Manager for testing. Samples failing to meet contract requirements will automatically void previous approvals. Replace such materials or equipment to meet contract requirements.

1.13 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment for materials incorporated in the work will be made unless all required DOR approvals or required Owner approvals have been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information-only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.14 CERTIFICATION OF SUBMITTAL DATA

Certify the submittal data as follows on Form ENG 4025: "I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

_____NAME OF CONTRACTOR _____ SIGNATURE OF CONTRACTOR

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

01 33 23
SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This specification defines the general requirements and procedures for submittals. A submittal is information submitted to the SD Dept. of the Military and/or AE for review to establish compliance with the contract documents.
- B. Detailed submittal requirements are found in the technical sections of the specifications. The SD Dept. of the Military and/or AE may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective technical specifications at no additional cost.
- C. Approval of a submittal does not relieve the Contractor of the responsibility for any error which may exist. The Contractor is responsible for fully complying with all contract requirements and the satisfactory construction of all work, including the need to check, confirm, and coordinate the work of all subcontractors for the project. Non-compliant material incorporated in the work will be removed and replaced at the Contractor's expense.

1.2 DEFINITIONS

- A. Preconstruction Submittals: Submittals which are required prior to issuing contract notice to proceed or starting construction. For example, Certificates of insurance; Surety bonds; Site-specific safety plan; Construction progress schedule; Schedule of values; Submittal register; List of proposed subcontractors.
- B. Shop Drawings: Drawings, diagrams, and schedules specifically prepared to illustrate some portion of the work. Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be integrated and coordinated.
- C. Product Data: Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions, and brochures, which describe and illustrate size, physical appearance, and other characteristics of materials, systems, or equipment for some portion of the work. Samples of warranty language when the contract requires extended product warranties.
- D. Samples: Physical examples of materials, equipment, or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project. Field samples and mock-ups constructed to establish standards by which the ensuing work can be judged.
- E. Design Data: Calculations, mix designs, analyses, or other data pertaining to a part of work.
- F. Test Reports: Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work. Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.
- G. Certificates: Document required of Contractor, or of a manufacturer, supplier, installer, or subcontractor through Contractor. The purpose is to document procedures, acceptability of methods, or personnel qualifications for a portion of the work.
- H. Manufacturer's Instructions: Pre-printed material describing installation of a product, system, or material, including special notices and MSDS concerning impedances, hazards, and safety precautions.
- I. Manufacturer's Field Reports: Documentation of the testing and verification actions taken by manufacturer's representative at the job site on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or instructions. The documentation must indicate whether the material, product, or system has passed or failed the test.
- J. Operation and Maintenance Data: Manufacturer data that is required to operate, maintain, troubleshoot, and repair equipment, including manufacturer's help, parts list, and product line documentation. This data shall be incorporated in an operations and maintenance manual.
- K. Closeout Submittals: Documentation necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a phase of construction on a multi-phase contract.

1.3 SUBMITTAL REGISTER

- A. The submittal register will list items of equipment and materials for which submittals are required by the specifications. This list may not be all inclusive and additional submittals may be required by the specifications. The Contractor is not relieved from supplying submittals required by the contract documents but which have been omitted from the submittal register.

- B. The submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period.
- C. The Contractor will provide the initial submittal register in electronic format. Contractor shall track all submittals by maintaining a complete list, including completion of all data columns, including dates on which submittals are submitted, returned for correction, and approved, and any comments or additional instruction provided.
- D. The Contractor shall update the submittal register as submittal actions occur and maintain the submittal register at the project site until final acceptance of all work.
- E. The Contractor shall provide/submit formal updates of the submittal register at each progress meeting.

1.4 SUBMITTAL SCHEDULING

- A. Submittals are to be scheduled, submitted, reviewed, and approved prior to the acquisition of the material or equipment.
- B. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow time for potential resubmittal.
- C. No delay costs or time extensions will be allowed for time lost in late submittals or resubmittals.
- D. All submittals are required to be approved prior to the start of the specified work activity.

1.5 SUBMITTAL PREPARATION

- A. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.
- B. Collect required data for each specific material, product, unit of work, or system into a single submittal. Prominently mark choices, options, and portions applicable to the submittal. Partial submittals will not be accepted for expedition of construction effort. Submittal will be returned without review if incomplete.
- C. If available product data is incomplete, provide Contractor-prepared documentation to supplement product data and satisfy submittal requirements.
- D. All irrelevant or unnecessary data shall be removed from the submittal to facilitate accuracy and timely processing. Submittals that contain the excessive amount of irrelevant or unnecessary data will be returned with review.
- E. Provide a transmittal form for each submittal with the following information:
 - 1. Project title, location and number.
 - 2. Construction contract number.
 - 3. Date of the drawings and revisions.
 - 4. Name, address, and telephone number of subcontractor, supplier, manufacturer, and any other subcontractor associated with the submittal.
 - 5. List paragraph number of the specification section and sheet number of the contract drawings by which the submittal is required.
 - 6. When a resubmission, add alphabetic suffix on submittal description. For example, submittal 18 would become 18A, to indicate resubmission.
 - 7. Product identification and location in project.
- F. The Contractor is responsible for reviewing and certifying that all submittals are in compliance with contract requirements before submitting for review. Proposed deviations from the contract requirements are to be clearly identified. All deviations submitted must include a side by side comparison of item being proposed against item specified. Failure to point out deviations will result in required removal and replacement of such work at the Contractor's expense.
- G. Stamp, sign, and date each submittal transmittal form indicating action taken.

1.6 ADDITIONAL REQUIRED DATA

- A. All submittals shall clearly indicate compliance with the Infrastructure Investment and Jobs Act Pub, Title IX – Build America, Buy America (BABA). All of the iron, steel, manufactured products, and construction materials used in the project must be produced in the United States in accordance with the BABA requirements.
- B. All submittals shall clearly indicate recycled content of all materials and compliance with the EPA procurement guideline.
 - 1. All products to be used and/or installed shall be composed of the highest percent of recovered material or biobased content practicable, or at least meet, but may exceed, the minimum recovered materials or biobased content of an EPA or USDA designated product.
 - 2. Product Supplier Directory for EPA purchasing recommendations related to Recovered Materials Advisory Notice is available at <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>

3. USDA designated items are available at <http://www.biopreferred.gov>
- C. Exemptions
 1. Only products identified in the construction documents to be of virgin material.
 2. Should the Contractor encounter difficulties finding products produced in the United State or wishing to use a product not containing recovered material meeting the EPA recovered content guidelines, a waiver may be requested.
 - a. Waivers will require review and approval from National Guard Bureau and will take an extensive period of time for review and approval.
 - b. Contractor is made aware of the requirement as additional time will not be granted for waiver of noncompliant products.
 - c. Written justification and documented approval must be included in the shop drawing submittal for any noncompliant products/materials.

1.7 SUBMITTAL FORMAT AND TRANSMISSION

- A. Provide submittals in electronic format, with the exception of material samples. Use PDF as the electronic format, unless otherwise specified or directed.
- B. Compile the electronic submittal file as a single, complete document. Name the electronic submittal file specifically according to its contents.
- C. Electronic files must be of sufficient quality that all information is legible. Generate PDF files from original documents so that the text included in the PDF file is both searchable and can be copied. If documents are scanned, Optical Character Resolution (OCR) routines are required.
- D. E-mail electronic submittal documents smaller than 5MB in size to e-mail addresses as directed by the SD Dept. of the Military and/or AE.
- E. Provide electronic documents over 5MB through an electronic FTP file sharing system. Confirm that the electronic FTP file sharing system can be accessed by all parties. The Contractor is responsible for setting up, providing, and maintaining the electronic FTP file sharing system for the construction contract period of performance.
- F. Provide hard copies of submittals when requested. Up to 3 hard copies of any submittal may be requested at no additional cost.

1.8 SAMPLES

- A. Submit two sets of physical samples showing range of variation, for each required item.
- B. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified.
- C. When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.
- D. Before submitting samples, the Contractor is to ensure that the materials or equipment will be available in quantities and timeframe required in the project. No change, substitution, or time extension will be permitted after a sample has been approved.
- E. The SD Dept. of the Military reserves the right to disapprove any material or equipment which previously has proven unsatisfactory in service.
- F. Physical samples supplied maybe requested back for use in the project after reviewed and approved.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit data specified for a given item within O&M Manual.

1.10 TEST REPORTS

- A. If materials or quality control testing is required, the SD Dept. of the Military will hire an independent Testing Firm.
- B. Specific tests may be required after work has been installed or completed which could require contractor to repair test area at no additional cost to contract.

1.11 REVIEW OF SUBMITTALS AND RFI

- A. SD Dept. of the Military and/or AE will review all submittals for compliance with the technical requirements of the contract documents. The AE for this project will assist the SD Dept. of the Military in reviewing all submittals and determining contractual compliance. Review will be only for conformance with the applicable codes, standards and contract requirements.
- B. Period of review for submittals begins when the submittal is received from the Contractor.

- C. Period of review for each resubmittal is the same as for initial submittal.
- D. Review period is 15 working days for submittals.
- E. Review period is 10 working days for RFIs.
- F. Submittals will be returned to the Contractor with the following notations:
 - 1. "Approved": authorizes the Contractor to proceed with the work covered.
 - 2. "Approved as noted": authorizes the Contractor to proceed with the work covered provided the Contractor incorporates the noted comments and makes the noted corrections.
 - 3. "Disapproved, revise and resubmit": indicates noncompliance with the contract requirements or that submittal is incomplete. Resubmit with appropriate changes and corrections. No work shall proceed for this item until resubmittal is approved.
 - 4. "Not reviewed": indicates submittal does not have evidence of being reviewed and approved by Contractor or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals after taking appropriate action.

1.12 APPROVED SUBMITTALS

- A. Approval of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory.
- B. Approval of a submittal does not relieve the Contractor of the responsibility for any error which may exist. The Contractor is responsible for fully complying with all contract requirements and the satisfactory construction of all work, including the need to check, confirm, and coordinate the work of all subcontractors for the project. Non-compliant material incorporated in the work will be removed and replaced at the Contractor's expense.
- C. After submittals have been approved, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.
- D. Retain a copy of all approved submittals at project site, including approved samples.

1.13 WITHHOLDING OF PAYMENT

- A. Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION 01 33 23

01 35 26
SAFETY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

The following section outlines minimum safety requirements to be followed by the Contractor. The Contractor is responsible to development, posting, training, and compliance of an Accident Prevention Plan. Contractor shall

1.2 APPLICABLE PUBLICATIONS:

- A. Latest publications listed below form part of this Article to extent referenced. Publications are referenced in text by basic designations only.
- B. American Society of Mechanical Engineers (ASME)
 - B30.3 Tower Cranes
 - B30.7 Winches
 - B30.9 Slings
 - B30.20 Below-the-Hook Lifting Devices
 - B30.22 Articulating Boom Cranes
 - B30.23 Personnel Lifting Systems Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings
 - B30.26 Rigging Hardware
- C. American Society of Safety Engineers (ASSE):
 - A10.1-2011 Pre-Project & Pre-Task Safety and Health Planning
 - A10.34-2012 Protection of the Public on or Adjacent to Construction Sites
 - A10.38-2013 Basic Elements of an Employer's Program to Provide a Safe and Healthful Work Environment American National Standard Construction and Demolition Operations
 - A10.44 Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations
 - Z359.1 The Fall Protection Code
 - Z359.2 Minimum Requirements for a Comprehensive Managed Fall Protection Program
 - ASSP Z359.3 Safety Requirements for Lanyards and Positioning Lanyards
 - ASSP Z359.4 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components
 - ASSP Z359.6 Specifications and Design Requirements for Active Fall Protection Systems
 - ASSP Z359.7 Qualification and Verification Testing of Fall Protection Products
 - ASSP Z359.11 Safety Requirements for Full Body Harnesses
 - ASSP Z359.12 Connecting Components for Personal Fall Arrest Systems
 - ASSP Z359.13 Personal Energy Absorbers and Energy Absorbing Lanyards
 - ASSP Z359.14 Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems
 - ASSP Z359.15 Safety Requirements for Single Anchor Lifelines and Fall Arresters for Personal Fall Arrest Systems
 - ASSP Z359.16 Safety Requirements for Climbing Ladder Fall Arrest Systems
 - ASSP Z359.18 Safety Requirements for Anchorage Connectors for Active Fall Protection Systems
 - ASSP Z490.1 Criteria for Accepted Practices in Safety, Health, and Environmental Training
- D. American Society for Testing and Materials (ASTM):
 - ASTM F855 Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment
- E. National Fire Protection Association (NFPA):
 - 10 Standard for Portable Fire Extinguishers
 - 30 Flammable and Combustible Liquids Code
 - 51B Standard for Fire Prevention during Welding, Cutting and Other Hot Work
 - 70 National Electrical Code
 - 70B Recommended Practice for Electrical Equipment Maintenance

- 70E Standard for Electrical Safety in the Workplace
- 99 Health Care Facilities Code
- 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations
- F. Manual of Uniform Traffic Control Devices
- G. Occupational Safety and Health Administration (OSHA):
 - All Sections
 - 29 CFR 1904 Reporting and Recording Injuries & Illnesses
 - 29 CFR 1910 Safety and Health Regulations for General Industry
 - 29 CFR 1926 Safety and Health Regulations for Construction Industry
 - CPL 2-0.124..... Multi-Employer Citation Policy
- H. Telecommunications Industry Association (TIA)

1.3 DEFINITIONS:

- A. **Critical Lift.** A lift with the hoisted load exceeding 75% of the crane's maximum capacity; lifts made out of the view of the operator (blind picks); lifts involving two or more cranes; personnel being hoisted; and special hazards such as lifts over occupied facilities, loads lifted close to power-lines, and lifts in high winds or where other adverse environmental conditions exist; and any lift which the crane operator believes is critical.
- B. **OSHA "Competent Person" (CP).** One who is capable of identifying existing and predictable hazards in the surroundings and working conditions which are unsanitary, hazardous or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them (see 29 CFR 1926.32(f)).
- C. **"Qualified Person"** means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
- D. **High Visibility Accident.** Any mishap which may generate publicity or high visibility.
- E. Accident/Incident Criticality Categories:
 - No Impact** – near miss incidents that should be investigated but are not required to be reported;
 - Minor incident/impact – incidents that require first aid or result in minor equipment damage (less than \$5000). These incidents must be investigated and shall be reported;
 - Moderate Incident/Impact** – These incidents must be investigated and are required to be reported. These include any work-related injury or illness that results in:
 1. Days away from work (any time lost after day of injury/illness onset);
 2. Restricted work;
 3. Transfer to another job;
 4. Medical treatment beyond first aid;
 5. Loss of consciousness;
 6. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (5) above or,
 7. Any incident that leads to major equipment damage (greater than \$5000).
 - Major Incident/Impact** – Any mishap that leads to fatalities, hospitalizations, amputations, and losses of an eye as a result of contractors' activities. Or any incident which leads to major property damage (greater than \$20,000) and/or may generate publicity or high visibility. These incidents must be investigated and are required to be reported as soon as practical, but not later than 2 hours after the incident.
- E. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even though provided by a physician or registered personnel.

1.4 REGULATORY REQUIREMENTS:

- A. In addition to the detailed requirements included in the provisions of this contract, comply with 29 CFR 1926, comply with 29 CFR 1910 as incorporated by reference within 29 CFR 1926, comply with ASSE A10.34, and all applicable federal, state, and local laws, ordinances, criteria, rules and regulations.
- B. Submit matters of interpretation of standards for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern except with specific approval and acceptance by the Project Manager and SDARNG SOHO.

1.5 ACCIDENT PREVENTION PLAN (APP):

- A. The APP (aka Construction Safety & Health Plan) shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and ensure it is site-specific.
- B. The Prime Contractor is considered to be the "controlling authority" for all worksite safety and health of each subcontractor(s). Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out.
- C. The APP shall be prepared as follows:
 - 1. Written in English by a qualified person who is employed by the Prime Contractor articulating the specific work and hazards pertaining to the project. Specifically articulating the safety requirements found within these contract safety specifications.
 - 2. Address both the Prime Contractors and the subcontractors work operations.
 - 3. State measures to be taken to control hazards associated with materials, services, or equipment provided by suppliers.
 - 4. Address all the elements/sub-elements and in order as follows:
 - a. **SIGNATURE SHEET** Title, signature, and phone number of the following:
 - 1) Plan preparer (Qualified Person such as corporate safety staff person or contracted Certified Safety Professional with construction safety experience);
 - 2) Plan approver (company/corporate officers authorized to obligate the company);
 - 3) Plan concurrence (e.g., Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional).
 - b. **BACKGROUND INFORMATION** List the following:
 - 1) Contractor;
 - 2) Project name;
 - 3) Contract number;
 - 4) Brief project description, description of work to be performed, and phases of work anticipated.
 - c. **STATEMENT OF SAFETY AND HEALTH POLICY**
 - 1) Provide a copy of current corporate/company Safety and Health Policy Statement, detailing commitment to providing a safe and healthful workplace for all employees.
 - d. **RESPONSIBILITIES AND LINES OF AUTHORITIES.** Provide the following:
 - 1) Statement of the employer's ultimate responsibility for the implementation of the SOH program;
 - 2) Identification and accountability of personnel responsible for safety at both corporate and project level. Contracts specifically requiring safety or industrial hygiene personnel shall include a copy of their resumes;
 - 3) Names of Competent and Qualified Person(s) and proof of competency/qualification to meet specific OSHA Competent/Qualified Person(s) requirements must be attached;
 - 4) Requirements that no work shall be performed unless a designated competent person is present on the job site;
 - 6) Lines of authority;
 - 7) Policies and procedures regarding noncompliance with safety requirements (to include disciplinary actions for violation of safety requirements) should be identified;
 - e. **SUBCONTRACTORS AND SUPPLIERS**
Provide procedures for coordinating SOH activities with other employers on the job site:
 - 1) Identification of subcontractors and suppliers (if known);
 - 2) Safety responsibilities of subcontractors and suppliers.
 - f. **TRAINING**
 - 1) Site-specific SOH orientation training at the time of initial hire or assignment to the project for every employee before working on the project site is required.
 - 2) Mandatory training and certifications that are applicable to this project (e.g., explosive actuated tools, crane operator, rigger, crane signal person, fall protection, electrical lockout/NFPA 70E, machine/equipment lockout, confined space, etc.) and any requirements for periodic retraining/recertification are required.
 - 3) Procedures for ongoing safety and health training for supervisors and employees shall be established to address changes in site hazards/conditions.
 - 4) OSHA 10-hour training is required for all workers on site and the OSHA 30-hour training is required for Trade Competent Persons (CPs)

g. **ACCIDENT/INCIDENT INVESTIGATION & REPORTING**

The Contractor shall conduct mishap investigations of all Moderate and Major as well as all High Visibility Incidents. The APP shall include accident/incident investigation procedure and identify person(s) responsible to provide the following to the Project Manager:

- 1) Exposure data (man-hours worked);
- 2) Accident investigation reports;
- 3) Project site injury and illness logs.

h. **PLANS (PROGRAMS, PROCEDURES) REQUIRED**

Based on a risk assessment of contracted activities and on mandatory OSHA compliance programs, the Contractor shall address all applicable occupational, patient, and public safety risks in site-specific compliance and accident prevention plans. These Plans shall include but are not be limited to procedures for addressing the risks associates with the following:

- 1) Emergency response;
- 2) Contingency for severe weather;
- 3) Fire Prevention;
- 4) Medical Support;
- 5) Posting of emergency telephone numbers;
- 6) Prevention of alcohol and drug abuse;
- 7) Site sanitation (housekeeping, drinking water, toilets);
- 8) Hazard communication program;
- 9) Welding/Cutting "Hot" work;
- 10) Electrical Safe Work Practices (Electrical LOTO/NFPA 70E);
- 11) General Electrical Safety;
- 12) Site-Specific Fall Protection & Prevention;
- 13) Excavation/trenching;
- 14) Asbestos abatement;
- 15) Crane Critical lift;
- 16) Respiratory protection;
- 17) Health hazard control program;
- 18) Heat/Cold Stress Monitoring;
- 19) Demolition plan (to include engineering survey);
- 20) Formwork and shoring erection and removal;
- 21) PreCast Concrete;
- 22) Public (Mandatory compliance with ANSI/ASSE A10.34-2012).

- D. Submit the APP to the Project Manager for review of compliance with contract requirements. Work cannot proceed without an accepted APP.
- E. Once accepted by the Project Manager, the APP and attachments will be enforced as part of the contract.
- F. Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Project Manager.

1.6 **ACTIVITY HAZARD ANALYSES (AHA):**

- A. AHAs are also known as Job Hazard Analyses, Job Safety Analyses, and Activity Safety Analyses. Before beginning each work activity involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or sub-contractor is to perform the work, the Contractor(s) performing that work activity shall prepare an AHA (Example electronic AHA forms can be found on the US Army Corps of Engineers web site).
- B. AHAs shall define the activities being performed and identify the work sequences, the specific anticipated hazards, site conditions, equipment, materials, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk.
- C. Work shall not begin until the AHA for the work activity has been accepted by the Project Manager and discussed with all engaged in the activity, including the Contractor, subcontractor(s), and on-site representatives at preparatory and initial control phase meetings.

1.7 **PRECONSTRUCTION CONFERENCE:**

- A. Contractor representatives who have a responsibility or significant role in implementation of the accident prevention program, as required by 29 CFR 1926.20(b)(1), on the project shall attend the preconstruction conference to gain a mutual understanding of its implementation. This includes the project superintendent, subcontractor superintendents, and any other assigned safety and health professionals.

- 1.8 “SITE SAFETY AND HEALTH OFFICER” (SSHO) AND “COMPETENT PERSON” (CP):
- A. The Prime Contractor shall designate a minimum of one SSHO at each project site that will be identified as the SSHO to administer the Contractor's safety program and government-accepted Accident Prevention Plan. Each subcontractor shall designate a minimum of one CP in compliance with 29 CFR 1926.20 (b)(2) that will be identified as a CP to administer their individual safety programs.
 - B. Further, all specialized Competent Persons for the work crews will be supplied by the respective contractor as required by 29 CFR 1926 (i.e. Asbestos, Electrical, Cranes, & Derricks, Demolition, Fall Protection, Fire Safety/Life Safety, Ladder, Rigging, Scaffolds, and Trenches/Excavations).
 - C. These Competent Persons can have collateral duties as the subcontractor's superintendent and/or work crew lead persons as well as fill more than one specialized CP role (i.e. Asbestos, Electrical, Cranes, & Derricks, Demolition, Fall Protection, Fire Safety/Life Safety, Ladder, Rigging, Scaffolds, and Trenches/Excavations).
 - D. The SSHO or an equally-qualified Designated Representative/alternate will maintain a presence on the site during construction operations. CPs will maintain presence during their construction activities in accordance with above mentioned clause. A listing of the designated SSHO and all known CPs shall be submitted prior to the start of work as part of the APP with the training documentation and/or AHA as listed in Section 1.8 below.
 - E. The repeated presence of uncontrolled hazards during a contractor's work operations will result in the designated CP as being deemed incompetent and result in the required removal of the employee.
- 1.9 TRAINING:
- A. The designated Prime Contractor SSHO must meet the requirements of all applicable OSHA standards and be capable (through training, experience, and qualifications) of ensuring that the requirements of 29 CFR 1926.16 and other appropriate Federal, State and local requirements are met for the project. As a minimum the SSHO must have completed the OSHA 30-hour Construction Safety class and have five (5) years of construction industry safety experience or three (3) years if he/she possesses a Certified Safety Professional (CSP) or have a safety and health degree from an accredited university or college.
 - B. All designated CPs shall have completed the OSHA 30-hour Construction Safety course within the past 5 years.
 - C. In addition to the OSHA 30 Hour Construction Safety Course, all CPs with high hazard work operations such as operations involving asbestos, electrical, cranes, demolition, work at heights/fall protection, fire safety/life safety, ladder, rigging, scaffolds, and trenches/excavations shall have a specialized formal course in the hazard recognition & control associated with those high hazard work operations. Documented “repeat” deficiencies in the execution of safety requirements will require retaking the requisite formal course.
 - D. All other construction workers shall have the OSHA 10-hour Construction Safety Outreach course and any necessary safety training to be able to identify hazards within their work environment.
 - E. Submit training records associated with the above training requirements to the Project Manager for review of compliance upon request.
 - F. Prior to any worker for the contractor or subcontractors beginning work, they shall undergo a safety briefing provided by the SSHO or his/her designated representative. As a minimum, this briefing shall include information on the site-specific hazards, construction limits, safety guidelines, means of egress, break areas, work hours, locations of restrooms, use of equipment, emergency procedures, accident reporting etc. Documentation shall be provided to the Project Manager that individuals have undergone contractor's safety briefing.
 - G. Ongoing safety training will be accomplished in the form of every other week documented safety meeting.
- 1.10 INSPECTIONS:
- A. The SSHO shall conduct frequent and regular safety inspections (daily) of the site and each of the subcontractors CPs shall conduct frequent and regular safety inspections (daily) of their work operations as required by 29 CFR 1926.20(b)(2).
- 1.11 ACCIDENTS, OSHA 300 LOGS, AND MAN-HOURS:
- A. The prime contractor shall establish and maintain an accident reporting, recordkeeping, and analysis system to track and analyze all injuries and illnesses, high visibility incidents, and accidental property damages that occur on site. Notify the Project Manager as soon as practical, but no more than four hours after any accident meeting the definition of a Moderate or Major incidents, High Visibility Incidents, or any weight handling and hoisting equipment accident. Within notification include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.).

- B. Conduct an accident investigation for all Minor, Moderate and Major Incidents as defined in the paragraph DEFINITIONS, and property damage accidents resulting in at least \$20,000 in damages, to establish the root cause(s) of the accident. Complete and provide the report to the Project Manager within 5 calendar days of the accident. The Project Manager will provide copies of any required or special forms.
- C. A summation of all man-hours worked by the contractor and associated sub-contractors for each month will be reported to the Project Manager monthly.
- D. A summation of all Minor, Moderate, and Major incidents experienced on site by the contractor and associated sub-contractors for each month will be provided to the Project Manager monthly. The contractor and associated sub-contractors' OSHA 300 logs will be made available to the Project Manager as requested.

1.12 PERSONAL PROTECTIVE EQUIPMENT (PPE):

- A. PPE is governed in all areas by the nature of the work the employee is performing. For example, specific PPE required for performing work on electrical equipment is identified in NFPA 70E, Standard for Electrical Safety in the Workplace.
- B. Mandatory PPE includes:
 - 1. Hard Hats – unless written authorization is given by the SSHO in circumstances of work operations that have limited potential for falling object hazards such as during finishing work or minor remodeling. With authorization to relax the requirement of hard hats, if a worker becomes exposed to an overhead falling object hazard, then hard hats would be required in accordance with the OSHA regulations.
 - 2. Safety glasses - unless written authorization is given by the SSHO in circumstances of no eye hazards, appropriate safety glasses meeting the ANSI Z.87.1 standard must be worn by each person on site.
 - 3. Appropriate Safety Shoes – based on the hazards present, safety shoes meeting the requirements of ASTM F2413-11 shall be worn by each person on site unless written authorization is given by SSHO in circumstances of no foot hazards.
 - 4. Hearing protection - Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks.
 - 5. Should the SSHO provide written authorization to not use PPE as noted above, documentation must be provided to the Project Manager within 24 hours.

1.13 FIRE SAFETY

- A. Fire Safety Plan: Establish and maintain a site-specific fire protection program in accordance with 29 CFR 1926. Prior to start of work, prepare a plan detailing project-specific fire safety measures, including periodic status reports, and submit to Project Manager for record keeping. This plan may be an element of the APP.
- B. Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.
- C. Separate temporary facilities, such as trailers, storage sheds, and dumpsters, from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 20 feet exposing overall length, separate by 10 feet.
- E. Temporary Heating and Electrical: Install, use and maintain installations in accordance with 29 CFR 1926, NFPA 241 and NFPA 70.
- F. Means of Egress: Do not block exiting for occupied buildings, including paths from exits to roads. Minimize disruptions and coordinate with Project Manager.
- G. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect daily. Report findings and corrective actions weekly to Project Manager.
- H. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.
- I. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30.
- K. Sprinklers: Install, test and activate new automatic sprinklers prior to removing existing sprinklers.
- L. Existing Fire Protection: Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems, except for portions immediately under construction, and temporarily for connections. Request interruptions with Project Manager. All existing or temporary fire protection systems (fire alarms, sprinklers) located in construction areas shall be tested. Parameters for the testing and results of any tests performed shall be recorded and copies provided to the Project Manager.
- M. Smoke Detectors: Prevent accidental operation. Install temporary covers to prevent activation and contamination. Remove temporary covers at end of work operations each day. Coordinate with Project Manager and SD Dept. of the Military Fire & Emergency Services Manager.
- N. Hot Work:

1. Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Project Manager and SD Dept. of the Military Fire & Emergency Services Manager.
2. Obtain permits from SD Dept. of the Military Fire & Emergency Services Manager at least 72 hours in advance.
- O. Fire Hazard Prevention and Safety Inspections: Inspect entire construction areas weekly. Coordinate with, and report findings and corrective actions weekly to Project Manager.
- P. Smoking: Smoking is prohibited in and adjacent to construction areas inside existing buildings and additions under construction. In separate and detached buildings under construction, smoking is prohibited except in designated smoking rest areas.
- Q. Dispose of waste and debris in accordance with NFPA 241. Remove from buildings daily.

1.14 ELECTRICAL

- A. All electrical work shall comply with NFPA 70 (NEC), NFPA 70B, NFPA 70E, 29 CFR Part 1910 Subpart J – General Environmental Controls, 29 CFR Part 1910 Subpart S – Electrical, and 29 CFR 1926 Subpart K in addition to other references required by contract.
- B. All qualified persons performing electrical work under this contract shall be licensed journeyman or master electricians. All apprentice electricians performing under this contract shall be deemed unqualified persons unless they are working under the immediate supervision of a licensed electrician or master electrician.
- C. All electrical work will be accomplished de-energized and in the Electrically Safe Work Condition (refer to NFPA 70E for Work Involving Electrical Hazards, including Exemptions to Work Permit). Any Contractor, subcontractor or temporary worker who fails to fully comply with this requirement is subject to immediate termination.

1.15 FALL PROTECTION

- A. The fall protection (FP) threshold height requirement is 6 ft for ALL WORK, unless specified differently or the OSHA 29 CFR 1926 requirements are more stringent, to include steel erection activities, systems-engineered activities (prefabricated) metal buildings, residential (wood) construction and scaffolding work.
 1. The use of a Safety Monitoring System (SMS) as a fall protection method is prohibited.
 2. The use of Controlled Access Zone (CAZ) as a fall protection method is prohibited.
 3. A Warning Line System (WLS) may ONLY be used on floors or flat or low-sloped roofs (between 0 - 18.4 degrees or 4:12 slope) and shall be erected around all sides of the work area (See 29 CFR 1926.502(f) for construction of WLS requirements).
 4. Fall protection while using a ladder will be governed by the OSHA requirements.

1.16 SCAFFOLDS AND OTHER WORK PLATFORMS

- A. All scaffolds and other work platforms construction activities shall comply with 29 CFR 1926 Subpart L.
- B. The fall protection (FP) threshold height requirement is 6 ft.
- C. The following hierarchy and prohibitions shall be followed in selecting appropriate work platforms.
 1. Scaffolds, platforms, or temporary floors shall be provided for all work except that can be performed safely from the ground or similar footing.
 2. Ladders less than 20 feet may be used as work platforms only when use of small hand tools or handling of light material is involved.
 3. Ladder jacks, lean-to, and prop-scaffolds are prohibited.
 4. Emergency descent devices shall not be used as working platforms.
- D. Contractors shall use a scaffold tagging system in which all scaffolds are tagged by the Competent Person. Tags shall be color-coded: green indicates the scaffold has been inspected and is safe to use; red indicates the scaffold is unsafe to use. Tags shall be readily visible, made of materials that will withstand the environment in which they are used, be legible and shall include:
 1. The Competent Person's name and signature;
 2. Dates of initial and last inspections.

1.17 EXCAVATION AND TRENCHES

- A. All excavation and trenching work shall comply with 29 CFR 1926 Subpart P. Excavations less than 5 feet in depth require evaluation by the contractor's "Competent Person" (CP) for determination of the necessity of an excavation protective system where kneeling, laying in, or stooping within the excavation is required.
- C. As required by OSHA 29 CFR 1926.651(b)(1), the estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation.

1. The planned dig site will be outlined/marked in white prior to locating the utilities.
2. Use of the American Public Works Association Uniform Color Code is required for the marking of the proposed excavation and located utilities.
3. 811 will be called two business days before digging on all local or State lands and public Right-of Ways.
4. Digging will not commence until all known utilities are marked.
5. Utility markings will be maintained by the Contractor.
- D. Excavations will be hand dug or excavated by other similar safe and acceptable means as excavation operations approach within 3 to 5 feet of identified underground utilities. Exploratory bar or other detection equipment will be utilized as necessary to further identify the location of underground utilities.
- E. Excavations greater than 20 feet in depth require a Professional Engineer designed excavation protective system.

1.18 CRANES

- A. All crane work shall comply with 29 CFR 1926 Subpart CC.
- B. Prior to operating a crane, the operator must be licensed, qualified or certified to operate the crane. Thus, all the provisions contained with Subpart CC are effective and there is no "Phase In" date.
- C. A detailed lift plan for all lifts shall be submitted to the Project Manager 14 days prior to the scheduled lift complete with route for truck carrying load, crane load analysis, siting of crane and path of swing and all other elements of a critical lift plan where the lift meets the definition of a critical lift. Critical lifts require a more comprehensive lift plan to minimize the potential of crane failure and/or catastrophic loss. The plan must be reviewed and accepted by the General Contractor before being submitted for review. The lift will not be allowed to proceed without prior acceptance of this document.
- D. Crane operators shall not carry loads
 1. Over the general public or personnel
 2. Over any occupied building unless
 - a. The top two floors are vacated;
 - b. Overhead protection with a design live load of 300 psf is provided.

1.19 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

- A. All installation, maintenance, and servicing of equipment or machinery shall comply with 29 CFR 1910.147 except for specifically referenced operations in 29 CFR 1926 such as concrete & masonry equipment [1926.702(j)], heavy machinery & equipment [1926.600(a)(3)(i)], and process safety management of highly hazardous chemicals (1926.64). Control of hazardous electrical energy during the installation, maintenance, or servicing of electrical equipment shall comply with Section 1.15 to include NFPA 70E and other requirements discussed in the section.

1.20 CONFINED SPACE ENTRY

- A. All confined space entry shall comply with 29 CFR 1926, Subpart AA except for specifically referenced operations in 29 CFR 1926 such as excavations/trenches [1926.651(g)].
- B. A site-specific Confined Space Entry Plan (including permitting process) shall be developed and submitted to the Project Manager and SD Dept. of the Military Fire & Emergency Services Manager.

1.21 WELDING AND CUTTING

- A. As specified in section 1.14, Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Project Manager. Obtain permits from SD Dept. of the Military Fire & Emergency Services Manager at least 72 hours in advance.

1.22 LADDERS

- A. All Ladder use shall comply with 29 CFR 1926 Subpart X.
- B. All portable ladders shall be of sufficient length and shall be placed so that workers will not stretch or assume a hazardous position.
- C. Manufacturer safety labels shall be in place on ladders.
- D. Step Ladders shall not be used in the closed position.
- E. Top steps or cap of step ladders shall not be used as a step.
- F. Portable ladders, used as temporary access, shall extend at least 3 ft (0.9 m) above the upper landing surface.
 1. When a 3 ft (0.9-m) extension is not possible, a grasping device (such as a grab rail) shall be provided to assist workers in mounting and dismounting the ladder.

2. In no case shall the length of the ladder be such that ladder deflection under a load would, by itself, cause the ladder to slip from its support.
- G. Ladders shall be inspected for visible defects on a daily basis and after any occurrence that could affect their safe use. Broken or damaged ladders shall be immediately tagged "DO NOT USE," or with similar wording, and withdrawn from service until restored to a condition meeting their original design.

1.23 FLOOR & WALL OPENINGS

- A. All floor and wall openings shall comply with 29 CFR 1926 Subpart M.
- B. Floor and roof holes/openings are any that measure over 2 inches in any direction of a walking/working surface which persons may trip or fall into or where objects may fall to the level below. Skylights located in floors or roofs are considered floor or roof hole/openings.
- C. All floor, roof openings or hole into which a person can accidentally walk or fall through shall be guarded either by a railing system with toe-boards along all exposed sides or a load-bearing cover. When the cover is not in place, the opening or hole shall be protected by a removable guardrail system or shall be attended when the guarding system has been removed, or other fall protection system.
 1. Covers shall be capable of supporting, without failure, at least twice the weight of the worker, equipment and material combined.
 2. Covers shall be secured when installed, clearly marked with the word "HOLE", "COVER" or "Danger, Roof Opening-Do Not Remove" or color-coded or equivalent methods (e.g., red or orange "X"). Workers must be made aware of the meaning for color coding and equivalent methods.
 3. Roofing material, such as roofing membrane, insulation or felts, covering or partly covering openings or holes, shall be immediately cut out. No hole or opening shall be left unattended unless covered.
 4. Non-load-bearing skylights shall be guarded by a load-bearing skylight screen, cover, or railing system along all exposed sides.
 5. Workers are prohibited from standing/walking on skylights.

PART 2 – PRODUCTS – NOT USED

2.1 CONFINED SPACE SIGNAGE

Provide permanent signs integral to or securely attached to access covers for new permit-required confined spaces. Signs for confined spaces must comply with NEMA Z535.2. Provide signs with wording: "DANGER-- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" in bold letters a minimum of one inch in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" must be red and readable from 5 feet.

PART 3 – EXECUTION – NOT USED

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01 35 30
SECURITY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

Included in this section are the Contractor's responsibilities to ensure construction sites and SDARNG property remain secure at all times during the construction process.

1.2 SECURITY

- A. Job site security is the responsibility of the Contractor. The Contractor shall take all necessary, prudent, and reasonable actions to secure the project site and the construction limits, including temporary enclosures and storage facilities, against unauthorized entry and theft. An equivalent security level and measures of the adjacent facility shall be maintained.
- B. The Contractor is advised current national "Force Protection Condition" (FPCON) ratings are applicable to all SDARNG facilities statewide. At any time the FPCON level may be increased to a heightened level requiring additional security measures.

Increased security levels may include, but are not limited to, limited personnel access, thorough entry screening of all personnel, random vehicle searches, parking limitations, and other measures may also be enforced. Cooperation with the Dept. of the Military and local SDARNG personnel with respect to FPCON issues is essential and compliance with FPCON measures directed are mandatory for the Prime Contractor, subcontractors, vendors, and suppliers, all employees of those entities, and any other person or persons having business regarding the work of the project who require access to the SDARNG facility.

FPCON measures directed and deemed necessary but which cause delay to the project or which have a negative impact upon the Prime Contractor's abilities to perform the work shall be subject to consideration as Changes in the Work in accordance with Article 14 of the General Conditions to Agreement for Construction.

1.3 FACILITY ACCESS

- A. The Contractor shall submit a SDARNG Contractor Access Application for the individual identified at the Contractor's Superintendent for the project. The Superintendent will be required to pass a background check for unescorted access to the SDARNG project site. The Contractor will be required to have a Superintendent that is able to pass a background check. The Superintendent must be onsite during all time's additional employees or Subcontractors are onsite. The Superintendent is ultimately responsible for all project site security and related issues.
- B. The Contractor shall submit an Employee Access List (EAL) identifying each employee's name and driver's license number or other form of government issued ID number. Only employees on the EAL will be permitted to work on the project site. This list must be kept current throughout the duration of the project. Employees entering the facility may be required to temporarily surrender a government-issued photo ID, such as a driver's license, to verify access clearance.
- C. The Dept. of the Military may, at its sole option, issue to the Contractor one or more proximity cards programmed to allow access to the facility. If such a card(s) is issued, the Contractor shall be responsible to assure only authorized employees utilize the card. The Contractor shall promptly notify the Dept. of the Military in the event the card is lost or damaged in a manner that it cannot be used. The Contractor shall pay \$5.00 for each lost or damaged card. All cards shall be returned to the Dept. of the Military upon completion of the project.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

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SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Contractor's design-related professional design services.
- F. Control of installation.
- G. Mock-ups.
- H. Tolerances.
- I. Defect Assessment.

1.2 RELATED REQUIREMENTS

- A. Section 01 21 00 - Allowances: Allowance for payment of testing services.
- B. Section 01 42 16 - Definitions.
- C. Section 01 42 19 - Reference Standards.
- D. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

1.3 REFERENCE STANDARDS

- A. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation 2017.
- B. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry 2019.
- C. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection 2021.
- D. IAS AC89 - Accreditation Criteria for Testing Laboratories 2020.

1.4 DEFINITIONS

- A. Contractor's Quality Control Plan: Contractor's management plan for executing the Contract for Construction.

1.5 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
 - 1. Submit a Request for Interpretation to Architect if the criteria indicated are not sufficient to perform required design services.
- C. Scope of Contractor's Professional Design Services: Provide for the following items of work:
 - 1. Structural Design of Metal Framing: As described in Section 05 40 00 - Cold-Formed Metal Framing.
 - 2. Structural Design of Metal Fabrications: As described in Section 05 50 00 - Metal Fabrications.
 - 3. Structural Design: Include physical characteristics, engineering calculations, and resulting dimensional limitations as described in Section 08 43 13 - Aluminum-Framed Storefronts.

1.6 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
 - 1. Include calculations that have been used to demonstrate compliance to performance and regulatory criteria provided, and to determine design solutions.
 - 2. Include required product data and shop drawings.
 - 3. Include a statement or certification attesting that design data complies with criteria indicated, such as building codes, loads, functional, and similar engineering requirements.
 - 4. Include signature and seal of design professional responsible for allocated design services on calculations and drawings.
- C. Test Reports: After each test/inspection, promptly submit to the Project Web Site.
 - 1. Include:

- a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Compliance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.

1.7 QUALITY ASSURANCE

- A. Designer Qualifications: Where professional engineering design services and design data submittals are specifically required of Contractor by Contract Documents, provide services of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
- B. Contractor's Quality Control (CQC) Plan:
 - 1. Prior to start of work, submit a comprehensive plan describing how contract deliverables will be produced. Tailor CQC plan to specific requirements of the project. Include the following information:
 - a. Management Structure: Identify personnel responsible for quality. Include a chart showing lines of authority.
 - 1) Include qualifications (in resume form), duties, responsibilities of each person assigned to CQC function.
 - b. Management Approach: Define, describe, and include in the plan specific methodologies used in executing the work.
 - 1) Management and control of documents and records relating to quality.
 - 2) Communications.
 - 3) Coordination procedures.
 - 4) Resource management.
 - 5) Process control.
 - 6) Inspection and testing procedures and scheduling.
 - 7) Control of noncomplying work.
 - 8) Tracking deficiencies from identification, through acceptable corrective action, and verification.
 - 9) Control of testing and measuring equipment.
 - 10) Project materials certification.
 - 11) Managerial continuity and flexibility.
 - c. Owner will not make a separate payment for providing and maintaining a Quality Control Plan. Include associated costs in Bid price.
 - d. Acceptance of the plan is required prior to start of construction activities not including mobilization work. Owner's acceptance of the plan will be conditional and predicated on continuing satisfactory adherence to the plan. Owner reserves the right to require Contractor to make changes to the plan and operations, including removal of personnel, as necessary, to obtain specified quality of work results.
- C. Quality-Control Personnel Qualifications. Engage a person with requisite training and experience to implement and manage quality assurance (QA) and quality control (QC) for the project.

1.8 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.

- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

3.1 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 Architect 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. Have work performed 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, and disfigurement.

3.2 MOCK-UPS

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.
- C. Notify Architect seven (7) working days in advance of dates and times when mock-ups will be constructed.
- D. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- E. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- F. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
- G. Architect will use accepted mock-ups as a comparison standard for the remaining Work.
- H. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.3 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 Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.4 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Architect.
 - 6. Submit reports of all tests/inspections specified.

- B. 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.
- C. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 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 Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory 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.
- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.5 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.

END SECTION 01 40 00

SECTION 01 42 16
DEFINITIONS

PART 1 – GENERAL

1.1 SUMMARY

- A. This section supplements the definitions contained in the General Conditions.
- B. Other definitions are included in individual specification sections.

1.2 DEFINITIONS

- A. Furnish: To supply, deliver, unload, and inspect for damage.
- B. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.
- C. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.
- D. Project Manual: The book-sized volume that includes the procurement requirements (if any), the contracting requirements, and the specifications.
- E. Provide: To furnish and install.
- F. Supply: Same as Furnish.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END SECTION 01 42 16

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01 42 00
SOURCES FOR REFERENCE PUBLICATIONS

PART 1 – GENERAL

1.1 SUMMARY

This section specifies organizations from which references and standards specified in the project manual are available.

1.2 REFERENCE ORGANIZATIONS

The specifications cited in this project manual and associated construction plans may be obtained from the associations or organizations listed below.

AACE	AACE INTERNATIONAL https://web.aacei.org/
ASA	ACOUSTICAL SOCIETY OF AMERICA https://acousticalsociety.org/
ABAA	AIR BARRIER ASSOCIATION OF AMERICA https://www.airbarrier.org/
ACCA	AIR CONDITIONING CONTRACTORS OF AMERICA https://www.acca.org/
ADC	AIR DUCT COUNCIL https://flexibleduct.org/
AMCA	AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. http://www.amca.org
AHRI	AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE http://www.ahrinet.org
ATIS	ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS http://www.atis.org
AA	ALUMINUM ASSOCIATION https://www.aluminum.org/
AAMA	AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION https://aamanet.org/
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS https://www.transportation.org/
AATCC	AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS https://www.aatcc.org/
ABMA	AMERICAN BEARING MANUFACTURERS ASSOCIATION https://www.americanbearings.org/
ACR	AMERICAN COLLEGE OF RADIOLOGY https://www.acr.org/
ACI	AMERICAN CONCRETE INSTITUTE https://www.concrete.org/
ACPA	AMERICAN CONCRETE PIPE ASSOCIATION https://www.concretepipe.org/
ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS https://www.acgi.org/
AFF	AMERICAN FOREST FOUNDATION https://www.treefarmssystem.org
AGA	AMERICAN GAS ASSOCIATION https://www.aga.org/
AGMA	AMERICAN GEAR MANUFACTURERS ASSOCIATION https://www.agma.org/
AHA	AMERICAN HARDBOARD ASSOCIATION http://domensino.com/AHA/
AIHA	AMERICAN INDUSTRIAL HYGIENE ASSOCIATION https://www.aiha.org/
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION https://www.aisc.org/
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION http://www.aitc-glulam.org
AISI	AMERICAN IRON AND STEEL INSTITUTE https://www.steel.org/
ALI	AMERICAN LADDER INSTITUTE https://www.americanladderinstitute.org
ALSC	AMERICAN LUMBER STANDARDS COMMITTEE http://www.alsc.org
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE https://www.ansi.org/
API	AMERICAN PETROLEUM INSTITUTE https://www.api.org/
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION https://www.arema.org
ASNT	AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING https://www.asnt.org/
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS https://www.asce.org/
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS https://www.ashrae.org/
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS https://www.asme.org/
ASSP	AMERICAN SOCIETY OF SAFETY PROFESSIONALS https://www.assp.org/
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERING http://www.asse-plumbing.org
AWWA	AMERICAN WATER WORKS ASSOCIATION https://www.awwa.org/
AWS	AMERICAN WELDING SOCIETY https://www.aws.org/
AWC	AMERICAN WOOD COUNCIL https://www.awc.org/
AWPA	AMERICAN WOOD PROTECTION ASSOCIATION http://www.awpa.com
AH	AmericanHort https://www.americanhort.org/
APA	APA - THE ENGINEERED WOOD ASSOCIATION https://www.apawood.org/
AABC	ASSOCIATED AIR BALANCE COUNCIL https://www.aabc.com/

AEIC	ASSOCIATION OF EDISON ILLUMINATING COMPANIES https://aeic.org/
APSP	ASSOCIATION OF POOL & SPA PROFESSIONALS https://apsp.org/
ASTM	ASTM INTERNATIONAL https://www.astm.org/
AVIXA	AUDIOVISUAL AND INTEGRATED EXPERIENCE ASSOCIATION https://www.avixa.org/
BTL	BACNET INTERNATIONAL https://www.bacnetlabs.org/
BICSI	BICSI International Standards Program https://www.bicsi.org/
BIFMA	BIFMA INTERNATIONAL https://www.bifma.org/
BHMA	BUILDERS HARDWARE MANUFACTURERS ASSOCIATION https://www.buildershardware.com/
CRI	CARPET AND RUG INSTITUTE https://carpet-rug.org/
CISPI	CAST IRON SOIL PIPE INSTITUTE https://www.cispi.org/
CDC	CENTERS FOR DISEASE CONTROL AND PREVENTION https://www.cdc.gov
CPA	COMPOSITE PANEL ASSOCIATION https://www.compositepanel.org/
CAGI	COMPRESSED AIR AND GAS INSTITUTE https://www.cagi.org/
CGA	COMPRESSED GAS ASSOCIATION https://www.cganet.com/
CRSI	CONCRETE REINFORCING STEEL INSTITUTE http://www.crsi.org/
CEA	CONSUMER ELECTRONICS ASSOCIATION https://www.cta.tech/
CTI	COOLING TECHNOLOGY INSTITUTE https://www.coolingtechnology.org/
CDA	COPPER DEVELOPMENT ASSOCIATION https://www.copper.org/
CEQ	COUNCIL ON ENVIRONMENTAL QUALITY https://www.whitehouse.gov/administration/eop/ceq
CMAA	CRANE MANUFACTURERS ASSOCIATION OF AMERICA http://www.mhi.org/cmaa
CSA	CSA GROUP https://www.csagroup.org/
DASMA	DOOR AND ACCESS SYSTEM MANUFACTURERS ASSOCIATION https://www.dasma.com/
ECMA	ELECTRIFICATION AND CONTROLS MANUFACTURERS ASSOCIATION www.mhi.org/ecma
ECIA	ELECTRONIC COMPONENTS INDUSTRY ASSOCIATION https://www.ecianow.org
EIA	ELECTRONIC INDUSTRIES ALLIANCE
ECIA	ELECTRONIC COMPONENTS INDUSTRY ASSOCIATION
ESD	ELECTROSTATIC DISCHARGE ASSOCIATION https://www.esda.org/
ETL	ETL TESTING LABORATORIES http://www.intertek.com/
EJMA	EXPANSION JOINT MANUFACTURERS ASSOCIATION http://www.ejma.org
EE	EXTRON ELECTRONICS https://www.extron.com/
FCI	FLUID CONTROLS INSTITUTE https://fluidcontrolsinstitute.org/
FSA	FLUID SEALING ASSOCIATION www.fluidsealing.com
FM	FM GLOBAL https://www.fmglobal.com/
FSC	FOREST STEWARDSHIP COUNCIL https://us.fsc.org/
FCCCHR	FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH https://fccchr.usc.edu/
GSi	GEOSYNTHETIC INSTITUTE https://geosynthetic-institute.org/
GANA	GLASS ASSOCIATION OF NORTH AMERICA http://www.glasswebsite.com
GBCI	GREEN BUSINESS CERTIFICATION INC. https://www.gbci.org
GBI	GREEN BUILDING INITIATIVE https://www.thegbi.org/
GS	GREEN SEAL https://www.greenseal.org/
GA	GYPSON ASSOCIATION https://www.gypsum.org/
HPVA	HARDWOOD PLYWOOD AND VENEER ASSOCIATION https://www.decorativehardwoods.org/
HI	HYDRAULIC INSTITUTE http://www.pumps.org
HYI	HYDRONICS INSTITUTE DIVISION OF AHRI http://www.ahrinet.org
ICC-ES	ICC EVALUATION SERVICE, INC. https://icc-es.org/
IES	ILLUMINATING ENGINEERING SOCIETY https://www.ies.org/
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS https://www.ieee.org/
IENT	INSTITUTE OF ENVIRONMENTAL SCIENCES AND TECHNOLOGY https://www.ient.org/
IICRC	INSTITUTE OF INSPECTION, CLEANING, AND RESTORATION CERTIFICATION https://www.iicrc.org/
ICEA	INSULATED CABLE ENGINEERS ASSOCIATION https://www.icea.net/
IGMA	INSULATING GLASS MANUFACTURERS ALLIANCE https://www.igmaonline.org/
ICS	INTELLIGENCE COMMUNITY STANDARD https://www.hsd.org/c/
IAPMO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS http://www.iapmo.org
ICPA	INTERNATIONAL CAST POLYMER ASSOCIATION https://theicpa.com/
ICC	INTERNATIONAL CODE COUNCIL https://www.iccsafe.org/
ICRI	INTERNATIONAL CONCRETE REPAIR INSTITUTE https://www.icri.org/

NETA	INTERNATIONAL ELECTRICAL TESTING ASSOCIATION https://www.netaworld.org/
IEC	INTERNATIONAL ELECTROTECHNICAL COMMISSION https://www.iec.ch/
IGSHPA	INTERNATIONAL GROUND SOURCE HEAT PUMP ASSOCIATION https://igshpa.org/
IIAR	INTERNATIONAL INSTITUTE OF AMMONIA REFRIGERATION https://www.iiar.org
ISO	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION https://www.iso.org
ISEA	INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION https://safetyequipment.org/
ISA	INTERNATIONAL SOCIETY OF AUTOMATION https://www.isa.org/
IWCA	INTERNATIONAL WINDOW CLEANING ASSOCIATION https://www.iwca.org/
IPC	IPC - ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES http://www.ipc.org
LHBH	L.H. BAILEY HORTORIUM https://plantbio.cals.cornell.edu/hortorium/
MSS	MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY http://msshq.org
MPI	MASTER PAINTERS INSTITUTE http://www.mpi.net/
MHI	MATERIAL HANDLING INDUSTRY OF AMERICA http://www.mhi.org
MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION https://www.mbma.com/
MA	MIDDLE ATLANTIC PRODUCTS https://www.legrand.us/middle-atlantic-products
MICA	MIDWEST INSULATION CONTRACTORS ASSOCIATION https://www.micainsulation.org/
NACE	NACE INTERNATIONAL https://www.nace.org
NASA	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION https://www.nasa.gov/
NADCA	NATIONAL AIR DUCT CLEANERS ASSOCIATION https://nadca.com/
NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS http://www.naamm.org
NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION https://www.necanet.org/
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION https://www.nema.org
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU http://www.nebb.org
NFRC	NATIONAL FENESTRATION RATING COUNCIL http://www.nfrc.org
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION https://www.nfpa.org
NFLPA	NATIONAL FLUID POWER ASSOCIATION https://www.nfpa.com
NHLA	NATIONAL HARDWOOD LUMBER ASSOCIATION https://nhla.com/
NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH https://www.cdc.gov/niosh/
NIJ	NATIONAL INSTITUTE OF JUSTICE https://www.justnet.org/
NIST	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY https://www.nist.gov/
NRMCA	NATIONAL READY MIXED CONCRETE ASSOCIATION https://www.nrmca.org/
NRCA	NATIONAL ROOFING CONTRACTORS ASSOCIATION http://www.nrca.net
NSTISS	NATIONAL SECURITY TELECOMMUNICATIONS AND INFORMATION SYSTEMS SECURITY http://www.dtic.mil/dtic/
NAVFAC EXWC	NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER https://www.navfac.navy.mil/navfac_worldwide/specialty_centers/exwc.html
NAIMA	NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION https://insulationinstitute.org
NELMA	NORTHEASTERN LUMBER MANUFACTURERS ASSOCIATION https://www.nelma.org/
NSF	NSF INTERNATIONAL http://www.nsf.org
ONVIF	OPEN NETWORK VIDEO INTERFACE FORUM https://www.onvif.org/
OECD	ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT http://www.oecd.org
PHI	PASSIVE HOUSE INSTITUTE INTERNATIONAL https://passivehouse.com/
PHIUS	PASSIVE HOUSE INSTITUTE - US http://phi.us.org/home-page
PDCA	PILE DRIVING CONTRACTORS ASSOCIATION http://www.piledrivers.org/
PFI	PIPE FABRICATION INSTITUTE https://pfi-institute.org/
PPFA	PLASTIC PIPE AND FITTINGS ASSOCIATION https://www.ppfahome.org/
PDI	PLUMBING AND DRAINAGE INSTITUTE http://www.pdionline.org
PMCA	PLUMBING AND MECHANICAL CONTRACTORS ASSOCIATION http://www.pmcaoregon.com/
PEI	PORCELAIN ENAMEL INSTITUTE http://www.porcelainenamel.com
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE https://www.pci.org/
PEFC	PROGRAMME FOR ENDORSEMENT OF FOREST CERTIFICATION https://www.pefc.org/
CRA	REDWOOD INSPECTION SERVICE (RIS) OF THE CALIFORNIA REDWOOD ASSOCIATION https://www.wvpa.org/about-wvpa/redwood-inspection-service
RCSC	RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS http://www.boltcouncil.org
RFCI	RESILIENT FLOOR COVERING INSTITUTE https://rfci.com/
SAND	SANDIA NATIONAL LABORATORIES https://energy.sandia.gov/
SCS	SCIENTIFIC CERTIFICATION SYSTEMS https://www.scsglobalservices.com/

SMA	SCREEN MANUFACTURERS ASSOCIATION http://smainfo.org
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION https://www.smacna.org/
SPRI	SINGLE PLY ROOFING INDUSTRY https://www.spri.org/
SSPC	SOCIETY FOR PROTECTIVE COATINGS http://www.sspc.org
SAE	SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL https://www.sae.org/
SCTE	SOCIETY OF CABLE TELECOMMUNICATIONS ENGINEERS https://www.scte.org/
SD DOT SSRB	SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES https://dot.sd.gov
SCMA	SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION http://www.cypressinfo.org
SPIB	SOUTHERN PINE INSPECTION BUREAU https://www.spib.org/
SPFA	SPRAY POLYURETHANE FOAM ALLIANCE http://www.sprayfoam.org
SDI/DOOR	STEEL DOOR INSTITUTE https://www.steeldoor.org/
SWI	STEEL WINDOW INSTITUTE https://www.steelwindows.com/
SFI	SUSTAINABLE FOREST INITIATIVE http://www.sfiprogram.org
TAPPI	TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY http://www.tappi.org
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION https://www.tiaonline.org/
TMS	THE MASONRY SOCIETY https://masonrysociety.org/
TCIA	TREE CARE INDUSTRY ASSOCIATION https://tcia.org/
TRIDIUM	TRIDIUM, INC https://www.tridium.com/
TPI	TRUSS PLATE INSTITUTE https://www.tpinst.org/
TPI	TURFGRASS PRODUCERS INTERNATIONAL http://www.turfgrassod.org
USACE	U.S. ARMY CORPS OF ENGINEERS http://www.publications.usace.army.mil/
USC	U.S. CODE http://uscode.house.gov/
DLA	U.S. DEFENSE LOGISTICS AGENCY http://www.dla.mil
USDA	U.S. DEPARTMENT OF AGRICULTURE
AMS	AGRICULTURAL MARKETING SERVICE https://www.ams.usda.gov/
USDA	USDA Rural Development https://www.rd.usda.gov/about-rd/agencies/rural-utilities-service
DOC	U.S. DEPARTMENT OF COMMERCE https://www.commerce.gov/
NTIS	National Technical Information Service https://www.ntis.gov/
DOD	U.S. DEPARTMENT OF DEFENSE https://www.ntis.gov/
ASSIST	Acquisition Streamlining and Standardization Information System
DODSSP	Department of Defense Single Stock Point
DAPS	Document Automation and Production Service https://assist.dla.mil/online/start/
UFC	Unified Facilities Criteria https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc
WBDG	Whole Building Design Guide
NIBS	National Institute of Building Sciences
DOE	U.S. DEPARTMENT OF ENERGY https://www.energy.gov/
FEMP	U.S. DEPARTMENT OF ENERGY FEDERAL ENERGY MANAGEMENT PROGRAM https://www.energy.gov/eere/femp/federal-energy-management-program
HUD	U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT https://www.huduser.gov
SD	U.S. DEPARTMENT OF STATE https://www.state.gov/
EPA	U.S. ENVIRONMENTAL PROTECTION AGENCY https://www.epa.gov
NTIS	National Technical Information Service https://www.ntis.gov/
GPO	U.S. Government Publishing Office https://www.gpo.gov/
FAA	U.S. FEDERAL AVIATION ADMINISTRATION https://www.faa.gov/
FCC	U.S. FEDERAL COMMUNICATIONS COMMISSION https://www.fcc.gov/
GPO	U.S. Government Publishing Office https://www.gpo.gov/
FHWA	U.S. FEDERAL HIGHWAY ADMINISTRATION https://www.fhwa.dot.gov/
GPO	U.S. Government Publishing Office https://www.gpo.gov/
GSA	U.S. GENERAL SERVICES ADMINISTRATION https://www.gsa.gov/EligMain/home.do
ASSIST	Acquisition Streamlining and Standardization Information System https://assist.dla.mil/online/start/
USGBC	U. S. GREEN BUILDING COUNCIL https://new.usgbc.org/
NARA	U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION https://www.archives.gov/
ULE	UL ENVIRONMENT https://industries.ul.com/environment/
UL	UNDERWRITERS LABORATORIES https://www.ul.com/
ULC	UNDERWRITERS LABORATORIES OF CANADA https://canada.ul.com/

UBPPA	UNI-BELL PVC PIPE ASSOCIATION https://www.uni-bell.org/
WCLIB	WEST COAST LUMBER INSPECTION BUREAU http://www.wclib.org
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION http://www.wwpa.org
WDMA	WINDOW AND DOOR MANUFACTURERS ASSOCIATION https://www.wdma.com/
WMMPA	WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION https://www.wmmpa.com/
WI	WOODWORK INSTITUTE https://woodworkinstitute.com
WBI	WOOLMARK COMPANY https://www.woolmark.com/

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01 45 00
QUALITY CONTROL

PART 1 GENERAL

1.1 SUMMARY

Establish and maintain an effective quality control (QC) system. QC consist of plans, procedures, and organization necessary to produce a product which complies with the Contract requirements. The QC system covers all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

- ASTM D3740.....Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
- ASTM E329.....Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

U.S. ARMY CORPS OF ENGINEERS (USACE)

- ER 1110-1-12.....Engineering and Design -- Quality Management

1.3 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include all associated costs in the Bid.

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

- A. Preconstruction Submittals
 - 1. Contractor Quality Control (CQC) Plan
 - 2. Additional Requirements for Design Quality Control (DQC) Plan
- B. Design Data
 - 1. Discipline-Specific Checklists
 - 2. Design Quality Control
- C. Test Reports
 - 1. Verification Statement

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The project superintendent will be held responsible for the quality of work and is subject to removal by the Project Manager for non-compliance with the quality requirements specified in the Contract. In this context the highest-level manager responsible for the overall construction activities at the site, including quality and production is the project superintendent. The project superintendent maintains a physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to the Project Manager.

3.2 CONTRACTOR QUALITY CONTROL (CQC) PLAN

Submit no later than 15 days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan. The Owner will consider an interim plan for the first 60 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work.

A. Content of the CQC Plan

Include, as a minimum, the following to cover all construction-operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified. Include a CQC System Manager that reports to an individual other than the project superintendent. The individual should be outside of the project superintendent's chain of command and must be shown as at least one level above the project superintendent in the chain of command.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the Contract. Letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities will be issued by the CQC System Manager. Furnish copies of these letters to the Project Manager.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures must be in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Project Manager are required to be used.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and is identified by different trades or disciplines, or it is work by the same trade in a different environment. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section.
- j. Coordinate scheduled work with Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections. Where the applicable code issued by the International Code Council (ICC) calls for inspections by the Building Official, the Contractor must include the inspections in the Quality Control Plan and must perform the inspections required by the applicable ICC. The Contractor must perform these inspections using independent qualified inspectors. Include the Special Inspection Plan requirements in the QC Plan.

B. Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Owner reserves the right to require the Contractor to make changes in the Contractor Quality Control(CQC) Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

C. Notification of Changes

After acceptance of the CQC Plan, notify the Project Manager in writing of any proposed change. Proposed changes are subject to acceptance by the Project Manager.

3.3 QUALITY CONTROL ORGANIZATION

A. Personnel Requirements

The requirements for the CQC organization are a Safety and Health Manager, CQC System Manager, and sufficient number of additional qualified personnel to ensure safety and Contract compliance. The Safety and Health Manager reports directly to a senior project (or corporate) official independent from the CQC System Manager. The Safety and Health Manager will also serve as a member of the CQC Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff maintains a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance. The CQC staff will be subject to acceptance by the Project Manager.

Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules and all other project documentation to the CQC organization. The CQC organization is responsible for maintaining these documents and records at the site at all times, except as otherwise acceptable to the Project Manager.

B. CQC System Manager

Identify as CQC System Manager an individual within the onsite work organization that is responsible for overall management of CQC and has the authority to act in all CQC matters for the Contractor. The CQC System Manager is required to be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 10 years construction experience on construction similar to this Contract. This CQC System Manager is on the site at all times during construction and is employed by the prime Contractor. The CQC System Manager is assigned as CQC System Manager and may have duties as project superintendent in addition to quality control. Identify in the plan an alternate to serve in the event of the CQC System Manager's absence. The requirements for the alternate are the same as the CQC System Manager.

C. CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: electrical, mechanical, structural, architectural, Cx Agent/LEED Specialist. These individuals or specialized technical companies are to be directly employed by the prime Contractor and can not be employed by a supplier or subcontractor on this project; be responsible to the CQC System Manager; be physically present at the construction site during work on the specialized personnel's areas of responsibility; have the necessary education or experience in accordance with the experience matrix listed herein. These individuals can perform other duties but need to be allowed sufficient time to perform the specialized personnel's assigned quality control duties as described in the Quality Control Plan. A single person can cover more than one area provided that the single person is qualified to perform quality control activities in each designated and that workload allows.

D. Additional Requirement

In addition to the above experience and education requirements, the Contractor Quality Control (CQC) System Manager and Alternate CQC System Manager are required to have completed the Construction Quality Management (CQM) for Contractors course. If the CQC System Manager does not have a current certification, obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Army Corps of Engineers. The Construction Quality Management Training certificate expires after 5 years. If the CQC System Manager's certificate has expired, retake the course to remain current.

E. Organizational Changes

Maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes to the Project Manager for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, have to comply with the requirements in Section 01 33 00 SUBMITTAL PROCEDURES. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the contract requirements. When Section 01 91 15 TOTAL BUILDING COMMISSIONING are included in the contract, the submittals required by those sections have to be coordinated with Section 01 33 00 SUBMITTAL PROCEDURES to ensure adequate time is allowed for each type of submittal required.

3.6 CONTROL

CQC is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control are required to be conducted by the CQC System Manager for each definable feature of the construction work as follows:

A. Preparatory Phase

This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase includes:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Owner personnel until final acceptance of the work.
- b. Review of the Contract drawings.
- c. Check to assure that all materials and equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.

- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.
 - f. Examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
 - g. Review of the appropriate activity hazard analysis to assure safety requirements are met.
 - h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
 - i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Project Manager.
 - j. Discussion of the initial control phase.
 - k. The Owner needs to be notified at least 72 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. Document the results of the preparatory phase actions by separate minutes prepared by the CQC System Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.
- B. Initial Phase
- This phase is accomplished at the beginning of a definable feature of work. Accomplish the following:
- a. Check work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
 - b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing are in compliance with the contract.
 - c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
 - d. Resolve all differences.
 - e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
 - f. The Owner needs to be notified at least 72 hours in advance of beginning the initial phase for definable feature of work. Prepare separate minutes of this phase by the CQC System Manager and attach to the daily CQC report. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases.
 - g. The initial phase for each definable feature of work is repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.
- C. Follow-up Phase
- Perform daily checks to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.
- D. Additional Preparatory and Initial Phases
- Conduct additional preparatory and initial phases on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

A. Testing Procedure

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, furnish to the Owner duplicate samples of test specimens for possible testing by the Owner. Testing includes operation and acceptance tests when specified. Procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. Perform the following activities and record and provide the following data:

1. Verify that testing procedures comply with contract requirements.
2. Verify that facilities and testing equipment are available and comply with testing standards.
3. Check test instrument calibration data against certified standards.
4. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

5. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the Project Manager, actual test reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Project Manager. Failure to submit timely test reports as stated results in nonpayment for related work performed and disapproval of the test facility for this Contract.

B. Testing Laboratories

All testing laboratories must be validated by the USACE Material Testing Center (MTC) for the tests to be performed. Information on the USACE MTC with web-links to both a list of validated testing laboratories and for the laboratory inspection request for can be found at: <https://mtc.erdc.dren.mil/>.

1. Capability Check

The Owner reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel is required to meet criteria detailed in ASTM D3740 and ASTM E329.

2. Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be responsible for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due the Contractor.

C. Onsite Laboratory

The Owner reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Owner.

3.8 COMPLETION INSPECTION

A. Punch-Out Inspection

Conduct an inspection of the work by the CQC System Manager near the end of the work, or any increment of the work established by a time stated in the Contract or as amended per the Contract documents. Prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Owner that the facility is ready for the Owner Substantial Completion Inspection.

B. Substantial Completion Inspection

The Owner will perform the Substantial Completion Inspection to verify that the facility is complete and ready to be occupied. An Owner Substantial Completion Inspection Punch List may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the Owner, so that a Final Inspection with the customer can be scheduled. Correct any items noted on the Substantial Completion Inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph need to be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

C. Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Project Manager is required to be in attendance at the final acceptance inspection. Additional Owner personnel will also be in attendance. The final acceptance inspection will be formally scheduled by the Project Manager based upon results of the Substantial Completion Inspection and Contractor's log for corrective work verifying completion. Notify the Project Manager when all items have been completed and ready for the final acceptance inspection. Include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Project Manager to bill the Contractor for the Owner's additional inspection cost.

3.9 DOCUMENTATION

A. Quality Control Activities

Maintain current records providing factual evidence that required quality control activities and tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

1. The name and area of responsibility of the Contractor/Subcontractor.
2. Operating plant/equipment with hours worked, idle, or down for repair.
3. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
4. Test and control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
5. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
6. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.
7. Offsite surveillance activities, including actions taken.
8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
9. Instructions given/received and conflicts in plans and specifications.

B. Verification Statement

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. Furnish the original and one copy of these records in report form to the Owner daily within 48 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, prepare and submit one report for every 14 days of no work and on the last day of a no work period. All calendar days need to be accounted for throughout the life of the contract. The first report following a day of no work will be for that day only. Reports need to be signed and dated by the Contractor Quality Control (CQC) System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the CQC System Manager Report.

3.10 SAMPLE FORMS

Sample forms enclosed at the end of this section.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Project Manager will notify the Contractor of any detected noncompliance with the foregoing requirements. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, will be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Project Manager can issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- END OF SECTION --

01 50 00
TEMPORARY FACILITIES

PART 1 – GENERAL

1.1 SUMMARY

This section includes requirements for temporary job trailer, restroom facilities, storage, enclosures, and other temporary items for the duration of the project.

1.2 TEMPORARY OFFICE/JOB TRAILER

The Contractor may, at their option, erect or bring on the site when directed, maintain in good condition, and remove when directed, a temporary, weathertight office, for his use and representatives of the AE and/or the Dept. of the Military. It shall be adequately heated and electrically lighted. The Contractor shall maintain a listed telephone at the temporary office. All costs related to the office, including but not limited to utilities, utility hookups and disconnects, maintenance, transporting, etc., shall be paid by the Contractor. Such office shall meet with the approval of the AE and the Dept. of the Military.

1.3 RESTROOM FACILITIES

1. The Contractor shall provide and maintain sanitary, temporary chemical toilet(s) located where indicated by the AE.
2. The temporary toilets shall be enclosed, weatherproofed, protected and secured from movement or overturning, and kept in a sanitary condition at all times.
3. The temporary toilets shall be supplied with the following requirements:
 - a. Constructed of fiberglass or (polyethylene) material.
 - b. Equipped with 40 gallon capacity holding tank.
 - c. Unit shall have separate urinal, be properly vented, locking door.
 - d. Provide number of units and maintenance according to the following:

<u>Number of People</u>	<u>Minimum Number of Facilities at Job Site</u>	<u>Maintenance Period</u>
20 or less	One	Two Weeks
20 - 199	One unit per 40 people at site	One Week
200 more	One unit per 50 people at site	One Week

- e. Maintenance shall include pump holding tank, wash and deodorize entire unit (weather permitting), equipped with four (4) rolls of toilet paper, repair any damages.
- f. The construction of a cesspool or a pit privy is prohibited.

1.4 STORAGE BUILDINGS

The Contractor and/or Sub-contractors may construct or bring on the site, such storage buildings as necessary to protect materials, tools or equipment for use on the project. Such buildings shall meet with the approval of the AE and shall be removed from the site upon completion of the work of the respective Contractor. The location of the storage buildings shall be as approved by the AE.

1.5 TEMPORARY ENCLOSURES

- A. The Contractor shall provide and install temporary weathertight enclosures for all exterior openings to protect work from weather. Equip exterior doors with self-closing hardware and padlocks.
- B. Provide and install temporary sash frames or enclosures for all exterior window openings. Fasten securely in place but capable of removal when required.

PART 2 – PRODUCTS

2.1 BARRICADES

Erect and maintain temporary barricades to limit public access to hazardous areas. Whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic barricades will be required. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.2 TEMPORARY SIGNAGE

- A. Bulletin Board

Within one calendar day of mobilization on site and prior to the commencement of work activities, provide a

clear weatherproof covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, Safety and Health Information and other information.

B. Project Identification Signs

The requirements for the signs, their content, and location are as indicated and as specified in Section 01 58 00 PROJECT IDENTIFICATION. Erect signs 2 days prior to the Ground Breaking Ceremony or 15 days after receipt of the Notice to Proceed, whichever is earliest. The Project Manager will provide as much notice as possible when a Ground Breaking Ceremony is scheduled.

C. Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards. Attach signs to the perimeter fencing every 150 feet warning the public of the presence of construction hazards. Signs must require unauthorized persons to keep out of the construction site.

2.3 BARRICADES

Erect and maintain temporary barricades to limit public access to hazardous areas. Barricades are required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.4 FENCING

Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic. Specific fencing requirements are as described herein.

A. Polyethylene Mesh Safety Fencing

Temporary safety fencing must be a high visibility orange colored, high density polyethylene grid, a minimum of 48 inches high and maximum mesh size of 2 inches. Fencing must extend from the grade to a minimum of 48 inches above the grade and be tightly secured to T-posts spaced as necessary to maintain a rigid and taut fence. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

B. Chain Link Panel Fencing

Temporary panel fencing must be galvanized steel chain link panels 6 feet high. Multiple fencing panels may be linked together at the bases to form long spans as needed. Each panel base must be weighted down using sand bags or other suitable materials in order for the fencing to withstand anticipated winds while remaining upright. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

2.5 TEMPORARY WIRING

Provide temporary wiring in accordance with NFPA 241 and NFPA 70. Include monthly inspection and testing of all equipment and apparatus.

PART 3 – EXECUTION

3.1 EMPLOYEE PARKING

Construction contract employees will park privately owned vehicles in an area designated by the Owner. This area will be within reasonable walking distance of the construction site. Employee parking must not interfere with existing and established parking requirements of the installation.

3.2 TEMPORARY BULLETIN BOARD

Locate the bulletin board at the project site in a conspicuous place easily accessible to all employees.

3.3 TEMPORARY UTILITIES

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

3.4 CONTRACTOR'S TEMPORARY OFFICE/JOB TRAILER

Trailers or storage buildings will be permitted, where space is available, subject to the approval of the Owner. A sign not smaller than 24 by 24 inches shall be conspicuously placed on the trailer depicting the company name, business phone number, and emergency phone number.

Trailers must be anchored to resist high winds and must meet applicable state or local standards for anchoring mobile trailers.

A. Appearance of Trailers and Buildings

1. Trailers must be roadworthy and comply with all appropriate state and local vehicle requirements.
2. Must present a clean and neat exterior appearance, with paint or graphic wrapping.
3. In good condition, free from visible damage, rust, deterioration, and meet all applicable safety requirements and be in a state of good repair.
4. Trailers or buildings rusted, have peeling paint or graphics, or are otherwise in need of repair will not be allowed on Installation property.
5. Failure to meet appearance requirements or properly maintain to the appearance standards will result in formal notification from the Owner to the Contractor.
 - a. The Owner will provide formal notice to the Contractor to remove the non-complying units at the Contractor's expense.
 - b. Failure to remove the identified trailer or building will result in the Contractor being assessed \$250.00 per calendar day beginning the next calendar day from the deadline date indicated on the formal notice from the Owner until the unit is removed from the property.
 - c. Assessed Public Perception Fees will be deducted from the Contractor's Contract utilizing the Construction Change Order process.

3.5 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletin board, signs, barricades, haul roads, and all other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence. Restore areas used during the performance of the Contract to the original or better condition. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil and seeding as necessary in accordance with the technical specifications.

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SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Procedures for Owner-supplied products.
- F. Maintenance materials, including extra materials, spare parts, tools, and software.
- G. Warranty requirements.

1.2 RELATED REQUIREMENTS

- A. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.3 REFERENCE STANDARDS

- A. 16 CFR 260.13 - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; Recycled Content Current Edition.
- B. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions From Indoor Sources Using Environmental Chambers 2017, v1.2.
- C. NEMA MG 1 - Motors and Generators 2018.
- D. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.4 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 – PRODUCTS

2.1 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
 - 1. Made using or containing CFC's or HCFC's.
 - 2. Containing lead, cadmium, or asbestos

2.2 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.3 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

2.4 WARRANTIES

- A. Effective dates of warranties shall be the Date of Substantial Completion (not the date of delivery or installation) and must be identified on the warranty or by signed letter modifying the warranty.

PART 3 – EXECUTION

3.1 SUBSTITUTION PROCEDURES

- A. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- E. Substitution Requests made after contract award and for the Contractor's convenience will be subject to review fees, and possibly redesign fees, by the design team. These will be processed as a deductive change order to the contractor and paid to the design team by the Owner.
 - 1. Contractor is responsible for ensuring that the proposed substitution is of equal to or superior to the basis of design in performance, appearance, quality and function prior to Architect's review.
- F. Substitution Submittal Procedure (after contract award):
 - 1. Submit request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 3. Architect will notify Contractor in writing of decision to accept or reject request.

3.2 OWNER-SUPPLIED PRODUCTS

- A. 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. On delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
 - 1. Review Owner reviewed shop drawings, product data, and samples.
 - 2. Coordinate all required utility connections.
 - 3. Receive and unload products at site; inspect for completeness or damage jointly with Owner.

3.3 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.4 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END SECTION 01 60 00

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01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 273 Standards for Universal Waste Management

49 CFR 173 Shippers - General Requirements for Shipments and Packaging's

49 CFR 178 Specifications for Packaging's

1.2 DEFINITIONS

A. Co-mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

B. Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

C. Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental demolition waste materials generated as a result of intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

D. Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill or incinerator, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

E. Diversion

The practice of diverting waste from disposal in a landfill or incinerator, by means of eliminating or minimizing waste, or reuse of materials.

F. Final Construction Waste Diversion Report

A written assertion by a material recovery facility operator identifying constituent materials diverted from disposal, usually including summary tabulations of materials, weight in short-ton.

G. Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

H. Reuse

The use of a product or materials again for the same purpose, in its original form or with little enhancement or change.

I. Salvage

Usable, salable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

J. Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

1.3 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)

Divert a minimum of 60 percent by weight of the project construction waste and demolition debris/waste from the landfill or incinerator. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste.

A. Practice efficient waste management when sizing, cutting, and installing products and materials

B. use all reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

1.4 CONSTRUCTION WASTE MANAGEMENT

Implement a Construction Waste Management Program for the project. Take a pro-active, responsible role in the management of construction waste, recycling process, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the Construction Waste Management Program. Establish a process for clear tracking, and documentation of construction waste and demolition debris/waste.

A. Implementation of Construction Waste Management Program

Develop and document how the Construction Waste Management Program will be implemented in a Construction Waste Management Plan. Submit a Construction Waste Management Plan to the Contracting Officer for approval. Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates.

B. Oversight

The Quality Control Manager, as specified in Section 01 45 00.00 10 QUALITY CONTROL, is responsible for overseeing and documenting results from executing the Construction Waste Management Plan for the project. The Environmental Manager, as specified in Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, is responsible for overseeing and documenting results from executing the Construction Waste Management Plan for the project.

C. Special Programs

Implement special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Retain revenue or savings from salvaged or recycling, unless otherwise directed. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations.

D. Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the projects. Designation of single source separating or commingling will be clearly marked on the containers.

E. Waste Streams

Delineate waste streams and characterization, including estimated material types and quantities of waste, in the Construction Waste Management Plan. Manage all waste streams associated with the project. Typical waste streams are listed below. Include additional waste streams not listed:

1. Land Clearing Debris
2. Asphalt
3. Masonry and CMU
4. Concrete
5. Metals (Includes, but is not limited to, banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze.)
6. Wood (nails and staples allowed)
7. Glass
8. Paper
9. Plastics (PET, HDPE,PVC,LDPE,PP,PS, Other)
10. Gypsum
11. Non-hazardous paint and paint cans
12. Carpet
13. Ceiling Tiles
14. Insulation
15. Beverage Containers

1.5 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

A. Preconstruction Submittals

1. Construction Waste Management Plan

B. Test Reports

1. Quarterly Reports
2. Annual Report

- C. Closeout Submittals
 - 1. Final Construction Waste Diversion Report

1.6 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed Construction Waste Management Plan and to develop a mutual understanding relative to the management of the Construction Waste Management Program and how waste diversion requirements will be met.

The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00 – QUALITY CONTROL. At a minimum, discuss and document waste management goals at following meetings:

- A. Preconstruction meeting.
- B. Regular site meetings.
- C. Work safety meeting (if applicable).

1.7 CONSTRUCTION WASTE MANAGEMENT PLAN

Submit Construction Waste Management Plan within 15 calendar days after Notice to Proceed. Revise and resubmit Construction Waste Management Plan as necessary, in order for construction to begin. Execute demolition or deconstruction activities in accordance with Section 02 41 00 – DEMOLITION. Manage demolition debris/waste or deconstruction materials in accordance with the approved construction waste management plan.

An approved Construction Waste Management Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved Construction Waste Management Plan. The plan demonstrates how to meet the project waste diversion requirement. Also, include the following in the plan:

- A. Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project.
- B. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- C. Description of the regular meetings to be held to address waste management.
- D. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of materials.
- E. Name of landfill and incinerator to be used.
- F. Identification of local and regional re-use programs, including non-profit organizations such as schools, local housing agencies, and organization that accept used materials such as material exchange networks and resale stores. Include the name, location, phone number for each re-use facility identified, and provide a copy of the permit or license for each facility.
- G. List of specific materials, by type and quantity, that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Identify the recycling facilities by name, address, and phone number.
- H. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.
- I. Description of the means by which materials identified in item above will be protected from contamination.
- J. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).
- K. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.
- L. Identification of at least 5 construction or demolition material streams for diversion.
- M. Detailed plan and distribution of waste diversion between buildings, when project is a part of a campus.
- N. Facilities or subcontractors offering construction waste transport on-site or off-site must ensure that proper shipping orders, bill of lading, manifests, or other shipping documents containing waste diversion information meet requirements of 40 CFR 273 Universal Waste Management, 49 CFR 173 Shippers - General Requirements for Shipments and Packaging's, and 49 CFR 178 Specifications for Packaging. Individuals signing manifests or other shipping documents should meet the minimum training requirements.

- O. List each supplier who deliver construction materials, in bulk, or package products in returnable containers or returnable packaging, or have take-back programs. List each program and the applicable material to actively monitor and track to assist in meeting waste diversion requirements on the project.
- P. Identify local jurisdiction requirements for waste management. Include local requirements and points of contact.

Distribute copies of the waste management plan to each subcontractor, Quality Control Manager Environmental Manager, and the Contracting Officer.

1.8 RECORDS (DOCUMENTATION)

A. General

Maintain records to document the types and quantities of waste generated and diverted through re-use, recycling and sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for materials not recycled, reused or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted project waste materials or disposed materials.

B. Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions or minor deconstruction activities.

1.9 REPORTS

A. General

Maintain current construction waste diversion information on site for periodic inspection by the Contracting Officer. Include in the quarterly reports, annual reports and final reports: the project name, contract information, information for waste generated, diverted and disposed of for the current reporting period and show cumulative totals for the project. Reports must identify quantities of waste by type and disposal method. Also include in each report, supporting documentation to include manifests, weight tickets, receipts, and invoices specifically identifying the project and waste material type and weighted sum.

B. Quarterly Reporting

Provide cumulative reports at the end of each quarter (December, March, June, and September, corresponding with the federal fiscal year for reporting purposes). Submit quarterly reports not later than 15 calendar days after the preceding quarter has ended. Submit Quarterly Reports to the Project Manager.

C. Final Reporting

Provide a cumulative construction waste diversion report. Submit report not later than 10 calendar days after the Substantial Completion Inspection. The Final Inspection will not take place until the final report is submitted. The Contractor is responsible for ensuring the report is submitted on time, failure to submit will delay the Final Inspection and potentially subject the Contractor to liquidated damages for failure to have the project ready for Final Inspection. Provide construction waste diversion report to the Project Manager.

1.10 COLLECTION

Collect, store, protect, and handle reusable and recyclable materials at the site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the Construction Waste Management Plan. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS and Section 02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS. Separate materials by one of the following methods described herein:

A. Source Separation Method

Separate waste products and materials that are recyclable from trash and sort as described below into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the Construction Waste Management Plan.

- B. Co-Mingled Method
Place waste products and recyclable materials into a single container and then transport to an authorized recycling facility, which meets all applicable requirements to accept and dispose of recyclable materials in accordance with all applicable local, state and federal regulations. The Co-mingled materials must be sorted and processed in accordance with the approved Construction Waste Management Plan.
- C. Other Methods
Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.11 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the waste management plan. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

- A. Reuse
Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved Construction Waste Management Plan. Coordinate with the Contracting Officer to identify onsite reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is allowed on the Installation. Consider the use of surplus industrial supply broker services, who match entities with reusable or repurpose industrial materials with entities with need of such materials.
- B. Recycle
Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg) - containing thermostats and ampoules, and PCBs-containing ballasts and electrical components as directed by the Contracting Officer. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.
- C. Compost
Consider composting on site if a reasonable amount of compostable materials will be available and a utilization of compostable material can be determined and appropriately planned for. Compostable materials include plant materials, sawdust and certain food scraps. Composting as a strategy must be explicitly addressed in the Construction Waste Management Plan submitted for approval to ensure it is feasible.
- D. Waste
Dispose by landfill or incineration only those waste materials with no practical use, economic benefit, or recycling opportunity.

PART 2 PRODUCTS - NOT USED.

PART 3 EXECUTION - NOT USED.

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WASTE AND RECYCLING TRACKING FORM

Contractor: _____
Project Manager: Kelly Eitreim

Total Weight:	0
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01 76 00
PROTECTING INSTALLED CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

- A. Protecting installed construction includes installing, delineating, or other means of ensuring that existing structures, objects, or surfaces remain in their current conditions.

1.2 MEASUREMENT AND PAYMENT

- A. Measurement and payment shall be considered incidental to the project. No compensation will be made for materials, equipment, labor, or other resources necessary for Protecting Installed Construction.

1.3 PROTECTION

- A. Existing facilities: protect adjacent walkways, roadways, loading docks, building entries, and other building facilities during demolition operations.
- B. Existing landscaping: protect trees, bushes, plantings, etc. from construction activities. Damage to existing landscaping due to the contractor's negligence to properly protect existing landscaping will result in the contractor replacing or repairing damaged landscaping at the Contractor's cost.
- C. Existing items to remain: protect facilities or infrastructure to remain, against damage and soiling during demolition.
- D. Existing utilities: maintain utility services to all adjacent facilities and protect them against damage during demolition operations.
Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by owner and authorities having jurisdiction.
Provide temporary services during interruptions to existing utilities, as acceptable to owner and to authorities having jurisdiction.
- E. Provide at least 72 hours' notice to owner if shutdown of service is required during changeover.
- F. Temporary protection: erect temporary protection such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated.
 - a. Protect existing site improvements, appurtenances, and landscaping to remain.
 - b. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - c. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
 - d. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
- G. Damage to existing structures, objects, or surfaces as a direct result of the contractor's negligence shall be replaced or repaired by the contractor to original or improved conditions. All costs associated with such replacement or repairs shall be paid by the contractor.
- H. Contractor shall take caution to not damage existing roadways or entrances with heavy construction equipment. Contractor shall repair damage caused due to heavy construction traffic.
 - 1. Contractor is to provide visual evidence of before and after conditions.

PART 2 – PRODUCTS - Not Used

PART 3 – EXECUTION - Not Used

END OF 01 76 00

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01 78 00
CLOSEOUT SUBMITTALS

PART 1 – GENERAL

1.1 SUMMARY

This section outlines required documentation to be provided to the AE and Owner at the conclusion of the project. Final payment will not be made to the Contractor prior to receipt of all closeout forms.

1.2 REQUIRED SUBMITTALS

- A. Training Plan
- B. Construction Waste & Recycled Materials Forms
- C. Hazardous Material Disposal Forms
- D. Certification of EPA Designated Items
- E. Certification of USDA Designated Items
- F. Recycled Material Weight Tickets
- G. Waste Weight Tickets
- H. Record Drawings
- I. O&M Manuals
- J. Real Property Data – Form 1354 (Final)
- K. BUILDER Data Information
- L. Pre-Substantial Completion Punch List
- M. Commissioning Issues Log
- N. Formal Notice of Substantial Completion
- O. Certificate of Substantial Completion
- P. Punch List Verification
- Q. Formal Notice of Final Project Completion
- R. Unemployment Contribution Certificate
- S. Final Application for Payment

PART 2 – PRODUCTS

2.1 TRAINING PLAN

- A. Contractor shall submit their training plan in accordance with section 01 78 23 - Operation & Maintenance Data within this project manual.
- B. Contractor shall submit their written training plan a minimum of 30 calendar days prior to scheduling training.
- C. All training must be completed prior to the Substantial Completion Inspection.

2.2 CONSTRUCTION WASTE & RECYCLED MATERIALS FORMS

- A. Refer to section 01 74 19 - Construction Waste Management for requirements.
- B. All weight tickets shall be provided to the Owner with the notice of substantially complete or prior.

2.3 HAZARDOUS MATERIAL DISPOSAL FORMS

- A. Refer to section 01 74 19 - Construction Waste Management for requirements.
- B. All weight tickets shall be provided to the Owner with the notice of substantially complete or prior.

2.4 CERTIFICATION OF EPA DESIGNATED ITEMS

Submit the Certification of EPA Designated Items as required by the Estimate of Percentage of Recovered Material Content for EPA Designated Items and Affirmative Procurement of EPA designated items in Service and Construction Contracts. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

- A. The product does not meet appropriate performance standards;
- B. The product is not available within a reasonable time frame;
- C. The product is not available competitively (from two or more sources);

- D. The product is only available at an unreasonable price (compared with a comparable non-recycled content product)."

Record each product used in the project that has a requirement or option of containing recycled content in accordance with SECTION 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, exemptions (a, b, c, or d, as indicated), and comments. Recycled content values may be determined by weight or volume percent but must be consistent throughout.

2.5 CERTIFICATION OF USDA DESIGNATED ITEMS

Submit the Certification of USDA Designated Items as required by the Bio-based Product Certifications and Affirmative Procurement of Biobased Products Under Service and Construction Contracts. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current USDA standards for biobased materials content. The following exemptions may apply to the non-procurement of biobased content materials:

- A. The product does not meet appropriate performance standards;
- B. The product is not available within a reasonable time frame;
- C. The product is not available competitively (from two or more sources);
- D. The product is only available at an unreasonable price (compared with a comparable bio-based content product)."

Record each product used in the project that has a requirement or option of containing biobased content in accordance with SECTION 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, total value of biobased content, exemptions (a, b, c, or d, as indicated), and comments. Biobased content values may be determined by weight or volume percent but must be consistent throughout.

2.6 RECORD DRAWINGS

A. Work included:

- 1. Throughout progress of the work, the Contractor shall maintain, at the job or site, an accurate record of changes in the Contract Documents. The record of changes shall be kept current at all times and shall be accessible for periodic review by the AE and/or the Dept. of the Military.
- 2. Transfer the recorded changes to a set of Record Documents to be provided to the AE prior to the final payment.

B. Accuracy of records:

- 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
- 2. Accuracy of records shall be such that future searches for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.

C. Entries on Drawings

- 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
- 2. Date all entries.
- 3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
- 4. In the event of overlapping changes, use different colors for the overlapping changes.
- 5. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, is shown schematically and is not intended to portray precise physical layout.
 - a. Final physical arrangement is determined by the Contractor, subject to the AE's approval.
 - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items shown only schematically on the Drawings. This layout will be shown on the Record Drawings.
 - c. The AE may waive the requirements for conversion of schematic layouts where, in the AE's judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the AE.
- 6. Show on the Record Drawings, the following:
 - a. Clearly identify the item by note, such as "cast iron drain", "galv. water", and the like.

- b. Show, by the symbol or note, the vertical location of the item ("under slab", "in ceiling plenum", "exposed", and the like).
 - c. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.
- D. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the work, both concealed and visible, to enable future modification of the work to proceed without lengthy and expensive site measurement, investigation and examination.
- E. Review and submittal:
 - 1. Contractor shall have Record Documents submitted in final form to the AE prior to or as an attachment with the notice of being substantially complete.

2.7 O&M MANUALS

- A. The Contractor shall prepare Operation and Maintenance Manuals in accordance with section 01 78 23 - Operation & Maintenance Data within this project manual.
- B. Draft manuals shall be provided to the AE in sufficient time for thorough review.
- C. Contractor shall submit FINAL Operation and Maintenance Manuals to the AE prior to or as an attachment with the notice of being substantially complete.

2.8 REAL PROPERTY DATA – FORM 1354 (FINAL)

- A. The Contractor shall submit the Final Form 1354 data to the Owner prior to or as an attachment with the notice of being substantially complete.
- B. Refer to UFC 1-300-08 for instruction on completing the DD FORM 1354. Contact the Project Manager for any project specific information necessary to complete the DD FORM 1354.
- C. Completed DD FORM 1354
Attach the Real Property receiving Component's completed High Performance and Sustainable Building (HPSB) Checklist for each applicable building to the completed DD 1354, in accordance with Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING.
- D. Completed Checklist
Submit the completed Checklist for DD FORM 1354 of Installed Building Equipment items. Attach this list to the updated DD FORM 1354.

2.9 BUILDER DATA INFORMATION

- A. Contractor shall submit a completed excel document provided by the Project Manager. All necessary information shall be documented along with electronic photographs of each piece of equipment or asset requiring photographic logging.

2.10 PRE-SUBSTANTIAL COMPLETION PUNCH LIST

- B. The AE may request a pre-substantial completion inspection punch list. This will consist of the AE and Contractor conducting a brief inspection of the project site to identify work items that need to be addressed or corrected before the project may be considered substantially complete.
- C. The Contractor shall record the items identified and generate a log of such items. The log shall note what was done to correct the identified issue, the Contractor that corrected the issue, and the date correction was completed.
- D. Contractor shall submit the pre-substantial completion punch list log prior to or as an attachment with the notice of being substantially complete.

2.11 COMMISSIONING ISSUES LOG

- A. During initial commissioning verification process the Commissioning Agent will develop a log of all issues found. The Commissioning Agent will provide a list of all items that need to be addressed to the Contractor.
- B. The Contractor shall create a log to track all items. The log shall indicate what was done to correct the identified issue, the Contractor that corrected the issue, and the date correction was completed.
- C. The Contractor shall have all identified issues resolved prior to requesting the Substantial Completion Inspection. The Contractor shall provide the Commissioning Issues Log to the Commissioning Agent and Owner for verification that all items have been completed.

2.12 FORMAL NOTICE OF SUBSTANTIAL COMPLETION

- A. Once the Contractor believes they have met the requirements of Contract Documents and are substantially complete in accordance with the definition in General Conditions 10.1.3, the Contractor shall submit a formal

letter to the AE and Owner stating the project is substantially complete and ready for a substantial completion inspection.

- A. If the AE agrees that the project appears ready for the substantial completion inspection per Article 10 to the General Conditions, the AE shall recommend to the Dept. of the Military that a substantial completion inspection be conducted.
- B. If the Dept. of the Military agrees that the work is substantially complete they will schedule the substantial completion inspection within two (2) weeks of receipt of the AE's recommendation.
 - 1. Should the Contractor fail to submit any documentation required prior to or with the notice of being substantially complete the Substantial Completion Inspection will be delayed until submitted. Calendar days will continue to be counted against the project should Contractor fail to submit required documents on time.

2.13 CERTIFICATE OF SUBSTANTIAL COMPLETION

- A. Following the substantial completion inspection the AE will generate a punch list identifying all items noted during the inspection which require correction or attention by the Contractor.
- B. The AE will then draft the Certificate of Substantial Completion, attached the punch list, sign the certificate, and send the Certificate of Substantial Completion to the Contractor. The certificate shall be provided to the Contractor no more than 7 calendar days from the substantial completion inspection date.
 - 1. The following are considered acceptable Certificate forms:
 - A. Specification Section 00 65 16 – Certificate of Substantial Completion Form
 - B. EJCDC C-625 – Certificate of Substantial Completion
 - C. AIA G704 – Certificate of Substantial Completion
 - 2. The certificate shall indicate the date in which the project was determined to be substantially complete, reference the punch list of items to be completed or corrected, and whether the entire project or specific portions of the project are considered substantially complete.
- C. Within 10 calendar days from determination that the project is substantially complete the Contractor shall provide the signed Certificate of Substantial Completion to the Owner.

2.14 PUNCH LIST VERIFICATION

- A. The Contractor shall provide the AE and Owner verification that all identified punch list items have been corrected/completed. This shall be done by producing a document identifying each punch list item, indicate what was done to correct the identified issue, the Contractor that corrected the issue, and the date correction was completed.
- B. The Contractor shall provide the punch list verification documentation to the AE and Owner as an attachment to their formal request for final inspection.

2.15 FORMAL NOTICE OF FINAL PROJECT COMPLETION

- A. The Contractor shall submit a formal letter to the AE and Owner requesting final inspection per Article 11 of the General Conditions.
- B. If the AE agrees that the project appears ready for the final inspection, the AE shall recommend to the Dept. of the Military that the final inspection be scheduled.
- C. If the Dept. of the Military agrees that the work is complete and in full compliance with the contract documents, they will schedule the final inspection within two (2) weeks of receipt of the AE's recommendation.

2.16 CERTIFICATE OF COMPLETION

- A. If the project is determined to be fully complete in accordance with the Contract Documents the AE will prepare the Certificate of Completion Specification Section 00 65 19 – Certificate of Completion Form.
- B. The AE shall provide the certificate to the Contractor no more than 5 calendar days from the final completion inspection date.
- C. Within 10 calendar days from determination that the project is fully complete the Contractor shall provide the signed Certificate of Completion to the Owner.

2.17 UNEMPLOYMENT CONTRIBUTION CERTIFICATE

- A. The Contractor shall include with their final application for payment a State of South Dakota Unemployment Contribution Certificate.
- B. Final payment will not be processed until the certificate is provided to the Owner.

2.18 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall comply with the requirements established in General Condition's section 11.8.
- B. Once all work is fully complete and all required documentation has been submitted and approved the Contractor shall submit their Application for Final Payment.
- C. Included with the submittal shall be AIA Forms G706, G706A and G707 (or equivalent forms) and any other documentation required within the project manual.

PART 3 – EXECUTION

3.1 SUBSTANTIAL COMPLETION INSPECTION

- A. Reference Articles 10 and 11 of the General Conditions.
- B. The Substantial Completion Inspection will be conducted to review work of all trades.
 - 1. The Contractors is responsible to ensure all Subcontractors are present for the substantial completion inspection. Failure to have all Subcontractors present may be cause for the Dept. of the Military to postpone the substantial completion inspection.
- C. All parties will gather at the scheduled time and location as designated by the meeting invite. Instructions will be provided to the group as a whole.
- D. Based on project size, the inspection will be conducted as one group reviewing all aspects of the project or broken into multiple groups based on trade.
 - 1. Should the inspection be broken into multiple groups all participants will reconvene at the end of the inspection to discuss findings.
- E. The AE shall record all items of work that need to be corrector or completed in accordance with the Contract Documents.
- F. The AE and Owner will determine overall consensus if the project is substantially complete.
- G. Participants will determine the dollar value associated with all work items identified that need to be corrected or completed.
- H. In accordance with SD Codified Law twice the value of the remaining work will be withheld from payment.
- I. The AE will consolidate all item identified for correction or completion into a "Punch List".
- J. The AE shall provide the consolidated Punch List to the Contractor within 7 calendar days from the date of the inspection.

3.2 FINAL COMPLETION INSPECTION

- A. Reference Articles 10 and 11 of the General Conditions.
- B. A Final Completion Inspection will be conducted to review all items identified on the Punch List.
 - 1. It is the Contractors responsibility to assure all Subcontractors with work listed on the "punch list" are present for the final inspection. Failure to have all Subcontractors present may be cause for the Dept. of the Military to postpone the final inspection.
- C. All parties will gather at the scheduled time and location as designated by the meeting invite.
- D. All items on the Punch List will be inspected to ensure they have been completed in accordance with the Contract Documents.
- E. The project will only be determined to be Final Complete if all items have been corrected/completed in accordance with the Contract Documents.
 - 1. The Contractor's failure to complete all items prior to the Final Completion Inspection will require additional inspections to be conducted.
 - 2. The Contractor shall pay each AE fees for re-inspection of the project site due to their failure to complete all item prior to requesting a Final Completion Inspection.
- F. Once the project has been determined to be fully complete a Certificate of Completion will be prepared by the AE and circulated for signatures.

END SECTION 01 78 00

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01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 OVERVIEW

This section includes requirements for owner training along with operation and maintenance manual requirements.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM E1971 Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

- A. Operation and Maintenance Data
 - 1. O&M Database
 - 2. Training Plan
 - 3. Training Outline
 - 4. Training Content
- B. Closeout Submittals
 - 1. Training Video Recording
 - 2. Validation of Training Completion

1.4 OPERATION AND MAINTENANCE DATA

- A. Submit Operation and Maintenance (O&M) Data for the provided equipment, product, or system, defining the importance of system interactions, troubleshooting, and long-term preventive operation and maintenance.
- B. Compile, prepare, and aggregate O&M data to include clarifying and updating the original sequences of operation to as-built conditions.
- C. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level.
- D. Include an index preceding each submittal.
- E. Submit in accordance with this section and Section 01 33 00 SUBMITTAL PROCEDURES.
- F. Package Quality
 - 1. Documents must be fully legible.
 - 2. Operation and Maintenance data must be consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions.
 - 3. Operation and Maintenance data must be submitted to the AE for quality review and approval prior to issuance to owner.
- G. Package Content
 - 1. Provide data package content in accordance with paragraph SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES.
 - 2. Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission, except as follows.
- H. Operation and Maintenance data must be submitted to the AE for inclusiveness review and approval prior to issuance to owner.
- I. Changes to Submittals
 - 1. Provide manufacturer-originated changes or revisions to submitted data if a component of an item is so affected subsequent to acceptance of the O&M Data. Submit changes, additions, or revisions required for final acceptance of submitted data within 30 calendar days of the notification of this change requirement.
- J. Commissioning Authority Review and Approval (if Cx is included with project)
 - 1. Submit the commissioned systems and equipment submittals to the Commissioning Authority (Cx) to review for completeness and applicability.
 - 2. Obtain validation from the Cx that the systems and equipment provided meet the requirements of the Contract documents and design intent, particularly as they relate to functionality, energy performance, water performance, maintainability, sustainability, system cost, indoor environmental quality, and local

- environmental impacts.
- 3. The CxA communicates deficiencies to the Owner.
- 4. Submit the O&M manuals to the owner upon a successful review of the corrections, and with the CxA recommendation for approval and acceptance of these O&M manuals. This work is in addition to the normal AE review procedures for O&M data.

1.5 INFORMATION REQUIRED IN O&M DATA PACKAGE

- A. Identification of Contractor and Subcontractors
- B. Index of Manual Sections
- C. Real Property Equipment
 - 1. Real property equipment shall be the first section of the Operation and Maintenance Manual.
 - 2. Provide a list of installed equipment furnished under this contract. Include all information usually listed on manufacturer's name plate. In the "EQUIPMENT-IN-PLACE LIST" include, as applicable, the following for each piece of equipment installed: assigned equipment number, description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty.
 - 3. Provide spreadsheet listing all equipment with extended warranties.
 - a. List all warranties for products, equipment, components, and sub-components whose duration exceeds one year. For each warranty listed, indicate the applicable specification section, piece of equipment, description of item, location, manufacturer, duration, start date, end date, type of warranty, and the point of contact for warranty fulfillment. Also, list or reference the specific operation and maintenance procedures that must be performed to keep the warranty valid. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.
 - 4. Facility Property Breakdown

National Guard Bureau requires certain infrastructure or systems to be quantified and associated pricing indicated for each identified item. Contractor shall provide installed quantity and the associated price with each on a Form 1354 (Form provided by owner).
- D. Operating Instructions

Provide specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

 - 1. Safety Precautions and Hazards – List personnel hazards and equipment or product safety precautions for operating conditions. Provide recommended safeguards for each identified hazard.
 - 2. Operator Prestart – Provide procedures required to install, set up, and prepare each system for use.
 - 3. Startup, Shutdown, and Post-Shutdown Procedures – Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.
 - 4. Normal Operations – Provide Control Diagrams with data to explain operation and control of systems and specific equipment. Provide narrative description of Normal Operating Procedures.
 - 5. Emergency Operations – Provide Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Provide Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of utility systems including required valve positions, valve locations and zones or portions of systems controlled.
 - 6. Operator Service Requirements – Provide instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gauge readings.
 - 7. Environmental Conditions – Provide a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to run.
 - 8. Operating Log – Provide forms, sample logs, and instructions for maintaining necessary operating records.
 - 9. Additional Requirements for HVAC Control Systems Provide Data Package 5 and the following for control systems:
 - a. Narrative description on how to perform and apply functions, features, modes, and other operations, including unoccupied operation, seasonal changeover, manual operation, and alarms. Include detailed technical manual for programming and customizing control loops and algorithms.
 - b. Full as-built sequence of operations.
 - c. Copies of checkout tests and calibrations performed by the Contractor (not Cx tests).
 - d. Full points list. Provide a listing of rooms with the following information for each room:
 - 1) Floor
 - 2) Room number

- 3) Room name
 - 4) Air handler unit ID
 - 5) Reference drawing number
 - 6) Air terminal unit tag ID
 - 7) Heating or cooling valve tag ID
 - 8) Minimum cfm
 - 9) Maximum cfm
 - e. Full print out of all schedules and set points after testing and acceptance of the system.
 - f. Full as-built print out of software program.
 - g. Marking of system sensors and thermostats on the as-built floor plan and mechanical drawings with their control system designations.
- E. Preventive Maintenance
- Provide the following information for preventive and scheduled maintenance to minimize repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.
1. Lubrication Data – Include the following preventive maintenance lubrication data, in addition to instructions for lubrication required under paragraph OPERATOR SERVICE REQUIREMENTS:
 - a. A table showing recommended lubricants for specific temperature ranges and applications.
 - b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.
 - c. A Lubrication Schedule showing service interval frequency.
 2. Preventive Maintenance Plan, Schedule, and Procedures

Provide manufacturer's schedule for routine preventive maintenance, inspections, condition monitoring (predictive tests) and adjustments required to ensure proper and economical operation and to minimize repairs. Provide instructions stating when the systems should be retested. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

 - a. Define the anticipated time required to perform each of each test (work-hours), test apparatus, number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventive maintenance, inspection, adjustment, lubrication and cleaning necessary to minimize repairs.
 - b. Repair requirements must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.
 3. Cleaning Recommendations – Provide environmentally preferable cleaning recommendations in accordance with ASTM E1971.
- F. Repair
- Provide manufacturer's recommended procedures and instructions for correcting problems and making repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.
1. Troubleshooting Guides and Diagnostic Techniques

Provide step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.
 2. Wiring Diagrams and Control Diagrams

Provide point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work in color. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.
 3. Repair Procedures

Provide instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.
 4. Removal and Replacement Instructions

Provide step-by-step procedures and a list of required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Use a combination of text and illustrations.

5. Spare Parts and Supply Lists

Provide lists of spare parts and supplies required for repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

6. Repair Work-Hours

Provide manufacturer's projection of repair work-hours including requirements by type of craft. Identify, and tabulate separately, repair that requires the equipment manufacturer to complete or to participate.

G. Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1. Product Submittal Data – Provide a copy of Product Data submittals documented with the required approval.
2. Manufacturer's Instructions – Provide a copy of Manufacturer's Instructions submittals documented with the required approval.
3. O&M Submittal Data – Provide a copy of Operation and Maintenance Data submittals documented with the required approval.
4. Parts Identification – Provide identification and coverage for the parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing must show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Group the parts shown in the listings by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog.
5. Warranty Information – List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components of the system. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.
6. Extended Warranty Certificates.
7. Personnel Training Requirements – Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.
8. Testing Equipment and Special Tool Information – Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components. Provide final set points.
9. Testing and Performance Data – Include completed pre-functional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms. Provide final set points.
10. Field Test Reports – Provide a copy of Field Test Reports submittals documented with the required approval.
11. Contractor Information – Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.6 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGE

Provide the O&M data packages specified in individual technical sections. The information required in each type of data package follows:

- A. Safety precautions and hazards
- B. Operator prestart
- C. Startup, shutdown, and post-shutdown procedures

- D. Normal operations
- E. Emergency operations
- F. Operator service requirements
- G. Environmental conditions
- H. Operating log
- I. Lubrication data
- J. Preventive maintenance plan, schedule, and procedures
- K. Cleaning recommendations
- L. Troubleshooting guides and diagnostic techniques
- M. Wiring diagrams and control diagrams
- N. Repair procedures
- O. Removal and replacement instructions
- P. Spare parts and supply list
- Q. Repair work-hours
- R. Product submittal data
- S. O&M submittal data
- T. Parts identification
- U. Warranty information
- V. Extended warranty information
- W. Personnel training requirements
- X. Testing equipment and special tool information
- Y. Testing and performance data
- Z. Contractor Information
- AA. Field test reports

PART 2 PRODUCTS

2.1 OPERATION AND MAINTENANCE MANUAL FILE FORMAT

Assemble data packages into electronic Operation and Maintenance Manuals. Assemble each manual into a composite electronically indexed file using the most current version of Adobe Acrobat or similar software capable of producing PDF file format. Provide compact disks (CD) or data digital versatile disk (DVD) as appropriate, so that each one contains operation, maintenance, startup reports, testing reports, and other record documentation. Include a complete electronically linked operation and maintenance directory.

A. Organization

Bookmark Product and Drawing Information documents using the current version of CSI Masterformat numbering system, and arrange submittals using the specification sections as a structure. Use CSI Masterformat and UFGS numbers along with descriptive bookmarked titles that explain the content of the information that is being bookmarked.

B. CD or DVD Label and Disk Holder or Case

Provide the following information on the disk label and disk holder or case: Operation & Maintenance Manual; Volume No. (if necessary); CFMO Project Name; CFMO#; Facility Name; Substantial Completion Date

2.2 OPERATION AND MAINTENANCE MANUAL BINDERS

1. Bound in 8-1/2" x 11" hard cover, indexed, loose leaf binder.
 - a. Information shall be folded, if necessary
2. Binders shall not exceed 3" in depth.
3. All sections and subsections will be provided with labeled index tabs.
4. A sufficient number of binders shall be used so that each binder is less than 3/4 full.
5. Multiple binders shall be used if required to contain materials.
6. All binders shall be properly identified on Cover and Side with: O&M Manual; CFMO Project Name; CFMO #; Facility Name; Substantial Completion Date.
7. Contractor shall provide three (3) hard copies of all manuals produced.

2.3 TRAINING AUDIO/VIDEO FILES

1. All training videos shall be produced to be one composite electronically indexed file. Training videos shall be indexed in accordance with technical specification sections.
2. Audio and video shall be professional quality.
3. Provide three (3) copies each on data digital versatile disk (DVD).

4. All DVD's shall be labeled with: Training Videos; CFMO Project Name; CFMO#; Facility Name; Substantial Completion Date.

2.4 FORM 1354 – REAL PROPERTY BREADOWN

1. Contractor shall be provided a Form 1354 with identified infrastructure or systems along with the associated estimated quantities and units of measure.
2. Contractor shall note any revisions to the quantities indicated on the form.
3. Contractor shall provide furnished and installed pricing for each indicated item on the Form 1354.
4. Within 14 calendar days following the date of acceptance of the project and prior to the final pay application, the Contractor shall submit the final document.

PART 3 EXECUTION

3.1 TRAINING

Prior to acceptance of the facility by the Owner for Beneficial Occupancy, provide comprehensive training for the systems and equipment specified in the technical specifications. The training must be targeted for building maintenance personnel, and applicable building occupants. Instructors must be well-versed in the particular systems that they are presenting. Address aspects of the Operation and Maintenance Manual submitted. Training must include classroom or field lectures based on the system operating requirements. The location of classroom training requires approval by the Owner.

A. Training Plan

Submit a written training plan for approval at least 30 calendar days prior to the scheduled training. Training plan must be approved by the AE, Commissioning Authority (CxA), and Owner. Also, coordinate the training schedule with the AE, CxA, and Owner. Include within the plan the following elements:

1. Equipment included in training
2. Intended audience
3. Location of training
4. Dates of training
5. Objectives
6. Outline of the information to be presented and subjects covered including description
7. Start and finish times and duration of training on each subject
8. Methods (e.g. classroom lecture, video, site walk-through, actual operational demonstrations, written handouts)
9. Instructor names and instructor qualifications for each subject
10. List of texts and other materials to be furnished by the Contractor that are required to support training
11. Description of proposed software to be used for video recording of training sessions.

B. Training Content

The core of this training must be based on manufacturer's recommendations and the operation and maintenance information. The AE and CxA is responsible for overseeing and approving the content and adequacy of the training. Spend 95 percent of the instruction time during the presentation on the OPERATION AND MAINTENANCE DATA. Include the following for each system training presentation:

1. Start-up, normal operation, shutdown, unoccupied operation, seasonal changeover, manual/emergency operation, controls set-up and programming, troubleshooting, and alarms.
2. Relevant health and safety issues.
3. Discussion of how the feature or system is environmentally responsive. Advise adjustments and optimizing methods for energy conservation.
4. Design intent.
5. Use of O&M Manual Files.
6. Review of control drawings and schematics.
7. Interactions with other systems.
8. Special maintenance and replacement sources.
9. Tenant interaction issues.

C. Training Outline

Provide the Operation and Maintenance Manual Files (Bookmarked PDF) and a written course outline listing the major and minor topics to be discussed by the instructor on each day of the course to each trainee in the course. Provide the course outline 21 calendar days prior to the training.

D. Training Video Recording

Record classroom training session(s) on video. Provide to the Owner three copies of the training session(s) in

DVD video recording format. Capture within the recording, in video and audio, the instructors' training presentations including question and answer periods with the attendees. The recording camera(s) must be attended by a person during the recording sessions to assure proper size of exhibits and projections during the recording are visible and readable when viewed as training. Audio shall be sufficient to clearly hear the presenter and participant questions on the recording when viewed as training.

E. Unresolved Questions from Attendees

If, at the end of the training course, there are questions from attendees that remain unresolved, the instructor must send the answers, in writing, to the Owner for transmittal to the attendees, and the training video must be modified to include the appropriate clarifications.

F. Validation of Training Completion

Ensure that each attendee at each training session signs a class roster daily to confirm Government participation in the training. At the completion of training, submit a signed validation letter that includes a sample record of training for reporting what systems were included in the training, who provided the training, when and where the training was performed, and copies of the signed class rosters. Provide two copies of the validation to the Owner, and one copy to the Operation and Maintenance Manual Preparer for inclusion into the Manual's documentation.

-- END OF SECTION --

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02 41 19
SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Removal of identified items/materials within the Construction Plans.
- B. Unless identified to be salvaged, all items shall become property of the Contractor.
- C. Contractor shall properly dispose of all items in accordance with Section 01 74 19 - Construction Waste Management, or in accordance with local, State, and Federal laws.
- D. Salvaged items shall remain in the same condition as existing. Salvaged items may be designated to be re-installed or turned over to the SDARNG for reuse at a later date. Items designated to be salvaged that are damaged during Contractor's removal or storage of the item shall be replaced or repaired by the Contractor at no cost to the SD Dept. of the Military.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced with the crafts necessary for proper performance of demolition work described herein and as shown on the Plans. Workers shall be familiar with specified requirements.

PART 2 – PRODUCTS – Not Used

PART 3 – EXECUTION

3.1 PROTECTION

- A. Contractor shall implement measures to prevent damage to adjacent construction, equipment, etc. that is to remain in place and intact.
- B. Protect existing, supporting, structural members. Repair damage.

3.2 EXISTING CONDITIONS

- A. Contractor shall examine the areas and conditions under which demolition work will take place. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.3 DEMOLITION

- A. Contractor shall thoroughly examine the contract documents, determine exact location and extent of selective demolition to be performed.
- B. Remove miscellaneous items as indicated on the drawings or as otherwise necessary to execute the work of the Project.
- C. Demolish in an orderly and careful manner as required to accommodate new work.
- D. Burning of materials on site is not permitted.
- E. Remove from the site contaminated, vermin infested or dangerous material encountered and dispose of by safe means so as not to endanger health of workers and public.
- F. Remove demolished materials, tools, and equipment from the site upon completion of work. Leave site in a condition acceptable to the Architect/Owner.
- G. Repair damaged area to the grounds (wheel tracks, etc.) caused by vehicles used in performance of this Contract.
- H. Salvage for reuse or delivery to Owner
 - a. Salvaged items to be reincorporated into the new work shall be removed, stored and reinstalled by the contractor. Protect from damage during all phases of the work.
 - b. Salvaged items indicated to be turned over to the Owner shall be stored in a common location and then turned over to the Owner. Protect from damage until the Owner takes possession. Coordinate change of possession details with the Owner's representative.
- I. Remove items identified on the Construction Plans and as described below.
 - 1. Civil/Site Demolition – None
 - 2. Landscape Demolition – None
 - 3. Structural Demolition – None
 - 4. Architectural Demolition

- a. At RTI front entrance vestibule, sawcut and remove of existing door frames at frames infill panel. Be careful to protect the existing structure assumed to be hidden inside the panel.
- b. Ceiling/soffit removal and patching ONLY AS NECESSARY to complete demolition or new work around exterior door frames.
- c. Salvage of existing hardware to Owner or disposal.
- d. Salvage of existing signage at door 16/17 for reinstallation at new door.
- e. Other items as shown on drawings.
- 5. Mechanical Demolition – None
- 6. Electrical Demolition
 - a. Alternate Bid Package #1 – Alternate #1 - Remove existing AI phone from existing location and salvage for reinstallation. Add blank plate over existing wall boxes. Reinstall existing AI phone on AL-2 frame.

3.4 REPLACEMENTS

- A. Contractor shall repair and/or replace adjacent construction, equipment, etc. damaged or removed due to demolition activities. Repair and/or replacement shall be at the Contractor's expense and no reimbursement or compensation shall be provided.

END SECTION 02 41 19

SECTION 07 92 00
JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes sealants for the following applications:
 - 1. Exterior joints in the following vertical surfaces and non-traffic horizontal surfaces:
 - a. Perimeter joints between materials listed above and frames of doors and windows.
 - b. Joints between dissimilar materials.
 - c. Other joints as indicated.
 - d. Imperfect joints as requested by the architect.
 - 2. Interior joints in the following vertical surfaces and horizontal non-traffic surfaces:
 - a. Perimeter joints of exterior openings where indicated.

1.2 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and waterresistant continuous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

1.4 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
- B. ASTM International (ASTM):
 - C509-06Elastomeric Cellular Preformed Gasket and Sealing Material
 - C612-14Mineral Fiber Block and Board Thermal Insulation
 - C717-14aStandard Terminology of Building Seals and Sealants
 - C734-06(R2012)Test Method for Low-Temperature Flexibility of Latex Sealants after Artificial Weathering
 - C794-10Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
 - C919-12Use of Sealants in Acoustical Applications.
 - C920-14aElastomeric Joint Sealants.
 - C1021-08(R2014)Laboratories Engaged in Testing of Building Sealants
 - C1193-13Standard Guide for Use of Joint Sealants.
 - C1248-08(R2012)Test Method for Staining of Porous Substrate by Joint Sealants
 - C1330-02(R2013)Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants
 - C1521-13Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints
 - D217-10Test Methods for Cone Penetration of Lubricating Grease
 - D1056-14Specification for Flexible Cellular Materials—Sponge or Expanded Rubber
 - E84-09Surface Burning Characteristics of Building Materials
- C. Sealant, Waterproofing and Restoration Institute (SWRI). The Professionals' Guide
- D. Environmental Protection Agency (EPA):
 - 40 CFR 59(2014)National Volatile Organic Compound Emission Standards for Consumer and Commercial Products

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, *and* multi-component material mixing instructions.
- B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.
- C. Do not subject to sustained temperatures exceeding 90 degrees F or less than 40 degrees F.

1.5 PROJECT CONDITIONS

- A. Environmental Limitations:
 - 1. Do not proceed with installation of joint sealants under following conditions:
 - a. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
 - b. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 degrees C (40 degrees F).
 - c. When joint substrates are wet.
- B. Joint-Width Conditions:
 - 1. Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- C. Joint-Substrate Conditions:
 - 1. Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

1.6 WARRANTY

- A. Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within two (2) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide type.
 - 1. Sika Sikaflex-1a (LEED: EPD)
 - 2. Sika Sikaflex 2c NS EZ Mix
 - 3. Master Builders Solutions (formerly known as Sonneborn - BASF) - Masterseal NP1
 - 4. Master Builders Solutions (formerly known as Sonneborn - BASF) - Masterseal NP2
 - 5. Tremco: Dymonic 100
 - 6. Tremco: Dymeric 240 FC

2.2 SEALANTS:

- A. Exterior Sealants:
 - 1. Vertical surfaces, provide non-staining ASTM C920, Type S or M, Grade NS, Class 25, Use NT.
 - 2. Horizontal surfaces, provide ASTM C920, Type S or M, Grade P, Class 25.
 - 3. Movement capability: +/- 35%.
 - 4. Provide location(s) of exterior sealant as follows:
 - a. Joints formed where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames. Provide sealant at exterior surfaces of exterior wall penetrations.
 - b. Metal to metal.
 - c. Masonry to masonry or stone.
 - d. Voids where items penetrate exterior walls.
 - e. Metal reglets, where flashing is inserted into masonry joints, and where flashing is penetrated by coping dowels.
- B. Interior Sealants:
 - 1. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system are to comply with the following limits for VOC content when calculated according to 40 CFR 59, (EPA Method 24):
 - a. Architectural Sealants: 250 g/L.
 - b. Sealant Primers for Nonporous Substrates: 250 g/L.
 - c. Sealant Primers for Porous Substrates: 775 g/L.
 - 2. Vertical and Horizontal Surfaces: ASTM C920, Type S or M, Grade NS, Class 25, Use NT.
 - 3. Food Service: Use a Vinyl Acetate Homopolymer, or other low VOC, non-toxic sealant approved for use in food preparation areas.
 - 4. Provide location(s) of interior sealant as follows:
 - a. Typical narrow joint 1/4 inch or less at walls and adjacent components.
 - b. Perimeter of doors, windows, access panels which adjoin concrete or masonry surfaces.
 - c. Joints at masonry walls and columns, piers, concrete walls or exterior walls.

2.3

COLOR:

- A. Sealants used with exposed masonry are to match color of mortar joints.
- B. Sealants used with unpainted concrete are to match color of adjacent concrete.
- C. Color of sealants for other locations to be light gray or aluminum, unless otherwise indicated in construction documents.

2.4

JOINT SEALANT BACKING:

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
 - 1. Type C: Closed-cell material with a surface skin.
- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D1056 or synthetic rubber (ASTM C509), nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 degrees F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5

PRIMER:

- A. As recommended by manufacturer of caulking or sealant material.
- B. Stain free type.

2.6

CLEANERS-NON POROUS SURFACES:

- A. Chemical cleaners compatible with sealant and acceptable to manufacturer of sealants and sealant backing material. Cleaners to be free of oily residues and other substances capable of staining or harming joint substrates and adjacent non-porous surfaces and formulated to promote adhesion of sealant and substrates.

PART 3 - EXECUTION

3.1

INSPECTION:

- A. Inspect substrate surface for bond breaker contamination and unsound materials at adherent faces of sealant.
- B. Coordinate for repair and resolution of unsound substrate materials.
- C. Inspect for uniform joint widths and that dimensions are within tolerance established by sealant manufacturer.

3.2

PREPARATIONS:

- A. Prepare joints in accordance with manufacturer's instructions and SWRI (The Professionals' Guide).
- B. Clean surfaces of joint to receive caulking or sealants leaving joint dry to the touch, free from frost, moisture, grease, oil, wax, lacquer paint, or other foreign matter that would tend to destroy or impair adhesion.
 - 1. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants.
 - 2. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air. Porous joint surfaces include but are not limited to the following:
 - a. Concrete.
 - b. Masonry.
 - c. Unglazed surfaces of ceramic tile.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous surfaces include but are not limited to the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.

- d. Glazed surfaces of ceramic tile.
- C. Do not cut or damage joint edges.
- D. Apply non-staining masking tape to face of surfaces adjacent to joints before applying primers, caulking, or sealing compounds.
 - 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.
- E. Apply primer to sides of joints wherever required by compound manufacturer's printed instructions or as indicated by pre-construction joint sealant substrate test.
 - 1. Apply primer prior to installation of back-up rod or bond breaker tape.
 - 2. Use brush or other approved means that will reach all parts of joints. Avoid application to or spillage onto adjacent substrate surfaces.

3.3 BACKING INSTALLATION:

- A. Install backing material, to form joints enclosed on three sides as required for specified depth of sealant.
- B. Where deep joints occur, install filler to fill space behind the backing rod and position the rod at proper depth.
- C. Cut fillers installed by others to proper depth for installation of backing rod and sealants.
- D. Install backing rod, without puncturing the material, to a uniform depth, within plus or minus 3 mm (1/8 inch) for sealant depths specified.
- E. Where space for backing rod does not exist, install bond breaker tape strip at bottom (or back) of joint so sealant bonds only to two opposing surfaces.

3.4 SEALANT DEPTHS AND GEOMETRY:

- A. At widths up to 1/4 inch, sealant depth equal to width.
- B. At widths over 1/4 inch, sealant depth 1/2 of width up to 1/2 inch maximum depth at center of joint with sealant thickness at center of joint approximately 1/2 of depth at adhesion surface.

3.5 INSTALLATION:

- A. General:
 - 1. Apply sealants and caulking only when ambient temperature is between 5 degrees C and 38 degrees C (40 degrees and 100 degrees F).
 - 2. Do not install polysulfide base sealants where sealant may be exposed to fumes from bituminous materials, or where water vapor in continuous contact with cementitious materials may be present.
 - 3. Do not install sealant type listed by manufacture as not suitable for use in locations specified.
 - 4. Apply caulking and sealing compound in accordance with manufacturer's printed instructions.
 - 5. Avoid dropping or smearing compound on adjacent surfaces.
 - 6. Fill joints solidly with compound and finish compound smooth.
 - 7. Tool exposed joints to form smooth and uniform beds, with slightly concave surface conforming to joint configuration per Figure 5A in ASTM C1193 unless shown or specified otherwise in construction documents. Remove masking tape immediately after tooling of sealant and before sealant face starts to "skin" over. Remove any excess sealant from adjacent surfaces of joint, leaving the working in a clean finished condition.
 - 8. Finish paving or floor joints flush unless joint is otherwise detailed.
 - 9. Apply compounds with nozzle size to fit joint width.
 - 10. Test sealants for compatibility with each other and substrate. Use only compatible sealant. Submit test reports.
 - 11. Replace sealant which is damaged during construction process.
- B. For application of sealants, follow requirements of ASTM C1193 unless specified otherwise. Take all necessary steps to prevent three-sided adhesion of sealants.

3.4 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

END OF SECTION 07 92 00

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08 11 13
STEEL DOORS AND FRAMES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARD

ANSI/SDI A250.8 Specifications for Standard Steel Doors and Frames (SDI-100)

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1/D1.1M Structural Welding Code - Steel ASTM INTERNATIONAL (ASTM)

ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

ASTM A879/A879M Standard Specification for Steel Sheet, zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface

ASTM A924/A924M Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation

ASTM C591 Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation

ASTM C612 Standard Specification for Mineral Fiber Block and Board Thermal Insulation

ASTM D2863 Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)

ASTM E1300 Standard Practice for Determining Load Resistance of Glass in Buildings

ASTM F2247 Standard Test Method for Metal Doors Used in Blast Resistant Applications (Equivalent Static Load Method)

ASTM F2248 Standard Practice for Specifying an Equivalent 3-Second Duration Design Loading for Blast Resistant Glazing Fabricated with Laminated Glass

ASTM F2927 Standard Test Method for Door Systems Subject to Airblast Loadings

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

ANSI/BHMA A156.115 Hardware Preparation in Steel Doors and Steel Frames

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM HMMA 810 Hollow Metal Doors NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 80 Standard for Fire Doors and Other Opening Protectives

NFPA 105 Standard for Smoke Door Assemblies and Other Opening Protectives

NFPA 252 Standard Methods of Fire Tests of Door Assemblies

STEEL DOOR INSTITUTE (SDI/DOOR)

SDI/DOOR 111 Recommended Details for Standard Steel Doors, Frames, and Accessories and Related Components

SDI/DOOR 113	Standard Practice for Determining the Steady-State Thermal Transmittance of Steel Door and Frame Assemblies
SDI/DOOR A250.3	Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames
SDI/DOOR A250.4	Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors
SDI/DOOR A250.6	Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames
SDI/DOOR A250.8	Specifications for Standard Steel Doors and Frames
SDI/DOOR A250.11	Recommended Erection Instructions for Steel Frames
U.S. DEPARTMENT OF DEFENSE (DOD)	
UFC 4-010-01	DoD Minimum Antiterrorism Standards for Buildings
UNDERWRITERS LABORATORIES (UL)	
UL 10C	UL Standard for Safety Positive Pressure Fire Tests of Door Assemblies

1.2 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

- A. Shop Drawings Doors
 - 1. Accessories
 - 2. Schedule of Doors
 - 3. Schedule of Frames
- B. Product Data
 - 1. Recycled Content for Steel Door and Frame Product
 - 2. Doors and Frames
 - 3. Accessories
- C. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.
- D. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years documented experience.
- E. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years of documented experience.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors, frames, and accessories undamaged and with protective wrappings or packaging.
- B. Strap knock-down frames in bundles.
- C. Provide temporary steel spreaders securely fastened to the bottom of each welded frame.
- D. Store doors and frames on platforms under cover in clean, dry, ventilated, and accessible locations, with 1/4-inch airspace between doors.
- E. Remove damp or wet packaging immediately and wipe affected surfaces dry.
- F. Replace damaged materials with new.

PART 2 PRODUCTS

2.1 STANDARD STEEL DOORS

- A. SDI A250.8, except as specified otherwise.
- B. Prepare doors to receive door hardware as specified in Section 08 71 00 DOOR HARDWARE.
- C. Undercut where indicated.
- D. Provide exterior doors with top edge closed flush and sealed to prevent water intrusion.
- E. Provide doors at 1-3/4 inch thick, unless otherwise indicated.
- F. Provide door material that uses a minimum of 25 percent recycled content.
- G. Provide data indicating percentage of recycled content for steel door product.
- H. Provide exterior glazing in accordance with ASTM F2248 and ASTM E1300.
- I. Provide weep-hole openings in bottom of exterior doors to permit moisture to escape. Seal joints in top edges

of doors against water penetration.

- J. Exterior doors must be tested in accordance with ASTM F2247 or ASTM F2927 to meet requirements of UFC 4-010-01.
- K. Accessibility: Comply with ICC A117.1 and ADA Standards.
- L. Classification - Level, Performance, Model
 - 1. Heavy Duty Doors, for interior.
 - a. SDI A250.8, Level 2, physical performance Level B, Model 2, with core construction as required by the manufacturer for interior doors and for exterior doors, of size(s) and design(s) indicated. Where vertical stiffener cores are required, the space between the stiffeners must be filled with board insulation.
 - 2. Extra Heavy Duty Doors, for exterior.
 - a. SDI A250.8, Level 3, physical performance Level A, Model 2 with core construction as required by the manufacturer for interior doors and for indicated exterior doors, of size(s) and design(s) indicated. Where vertical stiffener cores are required, the space between the stiffeners must be filled with board insulation. Zinc Coating.

2.2 CUSTOM HOLLOW METAL DOORS

- A. Provide custom hollow metal doors where nonstandard steel doors are indicated and/or field measured. Provide custom steel doors in the door size(s), design(s), materials, construction, gages, and finish as specified for custom steel doors and complying with the requirements of NAAMM HMMA 810.
- B. Fill all spaces in exterior doors with insulation.
- C. Close top and bottom edges with steel channels not lighter than 16 gage. Close tops of exterior doors flush with an additional channel and seal to prevent water intrusion.
- D. Prepare doors to receive hardware specified in Section 08 71 00 DOOR HARDWARE.
- E. Undercut doors where indicated.
- F. Provide doors at 1-3/4 inch thick, unless otherwise indicated.
- G. Provide exterior glazing in accordance with ASTM F2248 and ASTM E1300.
- H. Exterior doors must be tested in accordance with ASTM F2247 and ASTM F2927 to meet the requirements of UFC 4-010-01.

2.3 INSULATED STEEL DOOR SYSTEMS

- A. Provide insulated steel doors and frames in accordance with SDI 113 at exterior entrances and where indicated. Meet energy requirements including Solar Heat Gain Coefficient (SHGC) and U-factor.
- B. Provide insulated steel doors with a core of polyurethane foam; face sheets, edges, and frames of galvanized steel not lighter than 23 gage, 16 gage, and 16 gage respectively; magnetic weatherstripping; nonremovable-pin hinges; thermal-break aluminum threshold; and vinyl door bottom.
- C. Provide to doors and frames a phosphate treatment, rust-inhibitive primer.
- D. Prepare doors to receive specified hardware.
- E. Provide doors 1-3/4 inch thick.

2.4 ACCESSORIES

- A. Moldings: Provide moldings around glass of interior and exterior doors and louvers of interior doors. Provide non-removable moldings on outside of exterior doors and on corridor side of interior doors. Other moldings may be stationary or removable. Secure inside moldings to stationary moldings or provide snap-on moldings.

2.5 INSULATION CORES

Provide insulating cores at all exterior doors and other specific doors noted in the door schedule, and provide an apparent U-factor of .48 in accordance with SDI 113 and conforming to:

- 1. Polyurethane: 2 lbs/cu ft minimum density.

2.6 STANDARD STEEL FRAMES

- A. Frames shall be SDI A250.8. Frame level shall correspond to door level unless otherwise specified.
- B. Form frames to sizes and shapes indicated, with welded corners.
- C. Provide steel frames for doors, transoms, sidelights, mullions, cased openings, and interior glazed panels, unless otherwise indicated. Provide frame product that uses a minimum of 25 percent recycled content. Provide data indicating percentage of recycled content for steel frame product.
- D. Frames Wider than 48 inches: Reinforce with steel channel fitted tightly into frame head, flush with top.

- E. Welded Frames

Continuously weld frame faces at corner joints. Mechanically interlock or continuously weld stops and rabbets. Grind welds smooth. Weld frames in accordance with the recommended practice of the Structural Welding Code Sections 1 through 6, AWS D1.1/D1.1M and in accordance with the practice specified by the producer of the metal being welded.

 - 1. Special Conditions: Knock down/dimpled type frames may be used under conditions where welded frames will not suite existing conditions. Get approval of these conditions with Architect before order. Depressions/voids must be patched flush with surrounding frame surface with metallic filler and be properly prepared for finishing.
- F. Mullions and Transom Bars

Provide mullions and transom bars of closed or tubular construction with heads and jambs butt-welded together. Bottom of door mullions must have adjustable floor anchors and spreader connections.
- G. Stops and Beads

Provide form and loose stops and beads from 20 gage steel. Provide for glazed and other openings in standard steel frames. Secure beads to frames with oval-head, countersunk Phillips self-tapping sheet metal screws or concealed clips and fasteners. Space fasteners approximately 12 to 16-inches on center. Miter molded shapes at corners. Butt or miter square or rectangular beads at corners.
- H. Cased Openings: Fabricate frames for cased openings of same material, gage, and assembly as specified for metal door frames, except omit door stops and preparation for hardware.
- I. Anchors

Provide anchors to secure the frame to adjoining construction. Provide steel anchors, zinc-coated not lighter than 18 gage.

 - 1. Wall Anchors

Provide at least three anchors for each jamb. For frames which are more than 7.5 feet in height, provide one additional anchor for each jamb for each additional 2.5 feet or fraction thereof.

 - a. Masonry: Provide anchors of corrugated or perforated steel straps or 3/16-inch diameter steel wire, adjustable or T-shaped;
 - b. Completed openings: Secure frames to previously placed concrete or masonry with expansion bolts in accordance with SDI 111; and Solid plaster partitions: Secure anchors solidly to back of frames and tie into the lath. Provide adjustable top strut anchors on each side of frame for fastening to structural members or ceiling construction above. Provide size and type of strut anchors as recommended by the frame manufacturer.
 - 2. Floor Anchors

Provide floor anchors drilled for 3/8-inch anchor bolts at bottom of each jamb member. Where floor fill occurs, terminate bottom of frames at the indicated finished floor levels and support by adjustable extension clips resting on and anchored to the structural slabs.

2.7 FIRE AND SMOKE DOORS AND FRAMES

- A. Provide fire and smoke doors and frames in accordance with NFPA 80 and NFPA 105 and this specification. Include insulated core materials in fire doors where indicated in the door schedule.
- B. Labels

Provide fire doors and frames bearing the label of Underwriters Laboratories (UL), Factory Mutual Engineering and Research (FM), or Warnock Hersey International (WHI) attesting to the rating required. Testing must be in accordance with NFPA 252 or UL 10C. Provide labels that are metal with raised letters, bearing the name or file number of the door and frame manufacturer. Labels must be permanently affixed at the factory to frames and to the hinge edge of the door. Do not paint door labels.
- C. Oversized Doors

For fire doors and frames which exceed the size for which testing and labeling are available, furnish certificates stating that the doors and frames are identical in design, materials, and construction to a door which has been tested and meets the requirements for the class indicated.
- D. Astragal on Fire and Smoke Doors

On pairs of labeled fire doors, conform to NFPA 80 and UL requirements. On smoke control doors, conform to NFPA 105.

2.8 EXTERIOR FRAMES

- A. Provide thermal insulation in all exterior frames.
- B. Provide frames of a minimum Level 4, with frames of a minimum thickness of 0.067 inch, 14 gage.

2.9 HARDWARE PREPARATION

- A. Drill and tap doors and frames to receive finish hardware.
- B. Prepare doors and frames for hardware in accordance with the applicable requirements of SDI A250.8 and SDI A250.6. For additional requirements refer to ANSI/BHMA A156.115.
- C. Drill and tap for surface-applied hardware at the project site. Build additional reinforcing for surface-applied hardware into the door at the factory.
- D. Punch door frames, with the exception of frames that will have weatherstripping or lightproof or soundproof gasketing, to receive a minimum of two rubber or vinyl door silencers on lock side of single doors and one silencer for each leaf at heads of double doors.
- E. Provide high frequency hinge reinforcement in all exterior door frames.
- F. Set lock strikes out to provide clearance for silencers.

2.10 FINISHES

- A. Factory-Primed Finish
 - 1. Thoroughly clean all surfaces of doors and frames then chemically treat and factory prime with a rust inhibiting coating as specified in SDI A250.8.
- B. Hot-Dip Zinc-Coated and Factory-Primed Finish
 - 1. Fabricate scheduled doors and frames from hot dipped zinc coated steel, alloyed type, that complies with ASTM A924/A924M and ASTM A653/A653M. The coating weight must meet or exceed the minimum requirements for coatings having 0.4 ounces per square foot, total both sides, i.e., A40.
 - 2. Repair damaged zinc-coated surfaces by the application of zinc dust paint.
 - 3. Thoroughly clean and chemically treat to insure maximum paint adhesion.
 - 4. Factory prime as specified in SDI A250.8.
- C. Electrolytic Zinc-Coated Anchors and Accessories
 - 1. Provide electrolytically deposited zinc-coated steel in accordance with ASTM A879/A879M, Commercial Quality, Coating Class A.
 - 2. Phosphate treat and factory prime zinc-coated surfaces as specified in SDI A250.8.
- D. At Door 26 – Frame and door are to G90 galvanized.

2.11 FABRICATION AND WORKMANSHIP

- A. Provide finished doors and frames that are strong and rigid, neat in appearance, and free from defects, waves, scratches, cuts, dents, ridges, holes, warp, and buckle.
- B. Provide molded members that are clean cut, straight, and true, with joints coped or mitered, well formed, and in true alignment.
- C. Dress exposed welded and soldered joints smooth.
- D. Design door frame sections for use with the wall construction indicated.
- E. Corner joints must be well formed and in true alignment.
- F. Conceal fastenings where practicable.
- G. Frames for use in solid plaster partitions must be welded construction.
- H. On wraparound frames for masonry partitions, provide a throat opening 1/8-inch larger than the actual masonry thickness.
- I. Design frames in exposed masonry walls or partitions to allow sufficient space between the inside back of trim and masonry to receive caulking compound.

2.12 PROVISIONS FOR GLAZING

Materials are specified in Section 08 81 00, GLAZING.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Frames
 - Set frames in accordance with SDI A250.11. Plumb, align, and brace securely until permanent anchors are set. Anchor bottoms of frames with expansion bolts or powder-actuated fasteners. Build in or secure wall anchors to adjoining construction. Where frames require ceiling struts or overhead bracing, anchor frames to the struts or bracing. Install thermal insulation at exterior frames.
- B. Doors
 - Hang doors in accordance with clearances specified in SDI A250.8. After erection and glazing, clean and adjust hardware.
- C. Fire and Smoke Doors and Frames

Install fire doors and frames, including hardware, in accordance with NFPA 80. Install fire rated smoke doors and frames in accordance with NFPA 80 and NFPA 105.

3.2 PROTECTION

- A. Protect doors and frames from damage.
- B. Repair damaged doors and frames prior to completion and acceptance of the project or replace with new, as directed.
- C. Wire brush rusted frames until rust is removed.
- D. Clean thoroughly.
- E. Apply an all-over coat of rust-inhibitive paint of the same type used for shop coat.

3.3 CLEANING

- A. Upon completion, clean exposed surfaces of doors and frames thoroughly.
- B. Remove mastic smears and other unsightly marks.

END SECTION 08 11 13

SECTION 08 43 13
ALUMINUM-FRAMED STOREFRONTS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Interior and Exterior Aluminum-framed storefronts complaint with UFC 4-010-01 – Unified Facilities Criteria – DOD Minimum Antiterrorism Standards for Buildings.
- B. Aluminum-framed storefront, with vision glass.
- C. Aluminum doors and frames.
- D. Weatherstripping.

1.2 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Sealing joints between frames and adjacent construction.
- B. Section 08 71 00 - Door Hardware: Hardware items other than specified in this section.
- C. Section 08 80 00 - Glazing: Glass and glazing accessories.

1.3 REFERENCE STANDARDS

- A. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site 2015.
- B. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems 2015.
- C. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum 2014 (2015 Errata).
- D. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections 2009.
- E. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures Most Recent Edition Cited by Referring Code or Reference Standard.
- F. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2021.
- G. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric) 2021.
- H. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen 2019.
- I. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference 2014 (Reapproved 2021).
- J. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference 2000 (Reapproved 2016).
- K. UFC 4-010-01 – Unified Facilities Criteria – DOD Minimum Antiterrorism Standards for Buildings. (12 December 2018; including Change 2, 30 July 2022).

1.4 SUBMITTALS

- A. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, and internal drainage details.
- B. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.
- C. Recycled Content: Complete LEED Material Content form in Section 01 33 29, Sustainable Design Reporting. Provide cost and recycled content data.
- D. Samples: Submit three samples 2 x 3 inches (50 x 75 mm) in size illustrating finished aluminum surface, glass, infill panels, glazing materials.
- E. Manufacturer's Certificate: Certify that aluminum-framed storefronts meet or exceed specified requirements, in particular, that the products supplied are complaint with UFC 4-010-01 – Unified Facilities Criteria – DOD Minimum Antiterrorism Standards for Buildings, in particular Chapter 3, Standard 10 (Glazing) and Standard 12 (Exterior Doors).

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.6 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

1.7 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide ten year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.
- D. Provide ten year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design:
 - a. RTI: EFCO Corporation; Series 526 Thermal Impact Storefront Framing, center glazed.
 - b. UTES: EFCO Corporation; Series 403X Thermal Storefront Framing, center glazed.

2.2 FRAMING FOR INSULATING GLAZING

- A. Center-Set Style, Blast Mitigation Tested:
 - 1. Vertical Mullion Dimensions:
 - a. Sightline:
 - i. RTI: 2 1/2 inches wide
 - ii. UTES: 2 inches wide
 - b. Depth:
 - i. RTI: 6 inches deep min. (5 inches with extensions to make a minimum of 6 inch deep mullions).
 - ii. UTES: 6 inches deep min. (4 1/2 inches with extensions to make a minimum of 6 inch deep mullions).

2.3 BASIS OF DESIGN – SWINGING DOORS

- A. Wide Stile, Laminated Insulating Glazing 1 1/4 inches thick:
 - 1. Basis of Design:
 - a. RTI: EFCO Corporation; Series D518 DuraStile Heavy Duty Swing Entrance Doors.
 - b. UTES: EFCO Corporation; Series D502 ThermaStile Swing Entrance Doors.
 - 2. Thickness: 2 inches (51 mm).

2.4 ALUMINUM-FRAMED STOREFRONT

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
 - 3. Glazing Rabbet: For 1-1/4 inch (31.7 mm) laminated insulating glazing.
 - 4. Finish: Class I color anodized.
 - a. Factory finish all surfaces that will be exposed in completed assemblies.
 - 5. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
 - 6. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.
 - 7. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
 - 8. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
 - 9. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
 - 10. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

B. Performance Requirements

11. Storefront system shall be compliant with UFC 4-010-01 – Unified Facilities Criteria – DOD Minimum Antiterrorism Standards for Buildings. (12 December 2018; including Change 2, 30 July 2022), in particular Chapter 3, Standard 10 (Glazing) and Standard 12 (Exterior Doors).
12. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
 - a. Design Wind Loads: Comply with requirements of ASCE 7.
 - b. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
13. Water Penetration Resistance on Manufactured Assembly: No uncontrolled water on interior face, when tested in accordance with ASTM E331 at pressure differential of 12 psf (575 Pa).
14. Air Leakage: 0.06 cfm/sq ft (0.3 L/sec sq m) maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf (75 Pa) pressure difference.
15. Condensation Resistance Factor of Framing: 56, minimum, measured in accordance with AAMA 1503.
16. Overall U-value Including Glazing: 0.38 Btu/(hr sq ft deg F), maximum.
17. LEED Criteria:
 - a. Products in this section may contribute to the Environmental Product Declaration and Material Ingredients (HPD+) credit.
 - b. Recycled Content: provide highest recycled content available; minimum 25 percent recycled content value (post-consumer plus one-half pre-consumer recycled content).

2.5 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
 18. Glazing Stops: Flush.
 19. Glazing: See Section 08 80 00.
- B. Swing Doors: Glazed aluminum.
 20. Door Thickness: 2 inches (51 mm).
 21. Top Rail: 5 inches (125 mm) wide.
 22. Vertical Stiles: 5 inches (125 mm) wide.
 23. Bottom Rail: 10 inches (190 mm) wide.
 24. Glazing Stops: Square.
 25. Finish: Same as storefront

2.6 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Fasteners: Stainless steel.
- C. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

2.7 FINISHES

- A. Class I Color Anodized Finish: AAMA 611 AA-M12C22A42 Integrally colored anodic coating not less than 0.7 mils (0.018 mm) thick.
- B. Color:
 - a. RTI: Medium Bronze Anodized
 - b. UTES: Black Anodized

2.8 HARDWARE

- A. For each door, include weatherstripping.
- B. Other Door Hardware: See Section 08 71 00.
- C. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that storefront wall openings and adjoining water-resistive and/or air barrier seal materials are ready to receive work of this section.

3.2 INSTALLTION

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.3 TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inch per 3 feet (1.5 mm per m) non-cumulative or 0.06 inch per 10 feet (1.5 mm per 3 m), whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).

3.4 ADJUSTING

- A. Adjust operating hardware and sash for smooth operation.

3.5 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.

3.6 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.

END SECTION 08 43 13

08 81 00
GLAZING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)

AAMA 800	Voluntary Specifications and Test Methods for Sealants
AAMA GD5G-1	Glass Design for Sloped Glazing
AAMA TIR A7	Sloped Glazing Guidelines

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z97.1	Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test
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ASTM INTERNATIONAL (ASTM)

ASTM C509	Elastomeric Cellular Preformed Gasket and Sealing Material
ASTM C864	Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers
ASTM C920	Standard Specification for Elastomeric Joint Sealants
ASTM C1021	Standard Practice for Laboratories Engaged in Testing of Building Sealants
ASTM C1036	Standard Specification for Flat Glass
ASTM C1048	Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass
ASTM C1087	Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems
ASTM C1172	Standard Specification for Laminated Architectural Flat Glass
ASTM C1184	Standard Specification for Structural Silicone Sealants
ASTM C1281	Standard Specification for Preformed Tape Sealants for Glazing Applications
ASTM C1376	Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass
ASTM D395	Standard Test Methods for Rubber Property - Compression Set
ASTM D2287	Nonrigid Vinyl Chloride Polymer and Copolymer Molding and Extrusion Compounds
ASTM D4802	Standard Specification for Poly (Methyl Methacrylate) Acrylic Plastic Sheet
ASTM E90	Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
ASTM E119	Standard Test Methods for Fire Tests of Building Construction and Materials
ASTM E413	Classification for Rating Sound Insulation
ASTM E1300	Standard Practice for Determining Load Resistance of Glass in Buildings
ASTM E2190	Standard Specification for Insulating Glass Unit Performance and Evaluation
ASTM E2226	Standard Practice for Application of Hose Stream
ASTM F1642/F1642M	Standard Test Method for Glazing and Glazing Systems Subject to Airblast Loadings
ASTM F2912	Standard Specification for Glazing and Glazing Systems Subject to Airblast Loadings

GLASS ASSOCIATION OF NORTH AMERICA (GANA)

GANA Glazing Manual	Glazing Manual
GANA Sealant Manual	Sealant Manual
GANA Standards Manual	Engineering Standards Manual

INSULATING GLASS MANUFACTURERS ALLIANCE (IGMA)

IGMA TB-1200	Guidelines for Insulating Glass Dimensional Tolerances
IGMA TB-3001	Guidelines for Sloped Glazing
IGMA TM-3000	North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use

NATIONAL FENESTRATION RATING COUNCIL (NFRC)

NFRC 100	Procedure for Determining Fenestration Product U-Factors
NFRC 200	Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 80	Standard for Fire Doors and Other Opening Protectives
NFPA 251	Standard Methods of Tests of Fire Resistance of Building Construction and Materials
NFPA 252	Standard Methods of Fire Tests of Door Assemblies
NFPA 257	Standard on Fire Test for Window and Glass Block Assemblies

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star	Energy Star Energy Efficiency Labeling System (FEMP)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

16 CFR 1201	Safety Standard for Architectural Glazing Materials
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UNDERWRITERS LABORATORIES (UL)

UL 752	Standard for Bullet-Resisting Equipment
UL MEAPD	Mechanical Equipment and Associated Products Directory (online version is listed under Certifications at www.ul.com)

1.2 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

- A. SD-03 Product Data
 - 1. Insulating Glass
 - 2. Glazing Accessories
 - 3. Sealants
 - 4. Joint Backer
- B. SD-04 Samples
 - 1. Insulating Glass
 - 2. Glazing Tape
 - 3. Sealing Tapes
- C. SD-07 Certificates
 - 1. Insulating Glass
- D. SD-08 Manufacturer's Instructions Setting and Sealing Materials
 - 1. Glass Setting
- E. SD-11 Closeout Submittals
 - 1. Warranty for Insulated Glass Units
 - 2. Warranty for Polycarbonate Sheet
 - 3. Warranty for Monolithic Reflective Glass
 - 4. Warranty for Monolithic Opacified Spandrel

1.3 SYSTEM DESCRIPTION

Fabricate and install watertight and airtight glazing systems to withstand thermal movement and wind loading without glass breakage, gasket failure, deterioration of glazing accessories, or defects in the work. Glazed panels must comply with the safety standards, in accordance with ANSI Z97.1, and comply with indicated wind/snow loading in accordance with ASTM E1300.

1.4 QUALITY CONTROL

Submit two 8 by 10-inch samples of each of the following: tinted glass, heat-absorbing glass, and insulating glass units. Submit three samples of each other material.

1.5 DELIVERY, STORAGE, AND HANDLING

Deliver products to the site in unopened containers, labeled plainly with manufacturers' names and brands. Store glass and setting materials in safe, enclosed dry locations and do not unpack until needed for installation. Handle and install materials in a manner that will protect them from damage.

1.6 ENVIRONMENTAL REQUIREMENTS

Do not start glazing work until the outdoor temperature is above 40 degrees F and rising, unless procedures recommended by the glass manufacturer and approved by the Contracting Officer are made to warm the glass and rabbet surfaces. Provide ventilation to prevent condensation of moisture on glazing work during installation. Do

not perform glazing work during damp or rainy weather.

1.7 WARRANTY

A. Warranty for Insulated Glass Units

Warranty insulating glass units against development of material obstruction to vision (such as dust, fogging, or film formation on the inner glass surfaces) caused by failure of the hermetic seal, other than through glass breakage, for a 10-year period following acceptance of the work. Provide new units for any units failing to comply with terms of this warranty within 45 working days after receipt of notice from the Government.

B. Warranty for Polycarbonate Sheet

For a 5-year period following acceptance of the work:

1. Warranty Type I, Class A (UV stabilized) sheets against breakage;
2. Warranty Type III (coated, mar-resistant) sheets against breakage and against coating delamination;
3. Warranty Type IV (coated sheet) against breakage and against yellowing;
4. Warranty extruded polycarbonate profile sheet against breakage.
5. For a 10-year period following acceptance of the work, warranty Type IV against yellowing and loss of light transmission.

C. Monolithic Reflective Glass

Manufacturer must warrant the monolithic reflective glass to be free of peeling or deteriorating of coating for a period of 10 years after Date of Substantial Completion. Warranty must be signed by manufacturer.

PART 2 PRODUCTS

2.1 GLASS

ASTM C1036, unless specified otherwise. In doors and sidelights, provide safety glazing material conforming to 16 CFR 1201.

A. Clear Glass

For interior glazing (i.e., pass and observation windows), 1/4-inch-thick glass should be used.

Type I, Class 1 (clear), Quality q4 (A). Provide for glazing openings not indicated or specified otherwise. Use double-strength sheet glass or 1/8-inch float glass for openings up to and including 15 square feet, 3/16 inch for glazing openings over 15 square feet but not over 30 square feet, and 1/4 inch for glazing openings over 30 square feet but not over 45 square feet.

B. Annealed Glass

Annealed glass must be Type I transparent flat type, Class 1 - clear, Quality q3 - glazing select, conforming to ASTM C1036.

C. Reflective Coating Vision Glass ASTM C1376

D. Laminated Glass

[ASTM C1172, Laminated glass fabricated from two nominal 1/8 inch pieces of Type I, Class 1, Quality Q3, flat annealed clear glass conforming to ASTM C1036. Flat glass to be bonded together with a minimum of a 0.030 inch thick, clear polyvinyl butyral laminated, conforming to requirements of 16 CFR 1201 and ASTM C1172. For insulated glass units, use the laminated glass for the innermost plane.

1. The total thickness of nominally 1/4 inches.
2. Color to be clear.

J. Tempered Glass

ASTM C1048, Kind FT (fully tempered), Condition A (uncoated), Type I, Class 1 transparent, Quality q3, 1/4 inch thick, conforming to ASTM C1048 and GANA Standards Manual. Color must be clear
Provide at all interior glazing locations.

M. Fire/Safety Rated Glass

1. Fire Resistive Rated Glazing

Fire resistive glass must be laminated, with intumescent interlayer, Type I transparent flat type, Class 1-clear and meet 16 CFR 1201 Category I (under 9 square feet) or II (over 9 square feet). Glass must have a 90 minute rating when tested in accordance with ASTM E119 and NFPA 251. Glass must be permanently labeled with appropriate markings. Markings must include D-H-T-W.

2.3 INSULATING GLASS UNITS

Two panes of glass separated by a dehydrated airspace filled with argon gas and hermetically sealed, conforming to ASTM E2190. Submit performance and compliance documentation for each type of insulating glass. Provide laminated glass at innermost pane. The laminated pane shall be adhered to its supporting frame using structural silicone sealant or adhesive glazing tape. The structural silicone sealant bite shall be equal to the larger of 3/8" or the thickness of the laminated glass to which it adheres. The minimum thickness of the structural silicone bead shall be 3/16". The glazing tape bite shall be equal to two times the thickness of the laminated glass to which it adheres. The structural silicone bead or glazing tape shall be applied to both sides of single pane laminated glass but need only be applied to the inboard (protected) side of an IGU.

Dimensional tolerances must be as specified in IGMA TB-1200. Spacer must be black, roll-formed, thin-gauge, C-section steel, with bent or tightly welded or keyed and sealed joints to completely seal the spacer periphery and eliminate moisture and hydrocarbon vapor transmission into airspace through the corners. Primary seal must be compressed polyisobutylene and the secondary seal must be a specially formulated silicone.

A. Low Emissivity Coatings

Interior and exterior glass panes for Low-E insulating units must be Type I annealed flat glass, Class 2-tinted with anti-reflective low-emissivity coating or heat-strengthened or fully tempered glass complying with ASTM C1048, Condition C on No. 2 surface (inside surface of exterior pane), Quality q3 - glazing select, conforming to ASTM C1036. Glass performance must be U value maximum of 0.24 Btu/hr-ft²-F, Solar Heat Gain Coefficient (SHGC) maximum of 0.27. Color to be selected from full line of colors.

2.4 SETTING AND SEALING MATERIALS

Provide as specified in the GANA Glazing Manual, IGMA TM-3000, IGMA TB-3001, and manufacturer's recommendations, unless specified otherwise herein. Do not use metal sash putty, non-skinning compounds, non-resilient preformed sealers, or impregnated preformed gaskets. Materials exposed to view and unpainted must be gray or neutral color. Sealant testing must be performed by a testing agency qualified according to ASTM C1021.

Submit glass manufacturer's recommendations for setting and sealing materials and for installation of each type of glazing material specified.

A. Sealants

Provide elastomeric sealants.

1. Elastomeric Sealant

ASTM C920, Type S, Grade NS, Class 12.5, Use G. Use for channel or stop glazing metal sash. Sealants must be chemically compatible with setting blocks, edge blocks, and sealing tapes, with sealants used in manufacture of insulating glass units.

Color of sealant must be white.

B. Joint Backer

Joint backer must have a diameter size at least 25 percent larger than joint width; type and material as recommended in writing by glass and sealant manufacturer.

C. Glazing Tapes

1. Back-Bedding Mastic Glazing Tapes

Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C1281 and AAMA 800 for products indicated below:

- AAMA 804.3 tape, where indicated.
- AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
- AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

2. Expanded Cellular Glazing Tapes

Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:

- AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
- AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

D. Sealing Tapes

Preformed, semisolid, PVC-based material of proper size and compressibility for the particular condition,

complying with ASTM D2287. Use only where glazing rabbet is designed for tape and tape is recommended by the glass or sealant manufacturer. Provide spacer shims for use with compressible tapes. Tapes must be chemically compatible with the product being set.

E. Setting Blocks and Edge Blocks

Closed-cell neoprene setting blocks must be dense extruded type conforming to ASTM C509 and ASTM D395, Method B, Shore A durometer between 70 and 90. Edge blocking must be Shore A durometer of 50 (plus or minus 5). Provide silicone setting blocks when blocks are in contact with silicone sealant. Profiles, lengths and locations must be as required and recommended in writing by glass manufacturer. Block color must be black.

F. Glazing Gaskets

Glazing gaskets must be extruded with continuous integral locking projection designed to engage into metal glass holding members to provide a watertight seal during dynamic loading, building movements and thermal movements. Glazing gaskets for a single glazed opening must be continuous one-piece units with factory-fabricated injection-molded corners free of flashing and burrs. Glazing gaskets must be in lengths or units recommended by manufacturer to ensure against pull-back at corners.

Provide glazing gasket profiles as recommended by the manufacturer for the intended application.

1. Fixed Glazing Gaskets

Fixed glazing gaskets must be closed-cell (sponge) smooth extruded compression gaskets of cured elastomeric virgin neoprene compounds conforming to ASTM C509, Type 2, Option 1.

2. Wedge Glazing Gaskets

Wedge glazing gaskets must be high-quality extrusions of cured elastomeric virgin neoprene compounds, ozone resistant, conforming to ASTM C864, Option 1, Shore A durometer between 65 and 75.

3. Aluminum Framing Glazing Gaskets

Glazing gaskets for aluminum framing must be permanent, elastic, non-shrinking, non-migrating, watertight and weathertight.

G. Accessories

Provide as required for a complete installation, including glazing points, clips, shims, angles, beads, and spacer strips. Provide noncorroding metal accessories. Provide primer-sealers and cleaners as recommended by the glass and sealant manufacturers. Use ASTM C1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to surface.

PART 3 EXECUTION

Any materials that show visual evidence of biological growth due to the presence of moisture must not be installed on the building project.

3.1 PREPARATION

Preparation, unless otherwise specified or approved, must conform to applicable recommendations in the GANA Glazing Manual, GANA Sealant Manual, IGMA TB-3001, IGMA TM-3000, and manufacturer's recommendations. Determine the sizes to provide the required edge clearances by measuring the actual opening to receive the glass. Grind smooth in the shop glass edges that will be exposed in finish work. Leave labels in place until the installation is approved, except remove applied labels on heat-absorbing glass and on insulating glass units as soon as glass is installed. Securely fix movable items or keep in a closed and locked position until glazing compound has thoroughly set.

3.2 GLASS SETTING

Shop glaze or field glaze items to be glazed using glass of the quality and thickness specified or indicated. Glazing, unless otherwise specified or approved, must conform to applicable recommendations in the GANA Glazing Manual, GANA Sealant Manual, IGMA TB-3001, IGMA TM-3000, and manufacturer's recommendations. Aluminum windows, wood doors, and wood windows may be glazed in conformance with one of the glazing methods described in the standards under which they are produced, except that face puttying with no bedding will not be permitted. Handle and install glazing materials in accordance with manufacturer's instructions. Use beads or stops which are furnished with items to be glazed to secure the glass in place. Verify products are properly installed, connected, and adjusted.

A. Sheet Glass

Cut and set with the visible lines or waves horizontal.

B. Insulating Glass Units

Do not grind, nip, or cut edges or corners of units after the units have left the factory. Springing, forcing, or twisting of units during setting will not be permitted. Handle units so as not to strike frames or other objects. Installation must conform to applicable recommendations of

IGMA TB-3001 and IGMA TM-3000.

C. Installation of Heat-Absorbing Glass

Provide glass with clean-cut, factory-fabricated edges. Field cutting will not be permitted.

D. Installation of Laminated Glass

Sashes which are to receive laminated glass must be weeped to the outside to allow water drainage into the channel.

3.3 CLEANING

Clean glass surfaces and remove labels, paint spots, putty, and other defacement as required to prevent staining. Glass must be clean at the time the work is accepted.

3.4 PROTECTION

Protect glass work immediately after installation. Identify glazed openings with suitable warning tapes, cloth or paper flags, attached with non-staining adhesives. Protect reflective glass with a protective material to eliminate any contamination of the reflective coating. Place protective material far enough away from the coated glass to allow air to circulate to reduce heat buildup and moisture accumulation on the glass. Upon removal, separate protective materials for reuse or recycling. Remove and replace glass units which are broken, chipped, cracked, abraded, or otherwise damaged during construction activities with new units.

3.5 SCHEDULE

Some metric measurements in this section are based on mathematical conversion of inch-pound measurements, and not on metric measurement commonly agreed to by the manufacturers or other parties. The inch-pound and metric measurements are as follows:

<u>PRODUCTS</u>	<u>INCH-POUND</u>
Glass	1/8 inch
	3/16 inch
	7/32 inch
	1/4 inch
	3/8 inch
Interlayer	0.015 inch
Glazing Channels	1/4 inch

-- END OF SECTION --

SECTION 09 05 61
COMMON WORK RESULTS FOR FLOORING PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
 - 1. Carpet tile.
- B. Removal of existing floor coverings.
- C. Preparation of existing concrete floor slabs for installation of floor coverings.
- D. Patching compound.

1.02 REFERENCE STANDARDS

- A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50 mm] Cube Specimens); 2021.
- B. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 2020.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:
 - 1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
 - 2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
 - 3. Products:
 - a. TEC, an H.B. Fuller Construction Products Brand; TEC Feather Edge Skim Coat: www.tecspecialty.com/#sle.
 - b. USG Corporation; Durock Brand Advanced Skim Coat Floor Patch: www.usg.com/#sle.
 - c. Substitutions: See Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated:
 - 1. Existing concrete slabs (on-grade and elevated) with existing floor coverings:
 - a. Visual observation of existing floor covering, for adhesion, water damage, alkaline deposits, and other defects.
 - b. Removal of existing floor.
 - 2. Preliminary cleaning.
 - 3. Specified remediation, if required.
 - 4. Patching, smoothing, and leveling, as required.
 - 5. Other preparation specified.
 - 6. Adhesive bond and compatibility test.

7. Protection.

3.02 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.03 PRELIMINARY CLEANING

- A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.
- B. Do not use solvents or other chemicals for cleaning.

3.04 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer.
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- D. Do not fill expansion joints, isolation joints, or other moving joints.

3.05 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

END OF SECTION

SECTION 09 65 00
RESILIENT FLOORING, BASE, AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Vinyl Composition Tile
 - 2. Resilient base adhered to interior walls and partitions.
 - 3. Accessories and installation

1.2 APPLICABLE PUBLICATIONS

- A. Comply with references to extent specified in this section.
- B. ASTM International (ASTM):
 - 1. F1861-08(2012)e1 - Resilient Wall Base.
 - 2. D4259-88(2012) - Abrading Concrete.
- C. Federal Specifications (Fed. Spec.):
 - 1. RR-T-650E - Treads, Metallic and Non-Metallic, Skid-Resistant.
- D. International Concrete Repair Institute (ICRI):
 - 1. 310.2R-13 - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays.

1.3 SUBMITTALS

- A. Manufacturer's Literature and Data:
 - 1. Description of each product.
 - 2. Adhesives and primers indicating manufacturer's recommendation for each application.
 - 3. Installation instructions.
- B. Samples:
 - 1. Resilient Base: 6 inches long, each type and color.
 - 2. VCT: Submit manufacturer's complete set of color samples for Architect's initial selection.
- C. Operation and Maintenance Data:
 - 1. Care instructions for each exposed finish product.
- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Wall Base: 5 linear feet of each type and color.
 - 3. Turn over to owner, for storage on-site or off-site.
- E. VCT Warranty: limited 5-year warranty.

1.4 DELIVERY

- A. Deliver products in manufacturer's original sealed packaging.
- B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, color, production run number, and manufacture date.
- C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

1.5 STORAGE AND HANDLING

- A. Store products indoors in dry, weathertight facility.
- B. Protect products from damage when handling and during construction operations.

1.6 FIELD CONDITIONS

- A. Environment:
 - 1. Product Temperature: Minimum 21 degrees C (70 degrees F) for minimum 48 hours before installation.

2. Work Area Ambient Temperature Range: 21 to 27 degrees C (70 to 80 degrees F) continuously, beginning 48 hours before installation.
3. Install products when building is permanently enclosed and when wet construction is completed, dried, and cured.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Provide each product from one manufacturer and from one production run.

2.2 VINYL COMPOSITION TILES

- A. A homogeneous composition of high-quality additives, and colorants to meet the performance requirements of ASTM F 1066.
- B. Vinyl Composition Tiles
 1. Overall thickness: 1/8"
 2. Size: 12" x 12"
 3. Basis of Design: Tarkett
 4. Pattern and Color: To match existing to the best capability

2.3 RESILIENT BASE

- A. Shall be constructed of first-quality materials and shall be smooth and free from any imperfections which detract from its appearance.
- B. Resilient Base: 1/8 inch thick, 4 inches high.
 1. Type: Vinyl
 2. ASTM F1861, Type TV thermoplastic vinyl, Group 2 - layered.
 3. ASTM F-137 (Flexibility)
 4. ASTM F-386 (Thickness)
 5. ASTM F-410 (Wear Thickness)
 6. ASTM F-1515 (Resistance to Light)
- C. All wall base shall be 4" in height and furnished as roll stock. (All remnants 48-inches or longer shall be turned over to the Owner)
- D. The wall base shall be of the type Cove, in 1/8" gauge thickness
- E. Color: To be selected from the full range of standard colors. Intent is to match building's existing vinyl base color.
- F. Applications: Style B - Cove.

2.4 PRIMER (FOR CONCRETE FLOORS)

- A. Primer: Type recommended by adhesive manufacturer.

2.5 ADHESIVES

- A. Adhesives
 1. Low pollutant -emitting, water based type recommended by adhered product manufacturer for each application, 50 g/l maximum.
 2. Porous Surfaces
 - a. 960 Acrylic Cove Base Adhesive
 - b. Application: 1/8" square notch trowel
 - c. Coverage: Approximately 250 linear feet of 4" Wall Base
 3. Non-Porous Surfaces
 - a. 945 Contact Bond Adhesive
 - 1) Application: Brush or roller
 - 2) Coverage: approximately 360 sq ft/gallon
 - d. 960 Acrylic Cove Base Adhesive

- 1) Application: 1/8" square notch trowel.
- 2) Coverage: Approximately 250 linear feet of 4" Wall Base

2.6 ACCESSORIES

- A. Moldings, Transition and Edge Strips: Basis of Design Burke Flooring.
 1. Manufactures:
 - a. Burke Flooring: www.burkeflooring.com/#sle.
 - b. Mannington Works: www.manningtoncommercial.com
 - c. Roppe: www.roppe.com
 - d. Tarkett: www.commercial.tarkett.com
 - e. Or approved equal.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine and verify substrate suitability for product installation.
- B. Protect existing construction and completed work from damage.
- C. Remove existing base, stair treads, and/or landing flooring to permit new installation.
 1. Dispose of removed materials.
- D. Correct substrate deficiencies.
 1. Fill cracks, pits, and depressions with leveling compound.
 2. Remove protrusions; grind high spots.
 3. Apply leveling compound to achieve 1/8 inch in 10 feet maximum surface variation.
- E. Clean substrates. Remove contaminants capable of affecting subsequently installed product's performance.
- F. Allow substrate to dry and cure.

3.2 INSTALLATION GENERAL

- A. Install products according to manufacturer's instructions.
 1. When instructions deviate from specifications, submit proposed resolution for Contracting Officer consideration.

3.3 RESILIENT BASE INSTALLATION

- A. Follow manufacturer's installation instructions
- B. Areas to receive wall base shall be clean, fully enclosed, weather-tight, and maintained at a uniform temperature of at least 65 F for 24 hours before, during, and after the installation is completed
- C. Applications:
 1. Install resilient base in rooms scheduled on Drawings.
- D. Lay out resilient base with minimum number of joints.
 1. Length: 24 inches minimum, each piece.
 2. Locate joints 6 inches minimum from corners and intersection of adjacent materials.
- E. Installation:
 1. Apply adhesive uniformly for full contact between resilient base and substrate.
 2. Set resilient base with hairline butted joints aligned along top edge.
- F. Field form corners and end stops.
 1. V-groove back of outside corner.
 2. V-groove face of inside corner and notch cove for miter joint.
- G. Roll resilient base ensuring complete adhesion.

3.4 CLEANING

- A. Remove excess adhesive before adhesive sets.
- B. Clean exposed resilient base and surfaces. Remove contaminants and stains.
 1. Clean with mild detergent. Leave surfaces free of detergent residue.

3.5 PROTECTION

- A. Protect products from construction traffic and operations.
 - 1. Maintain protection until directed by Contracting Officer's Representative.
- B. Replace damaged products and re-clean.
 - 1. Damaged Products include cut, gouged, scraped, torn, and unbonded products.

END SECTION 09 65 00

09 68 13
CARPET TILE

PART 1 - GENERAL

1.1 OVERVIEW

- A. Section includes floor preparation, new walk-off carpet tile.

1.2 SUBMITTALS

- A. Shop Drawings: Submit manufacturer/material data of proposed carpet tile
- B. Samples: Contractor to submit samples to owner for color selection
- C. Warranty documentation.
- D. Maintenance Data: For carpet tiles to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
 - 2. Precautions for cleaning materials and methods that could be detrimental to carpet tile.
- E. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Carpet Tile: Full-size units equal to one full box of carpet tile.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified by the International Certified Floor covering Installers Association at the Commercial II certification level.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with CRI 104.

1.5 FIELD CONDITIONS

- A. Comply with CRI 104 for temperature, humidity, and ventilation limitations.
- B. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at occupancy levels during the remainder of the construction period.
- C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

1.6 WARRANTY

- A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 2. Failures include, but are not limited to, more than 10 percent edge raveling, snags, runs, dimensional stability, loss of tuft bind strength, loss of face fiber, and delamination.
 - 3. Warranty Period: Lifetime from date of Substantial Completion.

PART 2 – PRODUCTS

2.1 WALK-OFF CARPET TILE

- A. Manufacturer/ Pattern/ Color: Mohawk Group, Tuff Stuff II Walk Off Tile, Walnut 859
- B. Surface Texture: Tufted
- C. Stitches Per Inch: 8 . 5
- D. Average Density: 6 7 3 9
- E. Secondary Backing: E c o F l e x N X T
- F. Size: 24 in x 24 in
- G. Installation Method: Quarter Turn

2.2 ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.

- B. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation.

2.3 VINYL BASE: See Section 09 65 13 – Resilient Flooring, Base, and Accessories

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance. Examine carpet tile for type, color, pattern, and potential defects.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
 - 1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet tile manufacturer.
 - 2. Subfloor finishes comply with requirements specified in Division 03 Section "Cast-in- Place Concrete" for slabs receiving carpet tile.
 - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch (3 mm) wide or wider and protrusions more than 1/32 inch (0.8 mm) unless more stringent requirements are required by manufacturer's written instructions.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile manufacturer.
- D. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

3.3 INSTALLATION

- A. General: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: As recommended in writing by carpet tile manufacturer.
- C. Maintain dye lot integrity. Do not mix dye lots in same area.
- D. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
- E. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, non-staining marking device.
- G. Install pattern parallel to walls and borders.
- H. Stagger joints of carpet tiles so carpet tile grid is offset from access flooring panel grid. Do not fill seams of access flooring panels with carpet adhesive; keep seams free of adhesive.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet tile:
 - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
 - 2. Remove yarns that protrude from carpet tile surface.
 - 3. Vacuum carpet tile using commercial machine with face-beater element.
- B. Protect installed carpet tile to comply with CRI 104, Section 16, "Protecting Indoor Installations."
- C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or

recommended in writing by carpet tile manufacturer.

3.3 CLEAN-UP AND PROTECTION

- A. Clean up during progress of work; remove from site discarded materials, rubbish, cans and rags at end of each work week.
- B. Upon completion of work, clean and apply final surface finish per manufactures instructions.

END SECTION 09 68 13

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**SECTION 09 91 10
EXTERIOR PAINTING**

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following exterior substrates:
 - 1. Steel.
 - 2. Galvanized metal.

1.3 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- D. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- E. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- F. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00, Submittal Procedures.
- B. Product Data: Manufacturer's data sheets on each paint and coating product should include:
 - 1. Product characteristics
 - 2. Surface preparation instructions and recommendations
 - 3. Primer requirements and finish specification
 - 4. Storage and handling requirements and recommendations
 - 5. Application methods
 - 6. Cleanup Information
- B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
 - 1. Submit two paper "draw down" samples, 8-1/2 by 11 inches in size
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- C. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 1 gal. (3.8 L) of each color.
 - 2. Label each container with color in addition to the manufacturer's label.
- B. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

1.6 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 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Tnemec. (where Tnemec is listed no substitution will be accepted)

2.2 PAINT, GENERAL

- A. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: To be custom matched to interior HM doors at each building respectively.

2.3 EXTERIOR PAINTS

- A. Hollow Metal Doors and Frames:
 - 1. Surface Prep: Clean and Dry, lightly sand all surfaces
 - 2. Intermediate: Tnemec Series 73 at 2.5 – 3.0 dry mils
 - 3. Finish: Tnemec Series 1071 at 2.5-3.0 dry mils
- B. Ferrous Metals, Steel Tubes/Framing, Misc. Metals (lintels, bollards, etc.):
 - 1. Surface Prep: S.S.P.C SP-6 Commercial Blast
 - 2. Primer: Tnemec Series 90-97 at 2.5-3.5 dry mils
 - 3. Galvanized items thoroughly wiped with solvent-dampened rags.
 - 4. Intermediate: Tnemec Series 73 at 2.5-3.0 dry mils
 - 5. Finish: Tnemec Series 1071 at 2.5-3.0 dry mils

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
 - 2. Do not paint over labels of independent testing agencies or equipment names, identification, performance rating or no monoculture plates.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods

recommended in writing by paint manufacturer[.] [but not less than the following:]

1. SSPC-SP 2, "Hand Tool Cleaning."
 2. SSPC-SP 3, "Power Tool Cleaning."
 3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
 4. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
- E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
 3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

- A. Steel Substrates:
1. Alkyd System:
 - a. Prime Coat: Primer, alkyd, anticorrosive for metal.
 - b. Prime Coat: Shop primer specified in Division 05 Section where substrate is specified.
 - c. Intermediate Coat: Aliphatic Acrylic Polyurethane.
 - d. Topcoat: Alkyd, exterior, semi-gloss (Gloss Level 5).
- B. Galvanized-Metal Substrates:
1. Alkyd System:
 - a. Prime Coat: Primer, galvanized metal, as recommended in writing by topcoat manufacturer for exterior use on galvanized-metal substrates with topcoat indicated.
 - b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
 - c. Topcoat: Alkyd, exterior, semi-gloss (Gloss Level 5).

END SECTION 09 91 10

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SECTION 09 91 23
INTERIOR PAINTS AND COATINGS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Interior paint and coatings systems including: paint

1.2 PAINTING AND FINISHING

- A. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
- B. Paint exposed surfaces whether or not colors are designated in "schedules", except where natural finish of material is specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint same as adjacent similar materials or areas. If color or finish is not designated, architect will select there from standard colors available for materials systems specified.
- C. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, and lead items.
 - 6. Marble, granite, slate, brick, and other natural stones.
 - 7. Floors, unless specifically indicated.
 - 8. Ceramic and other tiles.
 - 9. Glass.
 - 10. Concealed pipes, ducts, and conduits.

1.3 REFERENCES

- A. MPI (APSM) – Master Painters Institute Architectural Painting Specification Manual Current Edition.
- B. SSPC-SP 1 - Solvent Cleaning
- C. SSPC-SP 2 - Hand Tool Cleaning
- D. SSPC-SP 3 - Power Tool Cleaning
- E. SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00, Submittal Procedures.
- B. Product Data: Manufacturer's data sheets on each paint and coating product should include:
 - 1. Product characteristics
 - 2. Surface preparation instructions and recommendations
 - 3. Primer requirements and finish specification
 - 4. Storage and handling requirements and recommendations
 - 5. Application methods
 - 6. Cleanup Information
- C. Samples: Submit two paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Allow 30 days for approval process, after receipt of complete samples by Architect.
 - 3. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as factory finished metals, wood cabinets, and wood doors, have been approved.
 - 4. Provide paper 'draw down' samples with specified coats cascaded on each sample.
- D. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged

with protective covering for storage and identified with labels describing contents.

1. Paint: 1 gal. (3.8 L) of each color.
 2. Label each container with color in addition to the manufacturer's label.
- B. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacture's name, label, and the following list of information:
1. Product name and type (description)
 2. Application & use instructions
 3. Surface preparation
 4. VOC content
 5. Environmental handling
 6. Batch date
 7. Color number
- B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- C. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.8 PROJECT CONDITIONS

- B. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- C. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- D. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.
- E. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.
- F. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.9 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years' experience and approved by manufacturer.

PART 2 — PRODUCTS

2.1 PAINT:

- A. MATERIAL QUALITY:
Provide BEST quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable. Select paint from one of the following manufacturers:
1. **BASIS OF DESIGN:** Diamond Vogel
 2. **BASIS OF DESIGN:** Tnemec; where Tnemec is listed no substitution will be accepted.
 3. Or Pre-approved equal
- B. FINISH SCHEDULE OF PAINTING:
1. Drywall (Walls, Ceilings, Gypsum Board, etc.)
 - a. Primer one (1) coat: Zero VOC Latex Primer Commercial Grade
 - b. DE-0654 Egg Shell, Commercial Grade
 - c. MS-1575 Semi-Gloss, Commercial Grade
 - d. Minimum: 2 top coats
 - e. Color: For touch up as required. Match Existing
 2. Door Frames, Metal Doors, Lintel:
 - a. Finish: 2 coats Pre-Catalyzed Water Based Epoxy; Semi-Gloss; or Commercial Grade Equivalent
 - b. Color: To be custom matched to interior HM doors at each building respectively.

3. Concrete Masonry Unit:
 - a. Primer one (1) coat: Commercial Grade Block Filler
 - b. DE-0654 Egg Shell, Commercial Grade
 - c. MS-1575 Semi-Gloss, Commercial Grade
 - d. Minimum: 2 top coats
 - e. Color: For touch up as required. Match Existing
6. Not to be painted: Factory finished items, insulated piping, plastic laminates, and special pre-finished accessories.

2.2 MATERIALS - GENERAL REQUIREMENTS

- A. Paints and Coatings - General:
 1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
 2. Provide paints and finishes of a soft pasty consistency, capable of being readily and uniformly dispersed to a homogenous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 3. Supply each paint material in quality required to complete entire project's work from a single production run.
 4. Low Emitting Materials:
 - i. Volatile Organic Compound (VOC) Content: South Coast Air Quality Management District (SCAQMD) Rule 1113, effective February 5, 2016.
 - ii. VOC Emissions: Products to be applied on the interior must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.2–2017, using the private office exposure scenario as defined in Section 01 35 47 Low Emitting Materials.
- B. Primers:
 1. Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

2.3 ACCESSORIES

- A. Coating Application Accessories:
 1. Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

PART 3 — EXECUTION

3.1 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly examined and prepared. Notify Architect of unsatisfactory conditions before proceeding.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.

3.2 SURFACE PREPARATION

- A. Proper product selection, surface preparation and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.
- B. Selection of the proper method of surface preparation depends on the substrate, the environment, and the expected service life of the coating system. Economics, surface contamination, and the effect on the substrate will also influence the selection of surface preparation methods.
- C. The surface must be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
- D. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow the surface to dry a minimum of 48 hours before

painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.

E. Methods

1. Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.

2. Block (Cinder and Concrete)

Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75°F. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound.

3. Concrete, SSPC-SP13 or NACE 6

This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.

4. Drywall—Interior

Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting.

5. Galvanized Metal

Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP7 is necessary to remove these treatments.

6. Steel: Structural, Plate, etc.

Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.

7. Solvent Cleaning, SSPC-SP1

Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.

8. Hand Tool Cleaning, SSPC-SP2

Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

9. Power Tool Cleaning, SSPC-SP3

Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

10. White Metal Blast Cleaning, SSPC-SP5 or NACE 1
A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
11. Commercial Blast Cleaning, SSPC-SP6 or NACE 3
A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
12. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4
A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.
13. Power Tool Cleaning to Bare Metal, SSPC-SP11
Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
14. Near-White Blast Cleaning, SSPC-SP10 or NACE 2
A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
15. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials SSPC-SP12 or NACE 5
This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.
16. Water Blasting, NACE Standard RP-01-72
Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

3.3 INSTALLATION

- A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.
- B. Do not apply to wet or damp surfaces.
 1. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days.
 2. Test new concrete for moisture content.
 3. Wait until wood is fully dry.
- C. Apply coatings using methods recommended by manufacturer.
- D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.
- F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

- G. Inspection: The coated surface must be inspected and approved by the Architect or Engineer just prior to the application of each coat.

3.4 PROTECTION

- A. Protect finished coatings from damage until completion of project.
- B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END SECTION 09 91 23

**SECTION 10 14 00
SIGNAGE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Room-Identification Sign Backer Plate
- B. Safety signs.

1.02 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- C. Manufacturer's Installation Instructions: Include installation templates and attachment devices.
- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Store adhesive at normal room temperature.

1.05 FIELD CONDITIONS

- A. Do not install adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.01 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Safety Signs: To match campus standards; locate where indicated on drawings.

2.02 ROOM-IDENTIFICATION SIGN BACKER PLATE

- A. Existing Lobby sign is to be salvaged for reinstallation as shown on the drawings. New location is on glass. Provide new window backer to existing sign.
- B. Size: Match size of existing sign.
- C. Mounting: VHB
- D. Color: To match existing sign.

2.03 NON-TACTILE SIGNAGE MEDIA

- A. Material: Outdoor Grade high gloss adhesive backed vinyl film on 0.040" Rust-Free Aluminum. Printed using UV and chemical resistant inks to ensure durability in most commercial environments.
- B. Size: 14" x 10"
- C. Copy
 - 1. Type A: Restricted Area - Authorized Personnel Only
 - 2. Type B: Danger - No Smoking or open flames within 50 feet

2.04 ACCESSORIES

- A. Adhesive: permanent adhesive.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Locate signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1.
- D. Protect from damage until Date of Substantial Completion; repair or replace damaged items.

END OF SECTION

SECTION 28 13 53
IP NETWORK COMPATIBLE INTERCOM (IX SYSTEM)

RTI ALT #1 Move AI Phone: Contractor will *not* be providing a new AI phone but section is provided to inform contractor what requirements the Guard has and what Alphone they will be working with. Reconnection of the existing AI phone is to meet this outline.

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. IP Video Intercom (Alphone IX Series)

1.02 REFERENCE STANDARDS

- A. Standard Detail IWD100 and IWD101 (at end of section 28 13 53.11)

1.03 REFERENCES

- A. American National Standards Institute (ANSI/TIA/EIA) 568 - Commercial Building Telecommunications Cabling Standard.
- B. International Organization for Standards (ISO) 9001:2000 - Quality Management Systems -

1.04 SYSTEM DESCRIPTION

- A. IP Network Compatible Video Intercom System: A network-based communication and security system featuring video entry security, internal communication, emergency stations, and paging. All units and app in the systems shall be able to unlock doors remotely on a network, assist onsite visitors from an offsite location, broadcast emergency announcements, and communicate using a PoE network.
 - 1. Power Source: Power over Ethernet (802.3af).
 - 2. Network Interface: 10 BASE-T / 100 BASE-TX Ethernet (RJ-45).
 - 3. Network Protocols: IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, MJPEG, RTSP, RTP, RTCP, IGMP, MLD, SMTP, DHCP, NTP, DNS.
 - 4. Bandwidth Usage:
 - a. G.711: 64Kbps x 2 per video call.
 - b. 64Kbps per monitor.
 - c. H.264: 24Kbps ~ 2,048Kbps.
 - 5. Communication: Hands-free (VOX), push-to-talk (simplex), or handset (full-duplex).
 - 6. Video Display: 7-inch color LCD.
 - 7. Camera: Type: IX-DV
 - a. 1/3-inch color CMOS. 1.23 Megapixels.
 - b. View Area at 0-degree camera angle mounted at 4 feet 11 inches (1500 mm) AFF: 2 feet 3 inches (700 mm) vertical x 3 feet 9 inch (1150 mm) horizontal at 19 inches (500 mm).
 - 8. Camera: IX-DVM Type:
 - a. 1/3-inch 8-type color CMOS. 720p HD, wide dynamic range
 - b. View Area mounted at 4 feet 11 inches (1500 mm) AFF: 4 feet 3 inches (1300 mm) vertical and a range of 170 degrees in a 19 inch (500 mm) horizontal radius.
 - 9. Video Stream: ONVIF Profile S.
 - 10. Door Release: All door release relays associated with the AIphone system will be through Altronix EFLOW4N8 box (see spec 28 05 07).
 - 11. Wire Type: CAT-6.
 - 12. Distance:
 - a. Any station to Network Node: 330 feet (100 meters).

1.05 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.

2. Storage and handling requirements and recommendations.
 3. Installation methods.
- B. Shop Drawings: Submit the following:
1. Wiring Diagrams: Indicate wiring for each item of equipment and interconnections between items of equipment.
 2. Include manufacturer's names, model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts.
- C. Installation and Operation Manuals:
1. Submit manufacturer's installation and operation manual, including operation instructions and component wiring diagrams.
 2. Provide detailed information required for Owner to properly operate equipment.
- D. Warranty: Submit manufacturer's standard warranty.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: ISO 9001:2015 certified company.
- B. Installer Qualifications: Factory trained and experienced with system installations of scope and size required for the Project.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
 2. Do not proceed with remaining work until workmanship is approved by Architect.
 3. Refinish mock-up area as required to produce acceptable work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

1.08 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: Aiphone Corp., which is located at: 6670 185th Ave. NE; Redmond, WA 98052 ; Toll Free Tel: 800-692-0200; Tel: 425-455-0510; Fax: 425-455-0071; Email: request info (marketing@aiphone.com); Web: <http://www.aiphone.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
- D. IP Video Intercom System: IX Series Intercom System as manufactured by Aiphone Corporation.

2.02 SYSTEM DESIGN

- A. Master Stations:
 - 1. Model IX-MV7-HB (Black chassis - Handset): Provide per locations on plans.
- B. Audio Video Door Stations:
 - 1. Model IX-DV (Video Door Station - Surface Mount - Vandal Resistant): Provide per locations on plans.

2.03 FUNCTIONAL COMPONENTS

- A. Functional Components: As indicated on the drawings or as required to complete system.
 - 1. Video Master Station Series IX-MV7:
 - a. Model IX-MV7-HB (Master Station - Black w/Handset).
 - b. An IP addressable video master station with a 7-inch color LCD monitor. It can be wall or desk mounted (desk stand included). The IX-MV7 offers handset (duplex) and hands-free (VOX/PTT) communication and call up to 500 other IX stations. It connects directly to a network using CAT-5e/6 cable. This station requires an 802.3af compliant Power-over-Ethernet network.
 - 2. 30 Degree Angle Box Model SBX-IXDV30:
 - a. Designed for use with IX-DV video door station.
 - 3. Mullion Mounting Bracket Model IX-MB:
 - a. Bracket designed for mullion mounting the IX-DV door station.
 - b. Opening at bottom for drainage.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive integrated security and communication system.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected..

3.02 PREPARATION

- A. Verify the following compliance before starting installation.
 - 1. The unit turns inoperative during power failure.
 - 2. Keep the intercom wires at least 1 foot (30 cm) away from strong electrical wiring (AC 100-240 V) including, in particular, wiring for inverter electrical appliances. Noise and malfunction could result.
 - 3. If a strong light shines on the main unit screen, the picture may turn white or only silhouettes will be visible.
 - 4. Other manufacturer's devices (such as sensor, detectors, door releases) used with this system, comply with the manufacturer's installation requirements.
 - 5. The LCD panel is manufactured with very high precision techniques, inevitably will have a very small portion of its picture elements always lit or not lit at all. This is not considered a unit malfunction. Please be aware of this ins advance.

3.03 INSTALLATION

- A. Install integrated security and communication system in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Mount equipment plumb, level, square, and secure. For video entrance stations and video door stations, comply with manufacturer's design requirements to provide optimum picture quality of station monitoring.

3.04 SET-UP AND ADJUSTING

- A. Adjust integrated security and communication system for proper operation in accordance with manufacturer's instructions.

3.05 DEMONSTRATION AND TRAINING

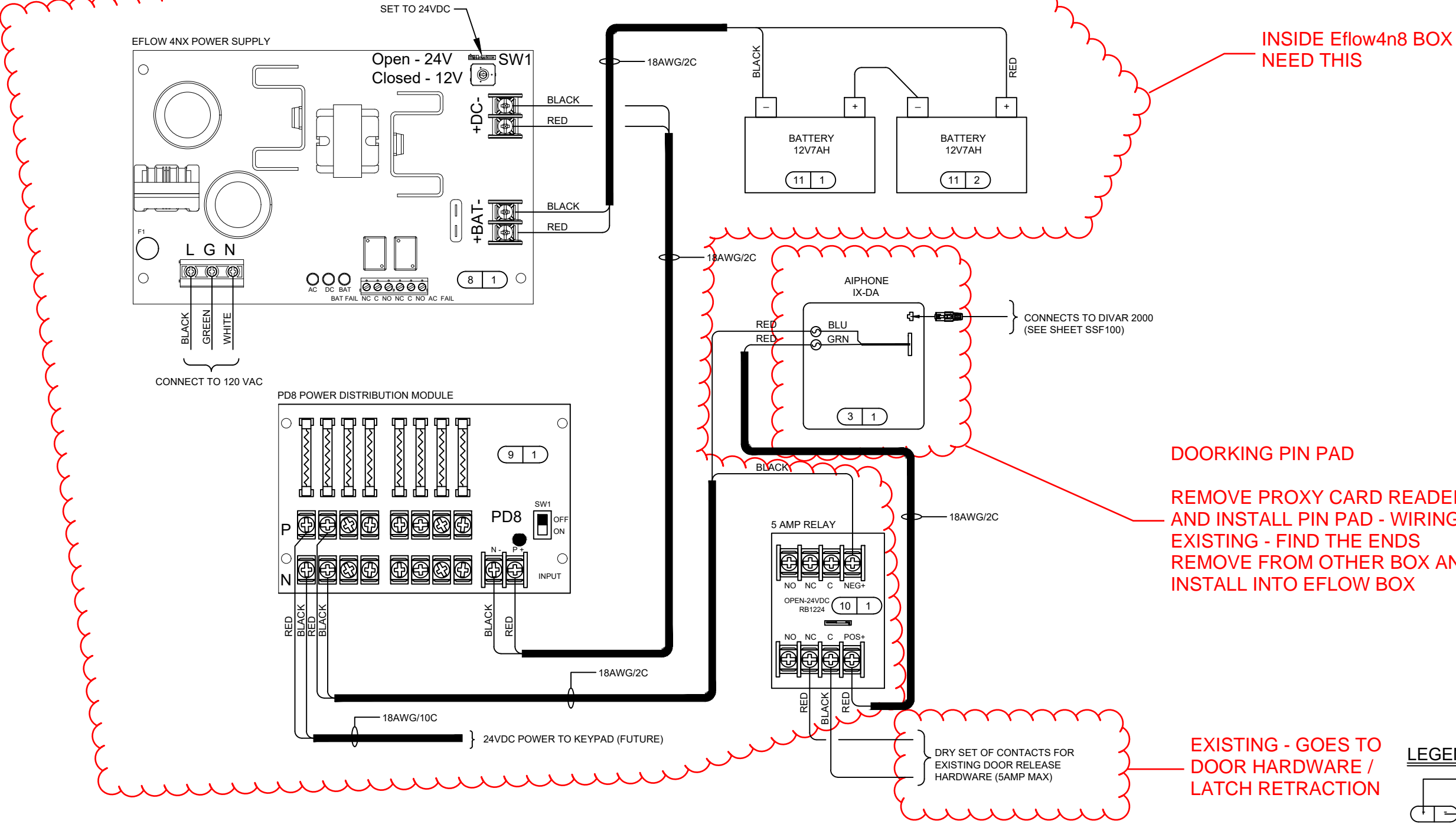
- A. Demonstration:
 - 1. Demonstrate that integrated security and communication system functions properly.
 - 2. Perform demonstration at final system inspection by qualified representative of manufacturer.
- B. Instruction and Training:
 - 1. Provide instruction and training of Owner's personnel as required for operation of integrated security and communication system.
 - 2. Provide hands-on demonstration of operation of system components and complete system, including user-level program changes and functions.
 - 3. Provide instruction and training by qualified representative of manufacturer.

3.06 PROTECTION

- A. Protect installed integrated security and communication system from damage during construction.

END OF SECTION

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	CCTV AND AIPHONE TYPICAL DESIGN RELEASE FOR INSTALLATION	01/27/17	
-	CHANGED BATTERY WIRING FROM PARALLEL TO SERIES	11/01/17	



DOORKING PIN PAD

REMOVE PROXY CARD READER
AND INSTALL PIN PAD - WIRING IS
EXISTING - FIND THE ENDS
REMOVE FROM OTHER BOX AND
INSTALL INTO EFLOW BOX

EXISTING - GOES TO
DOOR HARDWARE /
LATCH RETRACTION

LEGEND:

— DENOTES EQUIPMENT - ITEM NUMBER

— DENOTES EQUIPMENT - ITEM COUNT
QUANTITY NUMBER

"FOR OFFICIAL USE ONLY"

WIRING DETAIL FOR POWER SUPPLY,
PD8 AND RELAY

CITY		STATE	
SIZE	CAGE CODE	DRAWING NO.	REV
B	1Y0D7	AIPHONE & CCTV	A
SCALE:	NONE	SHEET NO.	IWD100

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	CCTV AND AIPHONE TYPICAL DESIGN RELEASE FOR INSTALLATION	01/27/17	
-	CHANGED BATTERY WIRING FROM PARALLEL TO SERIES	11/01/17	

F

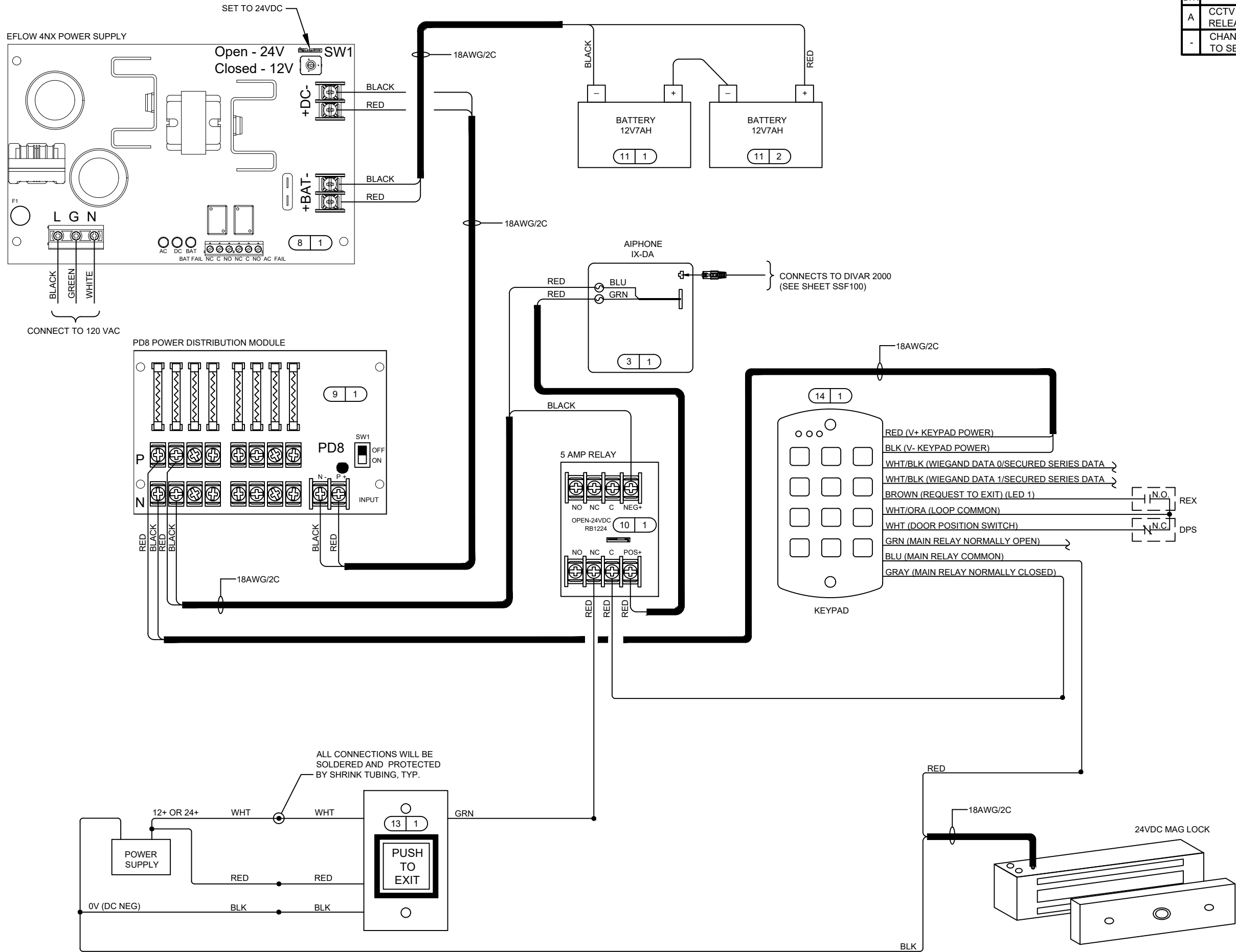
E

D

C

B

A



LEGEND:

— DENOTES EQUIPMENT - ITEM NUMBER

— DENOTES EQUIPMENT - ITEM COUNT
QUANTITY NUMBER

"FOR OFFICIAL USE ONLY"

**WIRING DETAIL FOR POWER SUPPLY,
PD8 AND RELAY WITH MAG LOCK**

CITY	STATE
SIZE	CAGE CODE
B 1Y0D7	AIPHONE & CCTV
SCALE:	SHEET NO.
NONE	IWD101

F

E

D

C

B

A