Project Manual For:

Idaho Transportation Department

District #1

Clarkia Salt Shed- 2023

FM12317

Milepost 58.1

Highway 3

Clarkia, Idaho 83812

Shoshone County

Wednesday, February 22nd , 2023

MSA Project Number: 1954

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Advertisement for Bid

In accordance with Idaho Statute Section 67-5711C, The Idaho Transportation Department (ITD) will accept sealed bids for **Project FM12317**, titled **Clarkia Salt Shed - 2023**, to construct a complete wood framed 60x120 salt-shed. The project is located at Milepost 58.1 on HWY 3, Clarkia, Idaho 83812.

Bid packets will be accepted at the Idaho Transportation Department at 11331 W. Chinden Blvd. Bldg. 8, Boise, Idaho, **before 2:29:59 p.m. (MT)** on **Friday, March 17th, 2023** according to the Bid Package Schedule deadline. The Invitation to Bid package can be found at the following address: http://itd.idaho.gov/business/ "Facility Bids" tab. There will be a public bid opening at the Idaho Transportation Department at 11331 W. Chinden Blvd. Bldg. 8, Boise, Idaho 83707 at 2:30p.m. (MT),

2:30:00 p.m. (MT) on **Friday, March 17th, 2023.**

An onsite Pre-bid Q&A will be held on **Thursday, March 9th,2023,** at **10:00 a.m. (site local time**). Attendance by bidders is Strongly Recommended. Failure to account for all subjects observed and discussed at the Pre-Bid Meeting will not be cause for a change order. Owner reserves the right to reject any or all bids, or to waive informalities.

Each bid must be accompanied by a bid bond with a surety company licensed to do business in Idaho or a certified or cashier's check drawn on an Idaho bank in an amount not less than 5% of the total bid made payable to Idaho Transportation Department. The bidder, in the event of failure to sign the contract or furnish the necessary 100% performance bond and the necessary 100% payment bond, will forfeit this surety.

Bidders shall be properly registered in the State of Idaho, in accordance with the Department of Self Governing Agencies as a "Contractor" licensed in the State of Idaho, in accordance with provisions of an act known as "Public Works Contractor's State License Law, Title 54, Chapter 19, Idaho Code Amended". Bidders shall be registered with the Idaho Secretary of State's office to do business in the State of Idaho.

Before any contract is awarded for the work contemplated herein, Idaho Transportation Department shall conduct such investigation, as it deems necessary to determine the performance record and ability of the apparent low bidder to perform the type and size of project specified under this contract. Upon request, the bidder shall submit such information as deemed necessary for such evaluation.

Submit All Questions to:

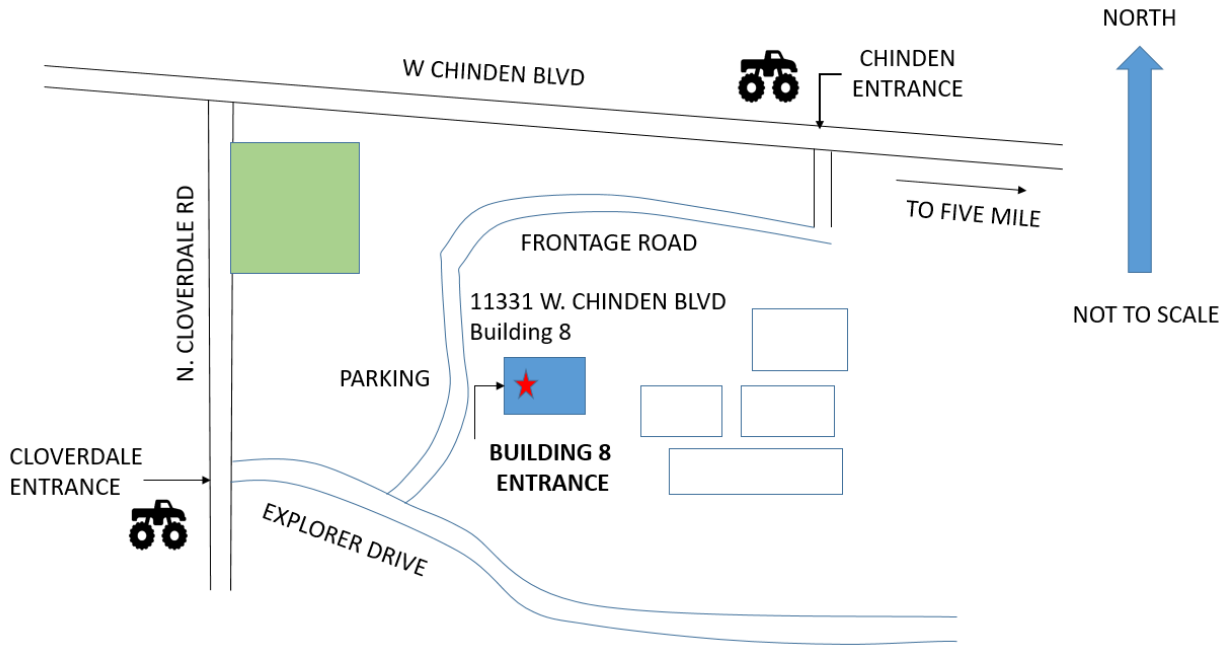
Marc Nelson,
Project Manager
Miller Stauffer Architects
601 E. Front Ave. Ste 201
Coeur d'Alene, Idaho 83814
(208) 664-1773
marcn@millerstauffer.com

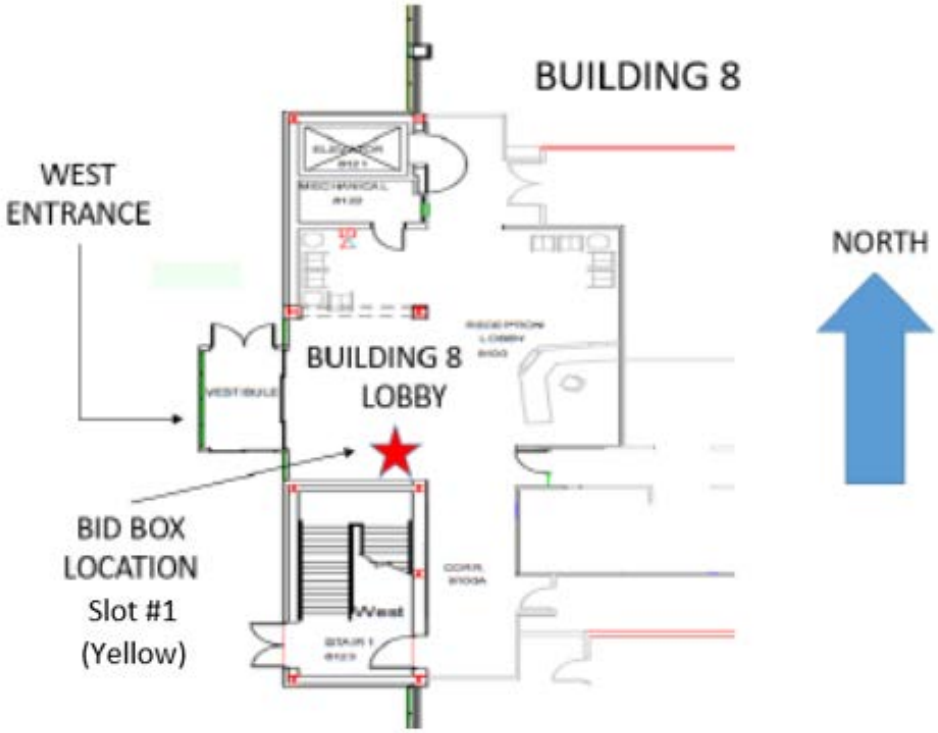
All Questions must be submitted by Monday, March 13th, 2023 at 2:00pm (MT).

BID BOX AND BID OPENING

RELOCATION TO NEW CAMPUS

EFFECTIVE JUNE 15, 2022 THE ITD BID BOXES AND BID OPENINGS WILL BE LOCATED AT THE STATE OF IDAHO CHINDEN CAMPUS, 11331 W. CHINDEN BLVD., BUILDING #8, BOISE, ID 83714. BID DOCUMENTS MUST BE DELIVERED TO THE NEW LOCATION (SEE BELOW).





EFFECTIVE JUNE 15TH:

BID BOX LOCATION: 11331 W. CHINDEN BLVD, BUILDING #8, WEST LOBBY SLOT #1 (YELLOW) **"FACILITIES SEALED BIDS"**

USPS DELIVERY ADDRESS: IDAHO TRANSPORTATION DEPARTMENT, ATTN: FM12317 ITD FACILITY MANAGMENT, PO BOX 11, BOISE, ID 83707-0040

FEDEX/UPS/DHL DELIVERY ADDRESS: IDAHO TRANSPORTATION DEPARTMENT, ATTN: FM12317 ITD FACILITY MANAGMENT, 11331 W. CHINDEN BLVD, BUILDING #8, BOISE, ID 83714

BID OPENINGS: 11331 W. CHINDEN BLVD, BUILDING #8,
- CONFERENCE ROOM TO BE DETERMINED

NOTE: IT IS RECOMMENDED THAT USPS MAIL AND FEDEX/UPS DELIVERIES BE RECEIVED AT THE ABOVE LOCATIONS AT LEAST 1 DAY PRIOR TO BID OPENING TO AVOID MISSING THE BID OPENING.

**IF YOU ADDRESS YOUR BIDS TO THE OLD ADDRESS, YOUR BID MAY NOT BE RECEIVED IN TIME FOR THE BID OPENING AND MAY BE DEEMED NON-RESPONSIVE. **

END OF

Advertisement for Bid

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

PART 1. GENERAL PROVISIONS

1.1 DEFINITIONS

A. Capitalized terms used in these Instructions to Bidders ("Instructions") shall have the meaning given to them in the Division of Public Works' Fixed Price Construction Contract Between Owner and Contractor.

1.2 HEADINGS

A. Headings used in these Instructions are for convenience only.

1.3 REJECTION OF BIDS, WAIVER OF INFORMALITIES OR CANCELLATION

A. Prior to the effective date of a contract, Idaho Transportation Department shall have the right to accept or reject all bids, to waive any minor deviations/informalities or to cancel the bid.

1.4 ORAL INFORMATION

A. Questions concerning a bid must be directed in **writing or electronic mail** to **Marc Nelson of Miller Stauffer Architects 601 E. Front Ave. Ste 201 Coeur d'Alene, Idaho 83814 Email: marcn@millerstauffer.com.** Questions must be received by **Monday March 13th , 2023 at 2:00PM (MT)** unless provided otherwise via an addendum. Oral information is not binding and any reliance by a bidder on any oral information or representation is at the bidder's sole risk. Any information given a prospective bidder in response to **a written or emailed question** will be provided to all prospective bidders by an addendum, if such information is necessary for purposes of submitting a bid or if failure to give such information would be prejudicial to uniformed bidders.

1.5 PUBLIC RECORDS

A. The Idaho Public Records Law, Title 74, Chapter 1, Idaho Code, allows the open inspection and copying of public records. Public records include any writing containing information relating to the conduct or administration of the public's business prepared, owned, used or retained by a State or local agency regardless of the physical form or character. Unless exempted by the Public Records Law, your bid will be a public record subject to disclosure under the Public Records Law. Any questions regarding the applicability of the Public Records Law should be addressed to your legal counsel prior to submission.

1.6 FORM OF AGREEMENT

A. Unless otherwise specified in the bid documents, the agreement between the successful bidder and the Owner ("State of Idaho – Idaho Transportation Department") shall be the Division of Public Works' Fixed Price Construction Contract Between Owner and Contractor.

1.7 PRE-BID CONFERENCE

A. An onsite pre-bid conference will be provided on **Thursday March 9th, 2023 at 10:00 AM (SITE LOCAL TIME)** for questions and answers. The Pre-Bid Conference will be done through a Microsoft Teams virtual meeting. Connection information is provided on the ITD website.

1.8 PERFORMANCE AND PAYMENT BONDS

A. A performance bond and payment bond are required for this Project, each in an amount of not less than one hundred percent (100%) of the Contract Price. The performance and payment bonds shall be AIA Document A312, 1984 or the most recent edition, or a standard surety form certified approved to be the same as the AIA A312 form and shall be executed by a surety or sureties reasonably acceptable to the Owner and authorized to do business in the State of Idaho. Bonds must be provided with ten (10) calendar days following receipt of a Notice of Intent to Award.

PART 2. BID SUBMISSION PROCESS

2.1 BID DOCUMENTS

A. The bid documents are available at the following address: HTTP://itd.idaho.gov "FACILITY BIDS" tab. The responsibility is on the bidder to use a complete set of bid documents to prepare its bid and neither the Owner nor the Architect and or Owner shall incur any liability for the bidder's failure to do so. Bidders obtain no ownership interest or any use rights, except to use in preparation of their bid, by issuance of the bid documents.

B. Electronic Transmission of Bid Documents is not allowed. Electronic bid documents will be rejected and will be considered non-responsive.

C. Bidders and Sub-bidders shall field verify all dimensions pertaining to the Work and shall be responsible for the determination of all quantities of materials required for the completion of the Work. The bidder shall not rely on the scale drawings of the Bidding Documents in his determination of required materials quantities. No allowance shall be made for Bidder's failure to field-verify dimensions.

D. A bid document deposit $75.00 per set is required for bid documents obtained from the Architects, the deposit will be returned to a bidder returning the complete bid documents in good condition no more than twenty (20) days after a Notice of Intent is issued and the amount of any deposit returned may be reduced if the bid documents returned are not complete or are damaged. A bidder awarded a Contract may also keep the bid documents and any deposit will be returned.

2.2 ADDENDA

A. In the event it becomes necessary to revise any part of the bid documents, addenda will be issued. Information given to one bidder will be available to all other bidders if such information is necessary for purposes of submitting a bid or if failure to give such information would be prejudicial to uninformed bidders. It is the bidder's responsibility to check for addenda prior to submitting a bid. A bidder is required to acknowledge receipt of all addenda by identifying the addenda numbers in the space provided on the bid proposal form. Failure to do so may result in the bid being declared non-responsive. No addenda will be issued past **March 15th 2023 at 4:00pm (MT)** unless modified otherwise via an addendum or extension of Bid Date.

2.3 REVIEW

A. It is the bidder's responsibility to review the bid documents and compare them as needed, including with regard to any other work that is or may be under construction that might affect the bidder or its work, to examine the site and local conditions and to report, in writing, any questions, errors, inconsistencies or ambiguities to Marc Nelson of Miller Stauffer Architects.

2.4 PRODUCTS SPECIFIED AND PROPOSED SUBSTITUTIONS

A. Materials, products or equipment, if specified by name or manufacturer, establish the standard of quality required and that must be met by any proposed substitution. Requests for substitutions must be made in writing to the Miller Stauffer Architects no less than ten (10) calendar days prior to the bid closing unless provided otherwise via an addendum. Such requests must provide detailed information to allow the Miller Stauffer Architects to determine if the proposed substitution is acceptable, including drawings or performance or test data and a detailed statement of how the substitution would change any other part of the Work. It is the bidder's obligation to satisfy this requirement and Miller Stauffer Architect's decision shall be final. To be allowed, substitutions must be approved in an addendum to the bid documents.

2.5 BID FORM

A. Bids must be submitted on the bid proposal forms, or copies of forms, furnished by Idaho Transportation Department or Miller Stauffer Architects. Bids submitted must contain all original signatures in ink on the following forms"

1. Bid Proposal Form
2. Contractor's Affidavit Concerning Alcohol and Drug-Free Workplace
3. Bidder's Acknowledge Statement
4. Bid Bond (Bid Security)

B. The person signing the Bid Proposal Form must initial any and all changes appearing on any of the bid forms. If the bidder is a corporation or other legal entity, the bid forms must be signed by an authorized designee. Oral, telephonic, telegraphic, facsimile or other electronically transmitted bid forms and/or signatures will not be considered.

2.6 BID PRICES

A. The bid form may require bidders to submit bid prices for one (1) or more items on various bases, including lump sum base bid, lump sum bid alternate prices, unit prices or any combination thereof. Bid amounts shall be expressed in words and numbers. The amount in words shall prevail if there is a discrepancy.

2.7 ALTERNATES

A. If the solicitation includes alternate bid items or unit prices, failure to bid on the alternates or unit prices may disqualify the bid. If bidding on an alternate does not change the base bid, indicate by "No Change." If bidding on all items is not required by the Contract Documents, bidders must affirmatively indicate that they are not bidding on those items.

2.8 TIME FOR SUBMISSION

A. Bids must be submitted on or before the time specified in the advertisement for bids. Any bid submitted late will be rejected.

2.9 SEALED ENVELOPE

A. Bids shall be submitted in a sealed envelope with the following clearly printed on the outside of the envelope: the Project number and Project name; the name and address of the bidder; and a statement, such as "BID ENCLOSED" to indicate that it is a bid.

2.10 MAILED BIDS

A. When bids are mailed or shipped, the sealed envelope containing the bid shall be enclosed in a separate mailing envelope with the notation “SEALED BID ENCLOSED” on the face thereof. If mailed, the mailing envelope shall be addressed as follows:

1. Address for Couriers / Physical Address
   11441 W. Chinden Blvd, Building 8 West Lobby Slot #1 (Yellow) **“Facilities Sealed Bids”**

2. Mailing Address
   USPS: Idaho Transportation Department, ATTN: FM12317 ID Facility Management, PO BOX 11, Boise, ID 83701-0040
   FEDEX/UPS/DHL: Idaho Transportation Department, ATTN: FM12317 ID Facility Management, 11331 W. Chinden Blvd, Building #8, Boise, ID 83714

B. It is the bidder’s responsibility to ensure that its bid is delivered to the place designated for receipt on or before the specified closing time. The Owner assumes no responsibility for delays in the delivery of mail by the U.S. Post Office or private couriers. Bidders should be advised the intra-state mail system may increase delivery time from arrival at Central Postal to the place designated for receipt and should plan accordingly. **LATE SUBMISSIONS WILL BE REJECTED, WILL NOT BE OPENED AND WILL BE RETURNED TO THE BIDDER. NO DEVIATIONS WILL BE ALLOWED.**

2.11 BID CLOSING DECLARDED

A. Immediately prior to the bid opening, the Owner’s representative will declare the official bid closing. Any part of a bid not received prior to the bid closing declared by the designated representative will not be considered and will be returned to the bidder unopened. All bids shall be taken under advisement.

2.12 DRUG-FREE WORKPLACE

A. Along with its bid, the bidder shall submit an affidavit certifying compliance with Title 72, Chapter 17, Idaho Code, requiring the Contractor and its subcontractors at the time of bid to provide a drug-free workplace program and to maintain such program throughout the duration of the Contract. The form of affidavit is attached.

2.13 ILLEGAL ALIENS

A. Bidder shall warrant that the bidder does not knowingly hire or engage any illegal aliens or persons not authorized to work in the United States; bidder shall take steps to verify that it does not hire or engage any illegal aliens or persons not authorized to work in the United States; and that any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and shall be cause for the imposition of monetary penalties and/or termination of any Contract resulting from this bid.

2.14 LEGAL RESIDENCY REQUIREMENT

A. By submitting a bid, the bidder attests, under penalty of perjury, that he (the bidder) is a United States citizen or legal permanent resident or that it is otherwise lawfully present in the United States pursuant to federal law. Prior to being issued a contract, the bidder will be required to submit proof of lawful presence in the United States in accordance with §67-7903, Idaho Code.

2.15 BIDDER'S ACKNOWLDGEMENT STATEMENT

A. The attached Bidder's Acknowledgement Statement must be completed and included, or the bid may be found non-responsive.

1. **PUBLIC WORKS CONTRACTOR'S LICENSE**: This Project is not financed in whole or in part by federal funds. Bids will be accepted from those Contractors only (prime contractors, subcontractors and/or specialty contractors) who, prior to the bid opening, hold current licenses as public works contractors in the State of Idaho.

2.16 PREVAILING WAGE RATE

A. Prevailing wage rates are not required for this project. There is no federal funds used for this project.

2.17 IDAHO LABOR REQUIREMENTS

A. This Project is subject to the provisions of Sections 44-1001 and 44-1002, Idaho Code, dealing with labor preference.

2.18 IDAHO PREFERENCE LAW

A. Section 67-2348, Idaho Code, requires Idaho Transportation Department to apply a preference in determining which Contractor submitted the lowest responsible bid. If the Contractor who submitted the lowest dollar bid is domiciled in a state with a preference law that penalizes Idaho domiciled contractors, Idaho Transportation Department must apply the preference law (percentage amount) of that domiciliary state to that Contractor's bid.

2.19 NAMING OF SUBCONTRACTORS

A. Section 67-2310, Idaho Code, requires general (prime) Contractors to include in their bid the name of the subcontractors who shall, in the event the Contractor secures the Contract, subcontract the plumbing, HVAC, and electrical work under the general (prime) Contract. Failure to name subcontractors as required by this section shall render any bid submitted by a general (prime) Contractor nonresponsive and void. Subcontractors named in accordance with the provisions of this section must possess an appropriate license or certificate of competency issued by the State of Idaho covering the Contractor work classification in which the subcontractor is named.

B. The Idaho Transportation Department interprets Section 67-2310, Idaho Code, to mean three (3) separate areas of work: plumbing work, HVAC, and electrical work. Idaho Transportation Department also requires that the general (prime) Contractor name the entity that will perform the Work, including if the entity is a subcontractor, a sub-subcontractor or the general (prime) Contractor submitting the bid. Failure to complete the Bid Proposal in full shall render a bid nonresponsive and void.

C. With regard to possessing an appropriate license or certificate of competency, all subcontractors listed by the general (prime) Contractor must have at the time of the bid opening a current license in the appropriate category (class, type and specialty category) as issued by the Public Works Contractors State License Board. In addition, plumbing, HVAC and electrical subcontractors shall have at the time of the bid opening a valid plumbing contractor's license, HVAC contractor's license or electrical contractor's license, respectively, as issued by the Idaho Division of Building Safety.

D. In determining if the above listed subcontractors are required on the Project, Idaho Transportation Department will refer to the plans and specifications. If doubt exists prior to bid closing, potential bidders should contact the Idaho Transportation Department and Miller Stauffer Architects who prepared the plans and specifications will be requested to make the determination. If plumbing, HVAC or electrical work are not shown on the plans and specifications but are discovered by the bidder prior to the date of bid opening, then the bidder must request clarification from Miller Stauffer Architects. Absent such clarification, Work will be considered incidental and naming of a subcontractor will not be required.

PART 3. BID SECURITY

3.1 AMOUNT AND FORM OF SECURITY

A. To be considered, bids must be accompanied by an acceptable bid security in an amount not less than five percent (5%) of the total amount of the bid, including additive alternates. The security may be in the form of a bond or a certified or cashier's check. A standard surety bid bond form meeting all the conditions of AIA Document A310 is acceptable and, if used, must include a certified and current copy of the power of attorney if the bond is executed by the attorney-in-fact on behalf of the surety.

3.2 FORFEITURE

A. A successful bidder who fails to sign the Contract for the Work or furnish the required bonds within ten (10) calendar days following the receipt of notice of intent to award a Contract is subject to forfeiture in accordance with Section 54-1904E, Idaho Code.

3.3 RETENTION OF SECURITY

A. Bid security shall be retained for no more than forty-five (45) calendar days after the opening of bids, so long as the bidder has not been notified of the acceptance of the bid.

PART 4. BID WITHDRAWAL

4.1 PRIOR TO BID CLOSING

A. If a bid has been submitted, it may be withdrawn in person by a bidder’s authorized representative before the opening of the bids. A bidder’s representative will be required to show identification and sign on a bid summary sheet before it will be released. After bid closing, no bid may be withdrawn except in strict accordance with these Instructions or applicable law.

PART 5. BID MODIFICATION

5.1 IF A BID HAS BEEN SUBMITTED, IT MAY BE MODIFIED BY THE SUBMISSION OF A WRITTEN DOCUMENT CONTAINED IN A SEPARATE SEALED ENVELOPE MARKED “BID MODIFICATION FROM [NAME OF BIDDER] FOR IDAHO TRANSPORTATION DEPARTMENT PROJECT NUMBER **FM12317; CLARKIA SALT SHED 2023**.” **THE DOCUMENT MODIFYING THE BID MUST BE SIGNED IN INK BY AN AUTHORIZED REPRESENTATIVE OF THE SUBMITTING BIDDER. THE DIVISION OF PUBLIC WORKS RESERVES THE RIGHT TO REQUIRE PRESENATION OF EVIDENCE SATIDFACTORY TO IT TO ESTABLISH THE AUTHORITY TO ACT ON BEHALF OF THE SUBMITTING BIDDER. NO OTHER FORM OF MODIFICATION (INCLUDING TELEPHONE, FACSIMILE OR ELECTRONIC MAIL) WILL BE ACCEPTED. AFTER BID CLOSING, NO BID MAY BE MODIFIED EXCEPT IN STRICT ACCORDANCE WITH THESE INSTRUCTIONS OR APPLICABLE LAW.**

PART 6. RELIEF FROM BIDS

6.1 CONDITIONS FOR RELIEF

A. Relief from bids is subject to Sections 54-1904B through 54-1904E, Idaho Code. In the event a bidder discovers a mistake in its bid following the bid opening and wishes to withdraw its bid, the bidder shall establish to the satisfaction of the Owner, pursuant to Section 54-1904C, Idaho Code, that a clerical or mathematical mistake was made; the bidder gave the public entity (Owner) written notice within five (5) calendar days after the opening of the bid of the mistake, specifying in the notice in detail how the mistake occurred; and the mistake was material.

6.2 DETERMINATION

A. If the Owner determines that the bidder has satisfied the requirements of Section 54-1904C, Idaho Code, to entitle it to relief from a bid because of a mistake, it shall prepare a report in writing to document the facts establishing the existence of each required element. The report shall be available for inspection as a public record and shall be filed with the public entity soliciting bids. A bidder claiming a mistake and satisfying all the required conditions of Section 54-1904C, Idaho Code, shall be entitled to relief from the bid and have any bid security returned by the Owner. Bidders not satisfying the conditions of Section 54-1904C, Idaho Code shall be subject to forfeiture in accordance with Section 54-1904B, Idaho Code. A bidder who claims a mistake or who forfeits its bid security shall be prohibited from participating in any re-bidding of that project on which the mistake was claimed or security forfeited and the Owner may award the Contract to the next lowest responsive and responsible bidder.

6.3 BIDDER'S REPRESENTATIONS

A. REPRESENTATIONS UPON SUBMITTING A BID

1. The person signing the bid is authorized to bind the bidder;
2. It has all required licenses, permits or other authorizations necessary to submit its bid;
3. It has taken steps necessary to ascertain the nature and location of the Work and has investigated and satisfied itself as to the general and local conditions which can affect the Work or its cost, including but not limited to: (i) conditions bearing upon transportation, disposal, handling and storage of materials; (ii) the availability of labor, water, natural gas, electric power and roads; (iii) uncertainties of weather, river stages or similar physical conditions at the site; (iv) the conformation and conditions of the ground; and (v) the character of equipment and facilities needed preliminary to and during the Work;
4. It has satisfied itself as to character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Owner as well as from the drawings and specifications provided as part of the bid package, and that any failure of the bidder to take such actions will not relieve the bidder from responsibility for estimating properly the difficulty and cost of successfully performing the Work;
5. It has received, read and reviewed the Contract, has submitted any questions in writing regarding the same and has received an answer to such questions;
6. Its bid is based upon the requirements of the Contract without exception;
7. It is in compliance with Title 72, Chapter 17, Idaho Code, regarding a drug-free workplace and has included the required affidavit regarding the same;
8. Its bid is in compliance with employment of persons authorized to work in the United States;
9. It will retain bid security and hold and honor all base bid prices for forty-five (45) calendar days from the date of bid opening, and cannot be withdrawn after the bid opening;
10. Its bid prices shown for each item on the bid proposal form include all labor, material, equipment, overhead and compensation to complete all of the Work for that item; and
11. It has included in its bid amount Idaho sales and/or use taxes on all materials and equipment and all other taxes imposed by law.

PART 7. BID AWARD

7.1 AWARD METHOD

A. Idaho Transportation Department construction contracts for the State of Idaho are awarded to the "lowest responsible and responsive bidder." The low bidder, for purposes of award, shall be the responsible and responsive bidder offering the low aggregate amount for the base bid item, plus any additive or deductive bid alternates selected by the Owner, and within funds available as determined by the Owner. Award is also subject to the requirements of Idaho Code, including without limitation: Title 67, Chapter 57; Title 67, Chapter 23; Title 54, Chapter 19; and Title 44, Chapter 10. It is the bidder's responsibility to conform to ALL applicable federal, state and local statutes or other applicable legal requirements. The information provided herein is intended to assist bidders in meeting applicable requirements but is not exhaustive and the Owner will not be responsible for any failure by any bidder to meet applicable requirements.

7.2 DETERMINATION OF RESPONSIBILITY

A. Idaho Transportation Department reserves the right to make reasonable inquiry about or from the submitting bidder or from third parties to determine the responsibility of a submitting bidder. Such inquiry may include, but not be limited to, inquiry regarding experience and expertise related to the Project, manpower and other resources, financial stability, credit ratings, references, potential subcontractors and past performance. The unreasonable failure of a submitting bidder to promptly supply any requested information may result in a finding of non-responsibility.

7.3 NOTICE OF EFFECTIVENESS

A. No Contract is effective until the authorized Owner’s official has signed the Contract and the Notice to Proceed has been issued. The bidder shall not provide any goods or render services until the Contract has been signed by the Owner and the Contract has become effective. Furthermore, the Owner is in no way responsible for reimbursing the bidder for goods provided or services rendered prior to the signature of the authorized Idaho Transportation Department official and the arrival of the Notice to Proceed.

7.4 INCURRING COSTS

A. The Owner is not liable for any cost incurred by bidders prior to the Notice to Proceed.

7.5 PRIOR ACCEPTANCE OF DEFECTIVE BIDS OR PROPOSALS

A. Idaho Transportation Department generally will not completely review or analyze bids that appear to fail to comply with the requirements of the bid documents, nor will Idaho Transportation Department generally investigate the references or qualifications of those who submit such bids. Therefore, any acknowledgment that the selection is complete shall not operate as a representation by the Idaho Transportation Department that an unsuccessful bid was responsive, complete, sufficient or lawful in any respect.

7.6 POST-AWARD SUBMITTALS

A. Upon receipt of a Notice of Intent to Award, the apparent low responsive and responsible bidder shall provide documentation required in such Notice. Such Notice of Intent to Award shall require the bidder to return to the Owner, within ten (10) days of receipt, a signed Contract, all required bonds, proof of insurance and documentation required by the Idaho State Tax Commission (report and affidavit).

7.7 OWNER'S RIGHT TO REJECT

A. Prior to execution of the Contract, Idaho Transportation Department or Miller Stauffer Architects shall provide written notice of any reasonable objection to any person or entity proposed by the bidder. Upon receipt of such notice, the bidder may withdraw its bid, without forfeiture, or propose a substitute and identify any change in any bid amount caused by such substitution. The Owner may accept or reject the substitution or the adjusted price. If the Owner rejects the substitution or the adjusted price, it will return the bidder's bid guarantee.

PART 8. BUILDING PERMIT

8.1 BUILDING PERMIT FEE

A. Building permit fees are to be included in the project bid cost. The contractor is responsible for all permits. The only Permitting Jurisdiction for this project is: The State of Idaho Division of Building Safety (DBS). The owner has submitted the project to DBS and the plan check fee has been paid. It is the contractor's responsibility to include the cost in the bid to pickup and pay for all building permit fees, including, building, electrical, and site disturbance.

PART 9. THIRD PARTY SPECIAL INSPECTIONS

9.1 SPECIAL INSPECTION COSTS

A. The owner shall provide all special inspections through a Third-Party Contract. The cost of the special inspections shall not be included in the project bid, except re-inspections that are found to be non-conforming to the contract documents.

PART 10. PROPERTY INSURANCE

10.1 "ALL RISK" BUILDERS INSURANCE

A. The contractor shall include in their bid costs a Builders "All-risk" Insurance policy. The policy is to be held by the General Contractor with the owner and the property listed as additionally insured. The policy shall be in place for the duration of the project.

END OF
INSTRUCTIONS TO BIDDERS

SECTION 00 41 13
BID FORM – STIPULATED SUM
(SINGLE PRIME CONTRACT)

BID PROPOSAL

TO: STATE OF IDAHO
IDAHO TRANSPORATATION DEPARTMENT

Bidders:

The bidder, in compliance with your Invitation for Bids for the Construction of **Clarkia Salt Shed 2023, ITD Project # FM12317**, having examined the bidding and Contract Documents and the site of the proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies and to provide the service and insurance in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents.

Bidder hereby agrees to commence Work under this Contract on a date to be specified in the written "Notice to Proceed" of the Owner and to substantially complete the Project within **180** consecutive calendar days thereafter, as stipulated in the specifications. Bidder further agrees to pay as liquated damages, the sum of **$500.00** for each consecutive calendar day after the established substantial completion date or adjusted date as established by change order.

Bidder acknowledges receipt of Addenda No.

_____Date:_____, _____Date:_____, _____Date:_____, _____Date:_____,

_____Date:_____, _____Date:_____, _____Date:_____, _____Date:_____,

BASE PROPOSAL:
Bidder agrees to perform all of the base proposal Work described in the specifications and shown on the plans for the sum of:

_____Dollars ($_____)
(Amount shall be in both words and figures. In case of discrepancy, the amount shown in words will govern)

ALTERNATE #1
(ADD STORAGE SHED, MAG SHED, LOADER SHED, ASPHALT APRON)

Add the sum of_____Dollars ($_____)
(Amount shall be in both words and figures. In case of discrepancy, the amount shown in words will govern)

ALTERNATE #2
(ASPHALT SITE IMPROVEMENTS)

Add the sum of_____Dollars ($_____)
(Amount shall be in both words and figures. In case of discrepancy, the amount shown in words will govern)

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The bidder agrees that this bid shall be good for a period of forty-five (45) calendar days after the scheduled opening time for receiving bids.

Upon receipt of written Notice of Intent to Award of the bid, Bidder will execute the formal Contract within ten (10) calendar days and deliver a Surety Bond or Bonds as required by paragraph “Performance and Payment Bonds” first page (ITB-1) of the Instructions to Bidders.

The bid security in the amount of five percent (5%) of the bid amount is to become the property of the Owner, in the event the Contract and bond are not executed within the time set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

The names and addresses of the entities who will perform the Work identified below, Subject to approval of Owner and Architect, if Undersigned is awarded the Contract, are as follows:

(If the listed trade is not needed for completion of the project enter "NOT APPLICABLE" in the respected spaces)

Plumbing (PWCL Category 15400)

(Name)_____

(Address)_____

Idaho Public Works Contractors License No._____

Idaho Plumbing Contractors License No._____

Heating, Ventilating & Air Conditioning (PWCL Category 15700-HVAC)

(Name)_____

(Address)_____

Idaho Public Works Contractors License No._____

Idaho HVAC Contractors License No._____

Electrical (PWCL Category 16000)

(Name)_____

(Address)_____

Idaho Public Works Contractors License No._____

Idaho Electrical Contractors License No._____

(Failure to name a properly licensed subcontractor in each of the above categories or "NOT APPLICABLE" will render the bid unresponsive and void)

Should the listing of subcontractors change due to selection of alternates or other similar circumstances attach explanation.

Bidder warrants that bid has been prepared and that any contract resulting from the acceptance of this bid is subject to the Fixed Price Construction Contract.

The undersigned notifies that it is of this date duly licensed as an Idaho Public Works Contractor and further it possesses an Idaho Public Works Contractor's License No._____, Exp. Date: _____ and it is domiciled in the State of_____.

The undersigned notifies that it is of this date duly licensed as an Idaho Contractor and further it possesses a State of Idaho General Contractors License No._____, Exp Date:_____

Dated this _____day of _____, 2020.
(date) (month) (year)

Respectfully submitted by:

_____
(Contractor's Name – Typed)

Seal
(Seal – if bid is by a corporation)

_____
(Street or P.O. Box Address)

_____
(City, State and zip code)

_____
(Authorized Signature)

_____
(Title)

_____
(Telephone Number)

_____
(Fax Number)

_____
(Email Address)

Have you remembered to include bid security (bid bond or certified or cashier's check), Contractor's Affidavit Concerning Alcohol and Drug-Free Workplace and a signed copy of the Bidder's Acknowledgement Statement with your bid?

CONTRACTOR'S AFFIDAVIT
CONCERNING ALCHOL AND DRUG-FREE WORK PLACE

STATE OF _____

COUNTY OF _____

Pursuant to Section 72-1717, Idaho Code, I, the undersigned, being duly sworn, dispose and certify that _____ is in compliance with the provisions of Section 72-1717, Idaho Code; that _____ provides a drug-free workplace program that complies with the provisions of Title 72, Chapter 17, Idaho Code, and will maintain such program throughout the life of a state construction contract; and that _____ shall subcontract Work only to subcontractors meeting the requirements of Section 72-1717(1)(a), Idaho Code.

_____
(Name of Contractor)

_____
(Address)

_____
(City and State)

By: _____
(Signature)

Subscribed and sworn to before me this _____ _day of _____,_____.

_____
NOTARY PUBLIC

Residing at:_____

Commission expires:_____

FAILURE TO EXECUTE THIS AFFIDAVIT AND SUBMIT IT ALONG WITH YOUR BID SHALL MAKE YOUR BID NON-RESPONSIVE.

BIDDER'S ACKNOWLEDGEMENT STATEMENT

NOTE: THE INFORMATION CONTAINED HEREIN IS A SUMMARY OF VITAL CONTRACT PROVISIONS AND DOES NOT CHANGE THE CONTRACT DOCUMENTS THAT WIL GOVERN THIS PROJECT.

Idaho Transportation Department, Project No.**FM12317, Clarkia Salt Shed 2023**

By Submitting a bid for this Project, the undersigned bidder agrees that, if awarded the Contract for construction, Contractor will conform to all conditions and requirements of the Contract, including but not limited to:

- Contractor agrees to comply with conditions pertaining to Sections 44-1001 and 44-1002, Idaho Code, requiring the employment of ninety-five percent (95%) bona fide Idaho residents and providing for a preference in the employment of bona fide Idaho residents and regarding the employment of persons not authorized to work in the United States of America.
- Contractor will substantially complete the Work within the time stated in the Contract Documents, or as modified by Change Order(s).
- If the Contractor fails to substantially complete the Project within the time stated in the Contract Documents, or as modified by Change Order, the Contractor agrees that the Owner may deduct from the Contract amount liquidated damages in the amount per calendar day, indicated in the Contract Documents, times the number of calendar days until the Project is Substantially Complete, as defined in the Contract Documents and as determined by the Design Professional (Miller Stauffer Architects).
- The Contractor agrees that the amount allowed for overhead and profit on any Change Order is limited to the amounts indicated in subparagraph 16.3.11 of the Fixed Price Construction Contract Between Owner and Contractor.
    - For total changes, the amount allowed for overhead, profit, bonds and insurance for the Contractor and all subcontractors of any tier combined shall not exceed fifteen percent (15%) of direct costs; or
    - The Contractor will determine the amount of overhead and profit to be apportioned between the Contractor and its subcontractor of allowable amounts of overhead, profit, bonds, and insurance.
- The Contractor agrees that Change Orders are governed by the Fixed Price Construction Contract between Owner and Contractor General Conditions of the Contract for Construction including as follows:
    - By the execution of a Change Order, the Contractor agrees and acknowledges that it has had sufficient time and opportunity to examine the change in Work which is the subject of the Change Order and that it has undertaken all reasonable efforts to discover and disclose any concealed or unknown conditions which may, to any extent, affect the Contractor's ability to perform in accordance with the Change Order. Aside from those matters specifically set forth in the Change Order, the Owner shall not be obligated to make any adjustments to either the Contract Sum or Contract Time by reason of any conditions affecting the change in Work addressed by the Change Order that could have reasonably been discovered or disclosed by the Contractor's examination.

- Any Change Order fully executed by mediation, shall constitute a final and full settlement of all matters relating to or affected by the change in the Work, including but not limited to, all direct and consequential costs associated with such change and any and all adjustments to the Contract Price and Contract Time. In the event a Change Order increases the Contract Price, the Contractor shall include the Work covered by such Change Order in the Application for Payment as if such Work was originally part of the Project and Contract Documents.

Failure to Execute this Acknowledgement may make your Bid Non-Responsive

I, _____, being duly authorized to bind the

(type or print name of individual)

Bidder, _____, does hereby certify that I have fully read

(type or print name of company)

Abd understand this document and that it highlights certain parts of the Contract that will be entered between the parties and that will govern this Project.

Authorized Signature: _____

Title: _____

Date: _____

END OF
BID FORM

SECTION 00 52 13

AGREEMENT FORM – STIPULATED SUM

(DESIGN/BID/BUILD)

IDAHO TRANSPORATION DEPARTMENT
FIXED PRICE CONSTRUCTION CONTRACT
BETWEEN OWNER AND CONTRACOR

CLARKIA SALT SHED
FM12317
MILEPOST 58.1
HIGHWAY 3
CLARKIA, IDAHO 83812

SHOSHONE COUNTY

JUNE 5TH, 2020

TABLE OF CONTENTS

ARTICLES

EXHIBITS

FIXED PRICE CONSTRUCTION CONTRACT
BETWEEN OWNER AND CONTRACTOR

THIS FIXED PRICE CONSTRUCTION CONTRACT BETWEEN OWNER AND CONTRACTOR (the "Contract") is by and between the State of Idaho, Idaho Transportation Department ("ITD" or the "Owner") and insert name of contractor (the "Contractor") and is for the construction of the Clarkia Salt Shed (the "Project") identified as ITD Project No. FM12317, as more fully described in Exhibit A, and incorporated herein by reference. This Contract shall be effective on _____ (day) of _____ (month), 20__ (year), when executed by both parties.

In consideration of the mutual promises, covenants, and agreements stated herein, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the Owner and the Contractor agree:

ARTICLE 1. CONTRACT DOCUMENTS

SECTION 1.01 The Contract Documents consist of this Contract, the drawings and specifications for the Project (the "Drawings and Specifications") identified in Exhibit C and any Addenda thereto issued prior to execution of this Contract, written amendments signed by both the Owner and the Contractor, Change Orders signed by both the Owner and the Contractor, Construction Change Directives and any written orders by the Architect for minor changes in the Work (the "Contract Documents"). Documents not included or expressly contemplated in this Article 1 do not, and shall not, form any part of the Contract Documents.

SECTION 1.02 The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

ARTICLE 2. REPRESENTATIONS AND WARRANTIES OF THE CONTRACTOR

In order to induce the Owner to execute this Contract and recognizing that the Owner is relying thereon, the Contractor, by executing this Contract, makes the following express representations to the Owner:

SECTION 2.01 The Contractor is fully qualified to act as the Contractor for the Project and has, and shall maintain, any and all licenses, permits or other authorizations necessary to act as the Contractor for, and to construct, the Project.

SECTION 2.02 The Contractor has become familiar with the Project site and the local conditions under which the Project is to be constructed and operated particularly in correlation to the requirements of the Contract.

SECTION 2.03 The Contractor has received, reviewed, compared, studied and carefully examined all of the documents which make up the Contract Documents, including the Drawings and Specifications, and any Addenda, and has found them in all respects to be complete, accurate, adequate, consistent, coordinated and sufficient for construction. Such review, comparison, study and examination shall be a warranty that the contractor believes that the documents are complete, and the Project is buildable as described except as reported.

SECTION 2.04 The Contractor warrants that the Contract Time is a reasonable period for performing the Work.

SECTION 2.05 The Contractor warrants to the Owner and Architect that all labor furnished on this Project shall be competent to perform the tasks undertaken; materials and equipment furnished under the Contract will be new and of high quality unless otherwise required or permitted by the Contract Documents; that the Work will be complete, of high quality and free from defects not inherent in the quality required or permitted; and that the Work will strictly conform to the requirements of the Contract Documents. Any Work not strictly conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse by Owner or its representatives, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty shall survive the completion of the Contract and final payment to the Contractor.

ARTICLE 3. INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, the Owner and the Contractor agree as follows:

SECTION 3.01 This Contract constitutes the entire and exclusive agreement between the parties with reference to the Project, and supersedes any and all prior discussions, communications, representations, understandings, negotiations, or agreements. This Contract also supersedes any bid documents.

SECTION 3.02 The intent of the Contract is to include all items necessary for the proper execution and completion of the Project and anything that may be required, implied or inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Fixed Price Contract Amount. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.

SECTION 3.03 Nothing contained in this Contract shall create, nor be interpreted to create, privity or any other relationship whatsoever between the Owner and any person or entity except the Contractor; provided, however, that the Architect is entitled to performance and enforcement of obligations under the Contract intended or necessary to facilitate its duties. Any reference to the Owner, the Contractor or the Architect shall be deemed to include authorized representatives.

SECTION 3.04 When a word, term or phrase is used in this Contract, it shall be interpreted or construed first as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage.

SECTION 3.05 The words "include," "includes," or "including," as used in this Contract, shall be deemed to be followed by the phrase "without limitation."

SECTION 3.06 The specification herein of any act, failure, refusal, omission, event, occurrence or condition as constituting a material breach of this Contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence or condition shall be deemed not to constitute a material breach of this Contract.

SECTION 3.07 The Contractor shall have a continuing duty to read, examine, review, compare and contrast each of the documents which make up this Contract, shop drawings and other submittals, and shall give timely written notice to the Owner and the Architect of any conflict, ambiguity, error or omission which the Contractor may find with respect to these documents before proceeding with the affected Work.

SECTION 3.08 The express or implied approval by the Owner or the Architect of any shop drawings or other submittals shall not relieve the Contractor of the continuing duties imposed hereby, nor shall any such approval be evidence of the Contractor's compliance with this Contract. The Owner has requested that the Architect prepare documents for the Project, including the Drawings and Specifications for the Project, which are accurate, adequate, consistent, coordinated, and sufficient for construction. HOWEVER, THE OWNER MAKES NO REPRESENTATION OR WARRANTY OF ANY NATURE WHATSOEVER TO THE CONTRACTOR CONCERNING SUCH DOCUMENTS. The Contractor again hereby acknowledges and represents that it has received, reviewed and carefully examined such documents; has found them to be complete, accurate, adequate, consistent, coordinated and sufficient for construction; and that the Contractor has not, does not and will not rely upon any representations or warranties by the Owner concerning such documents, as no such representations or warranties have been or are hereby made.

SECTION 3.09 In the event of any conflict among any of the documents which make up this Contract, the Architect shall interpret the documents, and the interpretation shall be binding on both the Owner and Contractor; provided, however, that this does not change the Owner's right to make decisions regarding Claims in accordance with Article 13 and Article 14. If no interpretation is provided by the Architect, the most stringent requirement in the Contract Documents will apply.

ARTICLE 4. OWNERSHIP OF DOCUMENTS

SECTION 4.01 Unless otherwise agreed by the Architect and its consultants, the party that prepared the drawings, specifications and other documents is the author of such with all copyright, common law, statutory and other reserved rights. The Contractor may retain one (1) record set of the Drawings and Specifications and other documents but shall not own or claim any copyright in them.

SECTION 4.02 The Drawings and Specifications and other documents, and any copies, are to be used solely for this Project, and not on any other project, or additions to this Project outside this Contract, without written consent of the Owner, the Architect and the Architect's consultants; provided, however, that copies may be made of applicable portions as necessary for completion of the Work. Such copies shall include any copyright notice on the Drawings and Specifications and other documents.

SECTION 4.03 Submission to or use by a regulatory body related to this Project is an acceptable use.

ARTICLE 5. CONTRACTOR'S PERFORMANCE

The Contractor shall perform all of the Work required, implied or reasonably inferable from this Contract, including the following:

SECTION 5.01 Construction of the Project.

SECTION 5.02 The furnishing of any required surety bonds and insurance.

SECTION 5.03 The provision or furnishing, and prompt payment therefore, of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, fuel, heat, light, cooling or other utilities required for construction and all necessary permits, including any required elevator permits, required for the construction of the Project. Construction projects for the State of Idaho require a building permit issued by the Division of Building Safety.

SECTION 5.04 The creation and submission of a detailed and comprehensive set of marked up blue or black-lined record drawings. Said record drawings shall be submitted to and approved by the Architect as a condition precedent to final payment to the Contractor.

ARTICLE 6. TIME FOR CONTRACTOR'S PERFORMANCE

SECTION 6.01 The Contractor shall commence the performance of this Contract in accordance with the "Notice to Proceed" (Exhibit F) issued by the Owner and shall diligently continue its performance to and until final completion of the Project. The Contractor shall accomplish Substantial Completion of the Project on or before the time indicated in Exhibit A. The period of time, including any adjustments made under this Contract, for the Contractor to reach Substantial Completion is the “Contract Time.”

SECTION 6.02 The Contractor may be assessed by and be responsible to the Owner for the amount indicated in Exhibit A per day for each and every calendar day of unexcused delay in achieving Substantial Completion beyond the date set forth for Substantial Completion. Any sums owed hereunder by the Contractor shall be payable not as a penalty but as liquidated damages, representing an estimate of delay damages likely to be sustained by the Owner estimated at the time of this Contract. When the Owner reasonably believes that Substantial Completion will be inexcusably delayed, the Owner shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the Owner to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving Substantial Completion, or any part thereof, for which the Owner has withheld payment, the Owner shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages. The Owner’s right to liquidated damages is not, and shall not be deemed to be, an exclusive remedy for delay and the Owner shall retain all remedies at law or in equity for delay or other breach.

SECTION 6.03 The term "Substantial Completion," as used herein, shall mean that point at which, as certified in writing by the Architect, or if there is no Architect, as certified by the Owner, the entire Project is at a level of completion in strict compliance with the Contract Documents, such that the Owner or its designee can enjoy beneficial use or occupancy and can use or operate it in all respects for its intended purpose. If, in the reasonable determination of the Owner, receipt of operation and maintenance manuals or completion of training is necessary for such beneficial use or occupancy, then there shall be no Substantial Completion until such manuals are provided or such training is completed. Partial use or occupancy of the Project shall not result in the Project being deemed substantially complete, or accepted as substantially complete, and such partial use or occupancy shall not be evidence of Substantial Completion. The Project shall not be deemed accepted until it is finally complete.

SECTION 6.04 Any request by the Contractor for an extension of the Contract Time must be made in accordance with, and is subject to, Article 13 and Article 14 related to Claims.

SECTION 6.05 The Owner shall have no liability of any kind to the Contractor if a schedule or other document submitted by the Contractor shows an intention to complete the Work prior to the scheduled completion date and for any reason other than Owner caused delay, the Contractor is not able to achieve such early completion.

ARTICLE 7. FIXED PRICE AND CONTRACT PAYMENTS

SECTION 7.01 The Owner shall pay, and the Contractor shall accept, as full and complete payment for the Contractor's timely performance of its obligations hereunder, the Fixed Price Contract Amount indicated in Exhibit A. The Fixed Price Contract Amount shall not be modified except as provided in this Contract.

SECTION 7.02 Prior to approval of the contract, the Contractor shall prepare and present to the Owner and the Architect the Contractor's Schedule of Values apportioning the Fixed Price Contract Amount among the different elements of the Project for purposes of periodic and final payment. The Contractor's Schedule of Values shall be presented in the Owner's web-based construction management software. The Contractor shall not imbalance it is Schedule of Values nor artificially inflate any element thereof. The violation of this provision by the Contractor shall constitute a material breach of this Contract. The Contractor's Schedule of Values will be utilized for the Contractor's requests for payment but shall only be so utilized after it has been approved in writing by the Architect.

SECTION 7.03 The Owner shall pay the Fixed Price Contract Amount to the Contractor in accordance with the procedures set forth in this Article. The Contractor shall submit a Contractor's Request for Payment, on or before the day of each month indicated in Exhibit A or otherwise agreed to, after commencement of performance, but no more frequently than once monthly. Said payment request shall be on made in the Owner's web-based construction management software and shall include whatever supporting information as may be required by the Architect, the Owner or both. Therein, the Contractor may request payment for one hundred percent (100%) of the Work satisfactorily completed to the date of the Contractor's Request for Payment, less five percent (5%) retainage, based on the Fixed Price Contract Amount allocated on the Schedule of Values. The Contractor's Request for Payment may include only: properly provided labor, materials or equipment properly incorporated into the Project, and time and materials or equipment necessary for the Project or that will be incorporated into the Project and are properly stored at the Project site (or elsewhere if off-site storage is approved in writing by the Owner). The Contractor's Request for Payment must exclude the total amount of previous payments received from the Owner. Any payment on account of stored materials or equipment will be subject to the Contractor providing written proof that the Owner has title to such materials or equipment and that they are fully insured against loss or damage. Each such Contractor's Request for Payment shall be signed by the Contractor and its submission shall constitute the Contractor's affirmative representation that the quantity of Work has reached the level for which payment is requested; that the Work has been properly installed or performed in strict compliance with the Contract; that all Work for which the Owner has previously paid is free and clear of any lien, claim or other encumbrance of any person whatsoever; and that the Contractor knows of no reason why payment should not be made as requested. As a condition precedent to payment, the Contractor shall, if required by the Owner, furnish to the Owner properly executed waivers or releases, in a form acceptable to the Owner, from all subcontractors, materialmen, suppliers or others having any claims or alleged claims, wherein said subcontractors, materialmen, suppliers or others shall acknowledge receipt of all sums due pursuant to all prior Contractor's Requests for Payment, and waive and relinquish any rights or other claims relating to the Project or Project site. The submission by the Contractor of the Contractor's Request for Payment also constitutes the Contractor's affirmative representation that, upon payment of the Contractor's Request for Payment submitted, title to all Work included in such payment shall be vested in the Owner.

SECTION 7.04 Thereafter, the Architect shall review the Contractor's Request for Payment and may also review the Work at the Project site or elsewhere to determine whether the quantity and quality of the Work are as represented in the Contractor's Request for Payment and as required by this Contract. The Architect shall approve in writing the amount which, in the opinion of the Architect, is properly owing to the Contractor and such approval is required before the Owner shall have any payment obligation. The Architect may withhold such approval, in whole or in part, as necessary to protect the Owner if it reasonably believes that the quantity or quality of the Work is not as represented in the Contractor's Request for Payment or is not in strict conformance to the Contract Documents.

SECTION 7.05 The Owner shall make payment to the Contractor no more than twenty-one (21) days following receipt by the Owner of the Architect's written approval of each Contractor's Request for Payment. The amount of each such payment shall be the amount approved for payment by the Architect less such amounts, if any, otherwise owing by the Contractor to the Owner or which the Owner shall have the right to withhold as authorized by this Contract. The Architect's approval of the Contractor's Request for Payment shall not preclude the Owner from the exercise of any of its rights it may have in this Contract, at law or in equity, as set forth in Paragraph 7.8 hereinafter.

SECTION 7.06 Off-site storage will not be approved at locations more than thirty (30) miles from the Project site or outside the State of Idaho and any payment for any off-site storage is subject to the following:

(1) The Contractor must provide at least thirty (30) days' advance written notice of its request to store off-site. Such notice must include a description of the type, quantities, locations and values of materials involved for the next billing cycle. All invoices must indicate the type, quantities and value of materials or equipment for which payment is requested;

(2) All materials stored off-site must be segregated and clearly marked with the ITD Project number and as being the "Property of the State of Idaho;"

(3) The Architect and/or the Owner's Field Representative must have unrestricted access to the stored materials during all business hours and may physically inventory all invoiced materials and equipment and may physically inspect the storage conditions;

(4) The Contractor must provide written Consent of Surety to off-site storage of materials and equipment and to payment for such materials and equipment prior to incorporation in the Work. Consent must be from the Surety. Consent of local broker or agent is not acceptable;

(5) The Contractor must maintain and must provide to the Architect, upon request, a current log of stored materials and equipment, which reflects when materials and equipment are used or added; and

(6) The Contractor must obtain and maintain all risk property insurance at replacement cost, with the State of Idaho listed as loss payee on all materials and equipment stored off-site and in transit.

SECTION 7.07 When payment is received from the Owner, the Contractor shall immediately pay all subcontractors, materialmen, laborer and suppliers the amounts they are due for the Work covered by such payment. The Contractor shall not withhold from a subcontractor or supplier more than the percentage withheld from a payment certificate for the subcontractor's or supplier's portion of the Work. In the event the Owner becomes informed that the Contractor has not paid a subcontractor, materialmen, laborer or supplier as provided herein, the Owner shall have the right, but not the duty, to issue future checks and payment to the Contractor of amounts otherwise due hereunder naming the Contractor and any such subcontractor, materialmen, laborer or supplier as joint payees. Such joint check procedure, if employed by the Owner, shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit the Owner to repeat the procedure in the future.

SECTION 7.08 Payment to the Contractor, utilization of the Project for any purpose by the Owner, or any other act or omission by the Owner shall not be interpreted or construed as an acceptance of any Work of the Contractor not strictly in compliance with this Contract.

SECTION 7.09 The Owner shall have and be entitled to the right to refuse to make any payment, including by reducing payment under any Contractor's Request for Payment, and, if necessary, may demand the return of a portion or all of an amount previously paid to the Contractor for reasons that include the following:

(1) The quality of the Contractor's work, in whole or part, is not in strict accordance with the requirements of this Contract or identified defective work, including punch list work, is not remedied as required by the Contract Documents;

(2) The quantity of the Contractor's work, in whole or in part, is not as represented in the Contractor's Request for Payment or otherwise;

(3) The Contractor's rate of progress is such that, in the Owner's opinion, Substantial Completion or final completion, or both, may be inexcusably delayed or that the Owner will incur additional costs or expense related to repeated Substantial Completion or final completion inspections through no fault of the Owner;

(4) The Owner reasonably believes that the Contractor has failed to use Contract funds, previously paid the Contractor by the Owner, to pay Contractor's project-related obligations, including subcontractors, laborers and material and equipment suppliers;

(5) There are claims made or it seems reasonably likely that claims will be made, against the Owner;

(6) The Contractor has caused a loss or damage to the Owner, the Architect, or another contractor;

(7) The Owner reasonably believes that the Project cannot be completed for the unpaid balance of the Fixed Price Contract Amount or the Owner reasonably believes that the Project cannot be completed within the Contract Time and that the unpaid balance of the Fixed Price Contract Amount would be inadequate to cover the cost of actual or liquidated damages for the anticipated delay;

(8) The Contractor fails or refuses to perform any of its obligations to the Owner; or

(9) The Contractor fails to pay taxes as required by Title 63, Chapter 15, Idaho Code.

In the event that the Owner makes written demand upon the Contractor for amounts previously paid by the Owner as contemplated in Paragraph 7.8, the Contractor shall promptly comply with such demand.

SECTION 7.10 If the Owner, without cause, fails to pay the Contractor any amounts due and payable thirty (30) days after those amounts are due pursuant to Paragraph 7.4, the Contractor shall have the right to cease the Work until receipt of proper payment. Contractor must first provide written notice to the Owner of the Contractor’s intent to cease the Work ten (10) days prior to stopping the Work under this Paragraph. If any amounts remain unpaid after fifty-one (51) days after the Architect approves the Contractor’s Request for Payment under Paragraph 7.4, interest at the rate of four percent (4%) per annum shall accrue on those unpaid amounts.

SECTION 7.11 When Contractor considers Substantial Completion has been achieved, the Contractor shall notify the Owner and the Architect in writing and shall furnish to the Architect a listing of those matters yet to be finished. The Architect will thereupon conduct an inspection to confirm that the Work is, in fact, substantially complete. Upon its confirmation that the Contractor's work is substantially complete, the Architect will so notify the Owner and Contractor in writing and will therein set forth the date of Substantial Completion. The Owner and the Contractor must accept the date of Substantial Completion in writing. Guarantees and warranties required by this Contract shall commence on the date of Substantial Completion. At the Contractor's Request for Payment following Substantial Completion, the Owner shall pay the Contractor an amount sufficient to increase total payments to the Contractor to ninety-five percent (95%) of the Fixed Price Contract Amount, less any liquidated damages, less the reasonable costs as determined by the Architect for completing all incomplete work, correcting and bringing into conformance all defective and nonconforming work, and handling any outstanding or potential claims. If the Architect determines that the Contractor has made or is making satisfactory progress on any uncompleted portions of the Work, the Owner may, at its discretion, release a portion of the retainage to the Contractor prior to the actual final completion of the conditions set forth in Paragraph 7.13. It is the intent of the parties that the Project will be accepted only in total (at Substantial Completion and final completion) and not in phases unless provided for in Exhibit A. Any acceptance other than in total shall require written agreement of Owner and Architect.

SECTION 7.12 When Contractor considers the Project is at final completion, it shall notify the Owner and the Architect thereof in writing. Thereupon, the Architect will perform a final inspection of the Project. If the Architect confirms that the Project is complete in full accordance with the Contract Documents and that the Contractor has performed all of its obligations to the Owner, the Architect will furnish a final approval for payment to the Owner certifying to the Owner that the Project is complete and the Contractor is entitled to the remainder of the unpaid Fixed Price Contract Amount, less any amount withheld pursuant to this Contract.

SECTION 7.13 If the Contractor fails to achieve final completion within a reasonable number of days as established by the Architect from the date of Substantial Completion, the Contractor may be assessed and be responsible to the Owner for fifty percent (50%) of the daily amount of liquidated damages as established pursuant to Paragraph 6.2 and Exhibit A, per day for each and every calendar day of unexcused delay in achieving final completion beyond the date established for final completion of the Work. Any sums due and payable hereunder by the Contractor shall be payable not as a penalty but as liquidated damages representing an estimate of delay damages likely to be sustained by the Owner, estimated at or before the time of executing this Contract. When the Owner reasonably believes that final completion will be inexcusably delayed, the Owner may withhold from any amounts otherwise due the Contractor an amount then believed by the Owner to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving final completion, or any part thereof, for which the Owner has withheld payment, the Owner shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages. The Owner's right to liquidated damages is not, and shall not be deemed to be, an exclusive remedy for delay and the Owner shall retain all remedies at law or in equity for delay or other breach.

SECTION 7.14 As a condition precedent to final payment, the Contractor must furnish the Owner, in the form and manner required by Owner, and with a copy to the Architect of the following:

(1) An affidavit that all of the Contractor's obligations to subcontractors, laborers, equipment, or material suppliers or other third parties in connection with the Project have been paid or otherwise satisfied;

(2) A release by the Contractor of all Claims it has or might have against the Owner or the Owner's property (ITD's form, Exhibit H);

(3) Contractor's Affidavit of Debts and Claims (AIA Document G706);

(4) Consent of Surety to final payment (AIA Document G707);

(5) Confirmation of all required training, product warranties, operating manuals, instruction manuals and other record documents, drawings and things customarily required of the Contractor; and

(6) A Public Works Contract Tax Release issued by the Idaho Tax Commission (See "Request for Tax Release" form, Exhibit G, to be submitted by Contractor to the Idaho Tax Commission).

SECTION 7.15 The Owner shall, subject to its rights set forth in this Contract, make final payment of all sums due the Contractor within thirty (30) days of the Architect's execution of a final approval for payment and receipt of documentation required by Paragraph 7.13, whichever is received later.

ARTICLE 8. INFORMATION AND MATERIAL SUPPLIED BY THE OWNER

SECTION 8.01 The Administrator of ITD or his designee shall be the sole representative of the State of Idaho. The Architect shall have authority to bind Owner only as specifically set forth in this Contract.

SECTION 8.02 The Owner will assign a Project Manager and a Field Representative to represent the Owner, identified in Exhibit B. The Owner's Field Representative's duties, responsibilities and limitations of authority are in accordance with ITD's policies and procedures.

SECTION 8.03 The Owner shall furnish to the Contractor, prior to the execution of this Contract, any and all written and tangible material in its possession concerning conditions below ground at the site of the Project. Such written and tangible material is furnished to the Contractor only in order to make complete disclosure of such material as being in the possession of the Owner and for no other purpose. By furnishing such material, the Owner does not represent, warrant or guarantee its accuracy, either in whole in part, implicitly or explicitly.

SECTION 8.04 The Owner will secure and pay for all required easements, the plan check fee required by the Division of Building Safety, conditional use permits and any other permits and fees specifically indicated in the Contract Documents to be secured and paid for by the Owner.

SECTION 8.05 The Owner will provide the Contractor one (1) copy of this complete Contract and the number of sets of Drawings and Project Manuals (including Specifications) as indicated in Exhibit A. The Contractor may purchase additional copies, at its expense, from the Architect.

ARTICLE 9. STOP WORK ORDER

SECTION 9.01 In the event the Contractor fails or refuses to perform the Work as required or fails or refuses to correct nonconforming Work, the Owner may instruct the Contractor to stop Work in whole or in part. Upon receipt of such instruction, the Contractor shall immediately stop as instructed by the Owner and shall not proceed further until the cause for the Owner's instructions has been corrected, no longer exists or the Owner instructs that the Work may resume. In the event the Owner issues such instructions to stop, and in the further event that the Contractor fails and refuses within seven (7) days of receipt of same to provide adequate assurance to the Owner that the cause of such instructions will be eliminated or corrected, then the Owner shall have the right, but not the obligation, to carry out the Work with its own forces or with the forces of another contractor, and the Contractor shall be fully responsible and liable for the costs of performing such Work by the Owner. Without limiting what else might constitute nonconforming Work, the existence of a gross safety violation or other situation or condition that creates, or could imminently create, a threat of serious harm to persons or property, shall constitute nonconforming Work and any order to stop the Work issued for such reason shall not be considered an interference with the Contractor's performance of the Work or its means and methods. The rights set forth herein are in addition to, and without prejudice to, any other rights or remedies the Owner may have against the Contractor.

SECTION 9.02 Any order to stop the Work issued pursuant to Paragraph 9.1 shall not be used to justify any Claim by the Contractor for additional time or money.

ARTICLE 10. DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations and responsibilities of the Contractor set forth in this Contract, the Contractor shall have and perform the following duties, obligations, and responsibilities to the Owner:

SECTION 10.01 The Contractor's continuing duties set forth in Paragraph 3.7 are by reference hereby incorporated in this Paragraph 10.1. The Contractor shall not perform Work without adequate plans and specifications or, as appropriate, approved shop drawings or other submittals. If the Contractor performs Work knowing or believing it involves an error, inconsistency or omission in the Contract without first providing written notice to the Architect and Owner, the Contractor shall be responsible for such Work and shall pay the cost of correcting same.

SECTION 10.02 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing Work. Errors, inconsistencies, or omissions discovered shall be reported to the Architect, the Owner, and the Owner's Field Representative immediately. Such examination, review and comparison shall be a warranty that the Contract Documents are complete, and the Project is buildable as described except as reported. Reported errors, inconsistencies or omissions will constitute a request for an interpretation by the Architect and may constitute a claim pursuant to Article 13 hereof where appropriate.

SECTION 10.03 The Contractor shall ensure that all Work shall strictly conform to the requirements of this Contract.

SECTION 10.04 The Work shall be strictly supervised, the Contractor bearing full responsibility for any and all acts or omissions of those engaged in the Work on behalf of the Contractor.

SECTION 10.05 All labor furnished on this Project shall be competent to perform the tasks undertaken; materials and equipment furnished under the Contract will be new and of high quality unless otherwise required or permitted by the Contract Documents; the Work will be complete, of high quality and free from defects not inherent in the quality required or permitted; and the Work will strictly conform to the requirements of the Contract Documents. Any Work not strictly conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

SECTION 10.06 Except as provided in Paragraph 8.4, the Contractor shall secure or provide and pay for all licenses, permits required by the Idaho Division of Building Safety, governmental approvals and inspections, connections for outside services for the use of municipal or private property for storage of materials, parking, utility services, temporary obstructions, enclosures or opening and patching of streets, and for all other facilities and services necessary for proper execution and completion of the Project.

SECTION 10.07 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities bearing on performance of the Work.

SECTION 10.08 The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Key supervisory personnel assigned by the Contractor to this Project are as listed in Exhibit B.

SECTION 10.09 The Contractor shall employ a competent superintendent and necessary assistants, as needed, to oversee execution of the Work. The superintendent shall be in attendance at the Project site during the progress of the Work. The superintendent and any project manager, if the Contractor utilizes a project manager, shall be reviewed and must be approved by the Architect and Owner, and neither shall be changed except with the consent of the Architect and Owner, unless the superintendent and/or project manager cease to be employed by the Contractor. Under this circumstance, any new superintendent or new project manager must be satisfactory to the Architect and Owner. Such approval shall not be unreasonably withheld. The superintendent and any project manager shall represent the Contractor and all communications given to the superintendent or project manager are deemed given to the Contractor.

SECTION 10.10 So long as the individuals named above remain actively employed or retained by the Contractor, they shall perform the functions indicated next to their names unless the Owner agrees to the contrary in writing. In the event one or more individuals not listed in Paragraph 10.9 subsequently assumes one or more of those functions listed in Paragraph 10.9, the Contractor shall be bound by the provisions of this paragraph as though such individuals had been listed in Paragraph 10.9.

SECTION 10.11 The Contractor shall provide to the Owner and the Architect a milestone schedule for completing the Work within the Contract Time. Such schedule shall be in a form specified in Division 1 of the Specifications and be acceptable to the Owner and to the Architect. The schedule must be submitted to and accepted by the Architect prior to the first request for payment unless required earlier by Division 1 of the Specifications. The Contractor's milestone schedule must be updated as required by the Architect and/or the Owner to reflect conditions encountered and shall apply to the total Project. The Contractor's revisions to the schedule shall not constitute a waiver of the requirement to complete the Project in the time allowed by the Contract, unless additional time for performance has been allowed pursuant to a Change Order. Any changes in milestone begin or end dates must be furnished to the Owner and the Architect. Strict compliance with the requirements of this Paragraph shall be a condition precedent to the payment to the Contractor and failure by the Contractor to strictly comply with said requirements shall constitute a material breach of this Contract.

SECTION 10.12 Unless otherwise provided in the Construction Documents, on all projects where the Fixed Price Contract Amount is over $1,000,000, the Contractor shall schedule and perform the Work in accordance with a Critical Path Method ("CPM") to indicate the rate of progress and practical order of the Project. The purpose of this scheduling requirement is to assure adequate planning, coordination and execution of the Work. The schedule shall indicate the dates for starting and completing major work activities, project events, major equipment, material and equipment submittals and delivery of major items. Project activities having critical time restraints on action, required by the Owner, shall be shown as scheduled milestones. The Contractor's schedule shall demonstrate the order, interdependence and sequence of activities. Critical paths shall be highlighted or distinguished. The schedule shall include all the dates specified in the Contract for Substantial Completion and final completion of the Work. The time limit set forth in the Contract for Substantial Completion and final completion must govern; the schedule must be adjusted to meet these dates. Schedule float shall belong to the Project. The Contractor shall submit to the Owner and Architect a CPM schedule within three (3) weeks after award of the Contract and maintain such schedule on a current basis in accordance with the Contract Documents.

SECTION 10.13 Once a month, or at intervals as required by the Architect, the Contractor shall advise the Owner and the Architect of the status of the Work (in duplicate) on the current milestone schedule. If any project milestone dates are not met on schedule, the Contractor shall immediately advise the Owner and Architect in writing of the proposed action to bring the Work on schedule. The Contractor shall also submit a detailed short-term schedule, as required by Division 1 of the Specifications, each month. This short-term schedule shall include a description of current and anticipated problem areas, delaying factors and their impact, and explanation of corrective action taken or proposed. If the Work is behind schedule, the Contractor shall indicate what measures it will take to put the Work back on schedule.

SECTION 10.14 If the Work is not progressing through no fault of the Owner or the Architect, as shown on the milestone schedule, as determined by the Architect, and the Owner and the Architect do not believe the Contractor's proposed action to bring the Work on schedule is adequate, then the Contractor shall be deemed in default under this Contract and the progress of the Work shall be deemed unsatisfactory. In such event, the Owner, at its discretion, may require the Contractor to work such additional time over regular hours, including Saturdays, Sundays and holidays, without additional cost to the Owner to bring the Work on schedule.

SECTION 10.15 The Contractor shall keep an updated copy of the Drawings and Project Manual (including Specifications) and Addenda at the site. Additionally, the Contractor shall keep a current submittal schedule and a copy of approved shop drawings and other submittals. All of these items shall be available to the Owner and the Architect at all regular business hours. Upon final completion of the Work, all of these items must be updated by the Contractor and provided to the Architect and shall become the property of the Owner.

SECTION 10.16 The Contractor shall carefully review and inspect for compliance with the Contract Documents, the shop drawings and other submittals (including product data and samples) required by the Contract Documents and shall submit to the Architect only submittals approved in accordance with this section. Such review and submittal shall be done promptly and in a sequence that will not delay its Work under this Contract or the activities of the Owner or of separate contractors. Shop drawings and other submittals from the Contractor do not constitute a part of the Contract. The Contractor shall not do any work requiring shop drawings or other submittals unless the Architect has verified compliance in writing. All Work requiring verified shop drawings or other submittals shall be done in strict compliance with such approved documents. However, verification of compliance by the Architect shall not be evidence that Work installed pursuant thereto conforms with the requirements of this Contract. The Architect shall have no duty to review submittals that are not Contractor approved, partial submittals or incomplete submittals. The Contractor shall maintain a submittal log which shall include, at a minimum, the date of each submittal, the date of any re-submittal, the date of any approval or rejection and the reason for any rejection.

SECTION 10.17 The Contractor shall maintain the Project site in a reasonably clean condition during performance of the Work. Upon final completion, the Contractor shall thoroughly clean the Project site of all debris, trash and excess materials or equipment.

SECTION 10.18 At all times relevant to this Contract, the Owner and the Architect shall have a right to enter the Project site and the Contractor shall allow the Owner and/or the Architect to review or inspect the work without formality or other procedure.

SECTION 10.19 The presence or duties of the Architect’s or the Owner's personnel or representatives at the construction site, does not make any of them responsible for those duties that belong to the Contractor or other entities and does not relieve the Contractor or any other entities of their obligations, duties and responsibilities, including any obligation or requirement to have or to implement any health or safety plans or precautions. Except as provided in Paragraph 10.9, Architect's and Owner's personnel have no authority to exercise any control over any Contractor or other entities or their employees in connection with their work or any health or safety precautions and have no duty for inspecting, noting, observing, correcting or reporting on health or safety deficiencies of the Contractor or other entities or any other persons at the site except their own personnel. The presence of Architect’s or Owner's personnel at a construction site is for the purpose of providing to Owner a greater degree of confidence that the completed Work will conform to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has been implemented and preserved by the Contractor. For this Contract only, construction sites include places of manufacture for materials incorporated into the construction Work and Contractor includes manufacturers of materials incorporated into the construction Work.

ARTICLE 11. INDEMNITY

SECTION 11.01 The Contractor shall defend, indemnify and hold harmless the Owner, Architect, and their employees, officers and agents harmless from any and all claims, liabilities, damages, losses, costs and expenses of every type whatsoever, including attorney fees and expenses, arising out of or resulting from the Contractor's work, acts or omissions under or related to the Contract Documents, to the extent caused by the Contractor, or anyone for whose acts the Contractor may be liable, regardless of whether such liability, claim, damage, loss, cost or expense is caused in part by the Owner.

SECTION 11.02 The limits of any insurance of the Contractor shall not be, and shall not be deemed to be, a limitation of the Contractor’s defense and indemnity obligations contained in this Article.

SECTION 11.03 In claims against any person or entity indemnified under this Article by an employee of the Contractor, a subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under this Article shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 12. THE ARCHITECT

The Architect for this Project is identified in Exhibit B, incorporated herein by reference, along with any authorized representatives and any limitations of responsibility. For the purpose of this Contract, the “Architect” means the properly licensed architect, properly registered professional engineer or other professional licensed in the State of Idaho who prepared the Drawings and Specifications for this Project. If the employment of the Architect is terminated, the Owner may retain a replacement professional and the role of the replacement professional shall be the same as the role of the Architect. Unless otherwise directed by the Owner in writing, the Architect will perform those duties and discharge those responsibilities allocated to the Architect in this Contract. The duties, obligations and responsibilities of the Architect shall be for contract administration and include the following:

SECTION 12.01 Unless otherwise directed by the Owner in writing, the Architect shall not act as the Owner's agent.

SECTION 12.02 Unless otherwise directed by the Owner in writing, the Owner and the Contractor shall communicate with each other through the Architect.

SECTION 12.03 When requested by the Owner or Contractor in writing, the Architect shall within seven (7) days render written interpretations necessary for the proper execution or progress of the Work or shall provide a written explanation as to why more time is needed and provide a date by which it will be provided.

SECTION 12.04 The Architect shall draft proposed change authorization(s).

SECTION 12.05 The Architect shall review and verify compliance or respond otherwise as necessary concerning shop drawings or other submittals received from the Contractor.

SECTION 12.06 The Architect shall be authorized to refuse to accept Work that is defective or otherwise fails to comply with the requirements of this Contract. If the Architect deems it appropriate, the Architect may, with the Owner’s consent, require extra inspections or testing of the Work for compliance with the requirements of this Contract.

SECTION 12.07 The Architect shall review the Contractor's Request for Payment and shall verify in writing those amounts which, in the opinion of the Architect, are properly owing to the Contractor as provided in this Contract.

SECTION 12.08 The Architect shall, upon written request from the Contractor, perform Substantial Completion and final completion inspections contemplated by Article 6.

SECTION 12.09 The Architect may require the Contractor to make changes which do not involve a change in the Fixed Price Contract Amount or in the Contract Time consistent with the intent of this Contract. Such changes shall be given to the Contractor in writing under signature of the Architect, with a copy to the Owner, and may be in the form of a supplemental instruction.

SECTION 12.10 The Architect shall review and evaluate Claims and take other actions related to Claims in accordance with Articles 13 and 14.

SECTION 12.11 The duties, obligations and responsibilities of the Contractor under this Contract shall in no manner whatsoever be changed, altered, discharged, released, or satisfied by any duty, obligation, or responsibility of the Architect. The Contractor is not a third-party beneficiary of any Contract by and between the Owner and the Architect. It is expressly acknowledged and agreed that the duties of the Contractor to the Owner are independent of, and are not diminished by, any duties of the Architect to the Owner.

ARTICLE 13. CLAIMS

SECTION 13.01 For purposes of this Contract, a "Claim" means a demand by the Contractor to the Owner, or by the Owner to the Contractor, for a change in the Fixed Price Contract Amount, an extension of the Contract Time, an adjustment to or interpretation of the Contract terms, or other relief with respect to the terms of the Contract, which demand the Contractor or Owner asserts is required or allowed under the Contract Documents and which the Contractor and the Owner have previously discussed and failed to agree upon.

SECTION 13.02 For the Claim to be considered, it must meet the following requirements:

(1) The Claim must be in writing;

(2) The Claim by the Contractor must be signed by an authorized representative of the Contractor, and the Claim by the Owner must be signed by an authorized representative of the Owner;

(3) The Claim by the Contractor must be provided to the Owner and to the Architect and the Claim by the Owner must be provided to the Contractor and to the Architect;

(4) The Claim must be made no later than ten (10) days after the event or first appearance of the circumstance giving rise to the Claim;

(5) The Claim must describe in detail all known facts and circumstances that the Contractor or Owner asserts support the Claim;

(6) The Claim must refer to the provision(s) of the Contract Documents that the Contractor or Owner asserts support the Claim;

(7) The Contractor or Owner must provide all documentation or other information to substantiate the Claim; and

(8) The Contractor or Owner must continue its performance under this Contract pending the resolution of any Claim; provided, however, that the Contractor shall not perform any additional or changed work not otherwise authorized in accordance with the Contract Documents.

SECTION 13.03 The failure by the Contractor to meet any of the requirements of Paragraph 13.2 shall constitute a complete waiver by the Contractor of any rights arising from or related to the Claim. Similarly, the failure by the Owner to meet any of the requirements of Paragraph 13.2 shall constitute a complete waiver by the Owner of any rights arising from or related to the Claim.

SECTION 13.04 If the Claim is made based on concealed or unknown site conditions, the following shall apply in addition to all other provisions applicable to the Claim:

(1) The condition must have been previously concealed and unknown or of a type not ordinarily encountered in the general geographic location of the Project and must not have been reasonably susceptible to discovery; and

(2) The Contractor shall notify the Architect and the Owner of the condition and shall not disturb the condition until the Architect and Owner have observed it or have waived in writing the right to observe it.

SECTION 13.05 If the Claim by the Contractor is for an increase in the Fixed Price Contract Amount, the following shall apply in addition to all other provisions applicable to the Claim:

(1) .1 Any increase in the Fixed Price Contract Amount shall be strictly limited to the direct costs incurred by the Contractor and shall not include any other costs, indirect or other, including any costs for or related to lost productivity, profit, home office overhead and any other overhead, legal fees, claim preparation, any matter previously resolved by a change order, equipment costs, costs related to the services of a project manager unless the project manager was required full time by the Owner or the Contract Documents, any costs associated with the failure to complete the Work early or in advance of the date required by the Contract Documents, it being specifically agreed to by the parties that there is no intention to have the Eichleay or other similar formula applicable to this Contract nor shall this Contract be deemed to be subject to any such formula; and

(2) .2 The Owner shall have no liability for, and the Fixed Price Contract Amount shall not be increased related to, any claims of third parties, including subcontractors, unless and until the liability of the Contractor for such has been established in a court of competent jurisdiction and any such liability of the Owner shall be limited in the same manner as described in subparagraph 13.5.1.

SECTION 13.06 If the Claim by the Owner is for a change in the Fixed Price Contract Amount, all other applicable provisions to the Claim apply.

SECTION 13.07 If the Claim by the Contractor is for an extension of the Contract Time, the following shall apply in addition to all other provisions applicable to the Claim:

(1) The Contractor has been delayed in its performance by an act or omission of the Owner and through no fault of the Contractor;

(2) The Contractor has been delayed in its performance by unusually severe weather that could not reasonably have been anticipated or by another event not within its reasonable control;

(3) At the time it occurs or during its occurrence, the delay will preclude completion of the Project in the time required by the Contract Documents; and

(4) Any extension of the Contract Time shall be the Contractor's sole and exclusive remedy for any delay except a delay caused by the active interference of the Owner with the Contractor's performance which active interference continues after written notice to the Owner. The Owner's exercise of any of its rights or remedies under this Contract, including ordering changes in the Work, directing suspension, rescheduling or correction of the Work, do not constitute active interference.

SECTION 13.08 If a Claim is made based on an error, inconsistency or omission in the Contract that was reasonably susceptible to discovery by the Contractor and was not reported in accordance with Paragraph 2.3, that Claim shall be denied.

ARTICLE 14. RESOLUTION OF CLAIMS

SECTION 14.01 All Claims made in accordance with Article 13 shall be reviewed and evaluated by the Architect. If the Claim is not made in strict accordance with Article 13, it shall be rejected as waived. Any failure by the Architect to reject the Claim for failure to meet the requirements of Article 13 is not binding on the Owner and the Owner may reject the Claim for such failure.

SECTION 14.02 No later than seven (7) days from receipt of the Claim by the Architect, it shall:

(1) Make a written request to the Contractor or Owner for more data to support the Claim;

(2) Attempt to facilitate resolution of the Claim through informal negotiations; or

(3) If the Claim is by the Contractor, make a written recommendation to the Owner, with a copy to the Contractor, that the Owner reject or approve all or part of the Claim and state the reasons for the Architect's recommendation. If the Claim is by the Owner, make a written recommendation to the Contractor, with a copy to the Owner, that the Contractor reject or approve all or part of the Claim and state the reasons for the Architect's recommendation.

SECTION 14.03 If the Architect requests more data from the Contractor or the Owner under subparagraph 14.2.1, the Contractor or Owner shall respond no later than seven (7) days from receipt of such request, and provide additional data, provide a date certain by which additional data will be provided, or state that it will not provide additional data. Upon receipt of data, if any, in accordance with this section, the Architect will complete the evaluation of the Claim. Failure to respond at all or failure to provide data by the date specified in the response to the request shall result in the Claim being evaluated based on the information in the Architect's possession.

SECTION 14.04 In evaluating the Claim, the Architect may consult with the Contractor, the Owner or other persons with knowledge or expertise that may assist the Architect in its evaluation.

SECTION 14.05 No later than fourteen (14) days after receipt by the Owner of the Architect's recommendation regarding the Contractor's Claim, the Owner shall, in writing, notify the Contractor and the Architect of its decision regarding the Claim. No later than fourteen (14) days after receipt by the Contractor of the Architect's recommendation regarding the Owner's Claim, the Contractor shall, in writing, notify the Owner and the Architect of its decision regarding the Claim.

SECTION 14.06 The Owner's decision regarding the Contractor's Claim is binding on the Owner and the Contractor but is subject to mediation in accordance with this Contract, and the Contractor's decision regarding the Owner's Claim is binding on the Owner and the Contractor but is subject to mediation in accordance with this Contract.

ARTICLE 15. SUBCONTRACTORS

SECTION 15.01 A document in the form of Exhibit E shall be completed and submitted upon execution of this Contract and those subcontractors named therein shall match those subcontractors named in the Contractor's bid unless otherwise agreed to in writing by the Owner. Also, upon execution of this Contract by the Contractor, the Contractor shall identify to the Owner and the Architect, in writing, those parties intended as subcontractors on the Project not otherwise named in Exhibit E. The Owner shall, in writing, state any objections the Owner may have to one or more of such subcontractors. The Contractor shall not enter into a subcontract with an intended subcontractor with reference to whom the Owner objects. All subcontracts shall afford the Contractor rights against the subcontractor which correspond to those rights afforded to the Owner against the Contractor herein, including those rights of Contract Termination as set forth in this Contract. All subcontractors shall, throughout the duration of this Contract, be properly licensed as Idaho Public Works Contractors.

SECTION 15.02 The Contractor conditionally assigns each of its subcontracts related to the Project to the Owner. All subcontracts between the Contractor and the subcontractors shall obligate the subcontractor to such conditional assignment. Upon a Termination by the Owner for cause under Paragraph 20.1, the Owner may accept such conditional assignment by written notification to the applicable subcontractor and to the Contractor. Such acceptance is subject to the rights of the Surety, if any, relating to the Contract.

ARTICLE 16. CHANGES IN THE WORK

SECTION 16.01 General

(1) Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article and elsewhere in the Contract Documents; and

(2) Changes in the Work shall be performed under applicable provisions of the Contract Documents and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

SECTION 16.02 Change Orders

(1) A “Change Order” is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon: a change in the work, any adjustment in the Fixed Price Contract Amount and any adjustment in the Contract Time;

(2) Methods used in determining adjustments to the Fixed Price Contract Amount may include those listed in subparagraph 16.3.4;

(3) The amount allowed for overhead and profit on any Change Order is limited to the amounts indicated in subparagraph 16.3.11;

(4) Any Change Order prepared, including those arising by reason of the parties’ mutual agreement or by mediation, shall constitute a final and full settlement of all matters relating to or affected by the change in the Work, including all direct, indirect and consequential costs associated with such change and any and all adjustments to the Fixed Price Contract Amount and Contract Time. In the event a Change Order increases the Fixed Price Contract Amount, the Contractor shall include the Work covered by such Change Order in the Contractor’s Request for Payment as if such Work were originally part of the Project and Contract Documents; and

(5) By the execution of a Change Order, the Contractor agrees and acknowledges that it has had sufficient time and opportunity to examine the change in Work which is the subject of the Change Order and that it has undertaken all reasonable efforts to discover and disclose any concealed or unknown conditions which may to any extent affect the Contractor’s ability to perform in accordance with the Change Order. Aside from those matters specifically set forth in the Change Order, the Owner shall not be obligated to make any adjustments to either the Fixed Price Contract Amount or Contract Time by reason of any conditions affecting the change in Work addressed by the Change Order, which could have reasonably been discovered or disclosed by the Contractor’s examination.

SECTION 16.03 Construction Change Directive (CCD)

(1) A “Construction Change Directive” is a written order prepared by the Architect and signed by the Owner and Architect directing a change in the Work prior to agreement on adjustment, if any, in the Fixed Price Contract Amount or Contract Time or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, the Fixed Price Contract Amount and Contract Time being adjusted accordingly;

(2) A Construction Change Directive, within limitations, may also be used to incorporate minor changes in the Work agreed to by the Architect’s representative, the Owner’s Field Representative and the Contractor’s superintendent or project manager. The limits of these representatives’ authority with regard to Construction Change Directives shall be documented in writing by the Architect, Owner and Contractor;

(3) A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order;

(4) If the Construction Change Directive provides for an adjustment to the Fixed Price Contract Amount, the adjustment shall be based on one (1) of the following methods:

(1) Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

(2) Unit prices stated in the Contract Documents or subsequently agreed upon;

(3) Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

(4) As provided in subparagraph 16.3.7;

(5) Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect in writing within forty-eight (48) hours of the Contractor’s agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Fixed Price Contract Amount or Contract Time;

(6) A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Fixed Price Contract Amount and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be incorporated into a future Change Order;

(7) If the Contractor does not respond promptly or disagrees with the method for adjustments in the Fixed Price Contract Amount or Contract Time, the method and the adjustment shall be determined by the Architect on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Fixed Price Contract Amount, an allowance for overhead and profit in accordance with subparagraph 16.3.11. In such case of an increase in Fixed Price Contract Amount, and also under subparagraph 16.3.4, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this subsection shall be limited to the following:

(1) Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom and workers’ compensation insurance;

(2) Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

(3) Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

(4) Costs of permit fees and sales, use or similar taxes related to the Work; and

(5) Additional costs of supervision and field office personnel directly attributable to the change;

(8) The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Fixed Price Contract Amount shall be for the actual net cost of the decrease, confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change;

(9) Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in the Contractor's Request for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs;

(10) When the Owner and Contractor agree with the determination by the Architect concerning the adjustments in the Fixed Price Contract Amount and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order; and

(11) For purposes of subparagraphs 16.2.3 and 16.3.7, the allowance for combined overhead, profit, bonds and insurance shall be limited as follows, unless otherwise provided in the Contract Documents:

(1) For changes, the amount allowed for overhead, profit, bonds and insurance for the Contractor and all subcontractors of any tier combined shall not exceed fifteen percent (15%) of direct costs; or

(2) The Contractor will determine the apportionment between the Contractor and its subcontractors of allowable amounts of overhead, profit, bonds and insurance.

SECTION 16.04 The Architect will have authority to order minor changes in the Work not involving adjustment in the Fixed Price Contract Amount or 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 Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 17. DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

SECTION 17.01 If the Contractor covers, conceals or obscures its Work in violation of this Contract or in violation of a directive or request from the Owner or the Architect, such Work shall be uncovered and displayed for the Owner's or Architect's inspection upon request and shall be reworked at no cost in time or money to the Owner.

SECTION 17.02 If any of the Work is covered, concealed or obscured in a manner not addressed by Paragraph 17.1, it shall, if directed by the Owner or the Architect, be uncovered and displayed for the Owner's or Architect's inspection. If the uncovered Work conforms strictly with this Contract, the costs incurred by the Contractor to uncover and subsequently replace such Work shall be borne by the Owner. Otherwise, such costs shall be borne by the Contractor.

SECTION 17.03 The Contractor shall, at no cost in time or money to the Owner, promptly correct Work (fabricated, installed or completed) rejected by the Owner or by the Architect as defective or that fails to conform to this Contract whether discovered before or after Substantial Completion. Additionally, the Contractor shall reimburse the Owner for all testing, inspections and other expenses incurred as a result thereof.

SECTION 17.04 In addition to any other warranty obligations in this Contract, the Contractor shall be specifically obligated to correct, upon written direction from the Owner, any and all defective or nonconforming Work for a period of twelve (12) months following Substantial Completion.

SECTION 17.05 The Owner may, but shall in no event be required to, choose to accept defective or nonconforming Work. In such event, the Fixed Price Contract Amount shall be reduced by the lesser of: (i) the reasonable costs of removing and correcting the defective or nonconforming Work; or (ii) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming Work. If the remaining portion of the unpaid Fixed Price Contract Amount, if any, is insufficient to compensate the Owner for the acceptance of defective or nonconforming Work, the Contractor shall, upon written demand from the Owner, pay the Owner such remaining compensation for accepting defective or nonconforming work.

ARTICLE 18. TERMINATION BY THE CONTRACTOR

SECTION 18.01 The Contractor may terminate the Contract if the Work is stopped for a period of ninety (90) consecutive days through no act or fault of the Contractor or a subcontractor, sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

(1) Issuance of an order by a court or by another public authority having jurisdiction and authority which requires all Work to be stopped; or

(2) An act of government, such as a declaration of national emergency, which requires all Work to be stopped.

SECTION 18.02 In such event, the Contractor shall be entitled to recover from the Owner as though the Owner had terminated the Contractor's performance under this Contract pursuant to Paragraph 20.3.

ARTICLE 19. OWNER'S RIGHT TO SUSPEND CONTRACTOR'S PERFORMANCE

SECTION 19.01 The Owner may, at any time and without cause, order the Contractor, in writing, to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine. If the Owner directs any such suspension, the Contractor must immediately comply with same.

SECTION 19.02 In the event the Owner directs a suspension of performance under this Article, and such suspension is through no fault of the Contractor, the Fixed Price Contract Amount and Contract Time shall be adjusted for increases in the cost and time caused by such suspension, delay or interruption to cover the Contractor's reasonable costs, actually incurred and paid, of:

(1) Demobilization and remobilization, including such costs paid to subcontractors;

(2) Preserving and protecting Work in place;

(3) Storage of materials or equipment purchased for the Project, including insurance thereon; and

(4) Performing in a later, or during a longer, time frame than that provided by this Contract.

SECTION 19.03 The adjustment of the Fixed Price Contract Amount shall include an amount for a reasonable profit. The adjustment of the Fixed Price Contract Amount shall not include any amount not otherwise allowed under this Contract, including any limitations applicable to Claims. The Contractor shall provide supporting documentation related to any increase upon request of the Owner. No adjustment shall be made to the extent:

(1) That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

(2) That an equitable adjustment is made or denied under another provision of the Contract.

ARTICLE 20. TERMINATION BY THE OWNER

The Owner may terminate this Contract in accordance with the following terms and conditions:

SECTION 20.01 If the Contractor does not perform the Work, or any part thereof, in accordance with the Contract Documents, or in a timely manner; does not supply adequate labor, supervisory personnel, or proper equipment or materials; fails to pay subcontractors; fails to timely discharge its obligations for labor, equipment, and materials; proceeds to disobey applicable law; or otherwise breaches this Contract, then the Owner, in addition to any other rights it may have against the Contractor, may terminate the Contract and assume control of the Project site and of all materials and equipment at the site and may complete the Work. In such case, the Contractor shall not be paid further until the Work is complete. Upon such Termination, the Owner may, subject to any superior rights of the Surety, take possession of the site and of all materials, equipment, tools and construction equipment and machinery thereon owned by the Contractor; accept assignment of those subcontracts conditionally assigned under Paragraph 15.2; and finish the Work by whatever reasonable method the Owner may deem expedient.

SECTION 20.02 When the Owner terminates the Contract for cause as provided in Paragraph 20.1, the Contractor shall not be entitled to receive further payment until the Work is finished and shall only be entitled to payment for Work satisfactorily performed by the Contractor in accordance with the Contract Documents. If the costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. In the event the employment of the Contractor is terminated by the Owner for cause pursuant to Paragraph 20.1 and it is subsequently determined by a court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination under Paragraph 20.3 and the provisions of Paragraph 20.3 shall apply.

SECTION 20.03 The Owner may, at any time and for any reason, terminate this Contract. The Owner shall give no less than seven (7) days' written notice of such Termination to the Contractor specifying when termination becomes effective. The Contractor shall incur no further obligations in connection with the Work and the Contractor shall stop Work when such Termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The Owner may direct the Contractor to assign the Contractor's right, title and interest under termination orders or subcontracts to the Owner or its designee. The Contractor shall transfer title and deliver to the Owner such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has. When terminated pursuant to this section, the following shall apply:

(1) The Contractor shall submit a Termination Claim to the Owner and the Architect specifying the amounts claimed due because of the Termination, together with costs, pricing or other supporting data required by the Owner or the Architect. Failure by the Contractor to file a Termination Claim within ninety (90) days from the effective date of termination shall be deemed a complete waiver by the Contractor of any right to any payment;

(2) Before or after receipt of the Termination Claim, the Owner and the Contractor may agree to the compensation, if any, due to the Contractor hereunder; and

(3) If the Contractor has filed the Termination Claim but the Contractor and the Owner do not agree on an amount due to the Contractor, the Owner shall pay the Contractor the following amounts:

(1) Unpaid Contract prices for labor, materials, equipment, and other services provided or perfected prior to termination and acceptable to or accepted by the Owner;

(2) Reasonable costs incurred in preparing to perform the terminated portion of the Work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for direct job-site overhead and profit related to such preparation (such profit shall not include anticipated profit or consequential damages); provided, however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated loss, if any; and

(3) Reasonable costs of settling and paying claims arising out of the Termination of subcontracts or orders pursuant to this Paragraph 20.3.

SECTION 20.04 Costs described in subparagraphs 20.3.3.2 or 20.3.3.3 above shall not include amounts paid in accordance with other provisions hereof. In no event shall the total sum to be paid the Contractor under subparagraph 20.3.3 exceed the total Fixed Price Contract Amount, as properly adjusted, reduced by the amount of payments previously or otherwise made and by any other deductions permitted under this Contract and shall in no event include duplication of payment.

ARTICLE 21. CONTRACTOR'S LIABILITY INSURANCE

SECTION 21.01 The Contractor, subcontractor and sub-subcontractor shall purchase and maintain in full force and effect from a company or companies lawfully authorized to do business in the State of Idaho such insurance as will protect the Contractor, subcontractor and sub-subcontractor from claims set forth below which may arise out of or result from the Contractor's or subcontractor’s operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:

(1) Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts which are applicable to the work to be performed;

(2) Claims for damages because of bodily injury, occupational sickness or disease or death of the Contractor's employees;

(3) Claims for damages because of bodily injury, sickness or disease or death of any person other than the Contractor's employees;

(4) Claims for damages insured by usual personal injury liability coverage which are sustained: (i) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor; or (ii) by another person;

(5) Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from;

(6) Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;

(7) Claims for bodily injury or property damage arising out of completed operations; and

(8) Claims involving contractual liability insurance applicable to the Contractor's obligations under Article 11.

SECTION 21.02 The insurance required by Paragraph 21.1 above shall be written for not less than limits of liability specified in this Contract or as required by law, whichever is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. In addition, for any insurance required that is obtained on a claims-made basis, “tail coverage” is required at the completion of the Work for twenty-four (24) months. Continuous claims-made coverage will be acceptable in lieu of “tail coverage” provided the retroactive date is on or before the effective date of this Contract or twenty-four (24) months “prior acts” coverage is provided.

(1) The insurance required by Paragraph 21.1 above shall be written for not less than the following limits:

(1) Workers' Compensation and Employer’s Liability

A) State Workers Compensation: Statutory
B) Employer's Liability:
a) $100,000 per Accident
b) $500,000 Disease, Policy Limit
c) $100,000 Disease, Each Employee

(2) Comprehensive Commercial General Liability and Umbrella Liability Insurance. Contractor shall maintain Commercial General Liability (“CGL”) and, if necessary, commercial umbrella insurance with a limit of not less than $2,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project location;

A) CGL insurance shall be written on Insurance Services Office (“ISO”) occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operation, independent contractors, products-completed operations, personal (including employee acts) and advertising injury and liability assumed under an insured contract (including the tort liability of another assumed in a business contract). As applicable, coverage must also include a broad form CGL endorsement if the substitute insurance is a 1973 edition CGL or its equivalent;
B) Owner shall be included as an additional insured under the CGL, using ISO additional insured endorsement CG 20 10 and CG 20 37 or their equivalent, which endorsement shall include coverage for the Owner with respect to liability arising out of the Work, including completed operations of Contractor, and which coverage shall be maintained in effect for the benefit of Owner for a period of two (2) years following the completion of the work specified in this Contract. Additional insured coverage as required in this subparagraph shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to the Owner;
C) For the hazards of explosion, collapse, and damage to underground property, commonly referred to as XCU, coverage shall be required if the exposures exist; and

D) This coverage may be provided by the subcontractor if the Owner and prime Contractor are named as additional insureds;

(3) Business Auto and Umbrella Liability Insurance: Contractor shall maintain business, auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than $1,000,000 each accident;

A) Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos);

B) Business auto coverage shall be written on ISO form CA 00 01, CA 00 05, CA 00 12, CA 00 20 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01;

C) If hazardous waste will be hauled, Contractor shall obtain pollution liability coverage equivalent to that provided under the ISO pollution liability-broadened coverage for covered autos endorsement (CA 99 48) and the Motor Carrier Act endorsement (MCS 90) shall be attached;

(4) If the General Liability coverages are provided by Commercial Liability policies the:

A) General Aggregate shall be not less than $4,000,000; and

B) Fire legal liability shall be provided in an amount not less than $100,000 per occurrence; and

(5) Umbrella Excess Liability. An umbrella policy may be used in combination with other policies to provide the required coverage.

SECTION 21.03 The Owner shall be named as additional insured or loss payee, as applicable, on the insurance required in subparagraphs 21.2.1.2, 21.2.1.3 and 21.2.1.5 above, and the insurance shall contain the severability of interest clause as follows:

(1) "The insurance afforded herein applies separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the company's 'liability.' "

SECTION 21.04 The Contractor may include all subcontractors as insureds under the Contractor's policies in lieu of separate policies by each subcontractor. The Contractor must furnish the State of Idaho, Idaho Transportation Department, with the required endorsements or certificates of insurance from each subcontractor which names the subcontractor, its officials, employees, and volunteers as insureds.

SECTION 21.05 Certificates of Insurance for Workers' Compensation shall be on the standard form. Certificates of Insurance for Commercial or Comprehensive General Liability shall be the most current ACORD Form 25 or 28, must be acceptable to the Owner and shall be filed with the Owner prior to commencement of the Work. The Owner may require proof of coverage by an endorsement. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Contractor's Request for Payment as required by Article 7. Information concerning reduction of coverage shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

ARTICLE 22. OWNER'S LIABILITY INSURANCE

SECTION 22.01 The Owner, at its option, may purchase or maintain insurance for protection against claims which may arise from operations under the Contract.

ARTICLE 23. PROPERTY INSURANCE

SECTION 23.01 Unless otherwise provided, the Owner shall purchase or maintain, from a company or companies lawfully authorized to do business in the State of Idaho, property insurance written on a builders risk "all-risk" or equivalent policy form in an amount not less than the initial Fixed Price Contract Amount. Such property insurance shall be maintained until final payment to the Contractor has been made. This insurance shall include interests of the Owner, the Contractor, subcontractors and sub-subcontractors.

SECTION 23.02 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, but not necessarily be limited to insurance against the perils of fire (with extended coverage) and mischief, collapse, earthquake, flood, windstorm, temporary buildings and debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and shall cover necessary and reasonable expenses for the Architect's expenses required as a result of such insured loss.

SECTION 23.03 If the property insurance requires deductibles, the Owner shall pay costs of such deductibles.

SECTION 23.04 Boiler and Machinery Insurance. The Owner will purchase and maintain boiler and machinery insurance, which shall specifically cover such insured objects during installation and testing.

SECTION 23.05 Loss of Use Insurance. The Owner, at the Owner’s option, may purchase and maintain such insurance as will insure the Owner against loss of the Owner’s property due to fire or other hazards, however caused.

SECTION 23.06 Waivers of Subrogation. The Owner and Contractor waive all rights against: (i) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other; and (ii) the Architect, Architect’s consultants, separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages to the Work caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Article or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner. The Owner or Contractor, as appropriate, shall require of the Architect, Architect’s consultants, separate contractors, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged. The Owner does not waive its subrogation rights to the extent of its property insurance on structures or portions of structures that do not comprise the Work.

SECTION 23.07 The Contractor authorizes the Owner to negotiate and agree on the value and extent of, and to collect the proceeds payable with respect to, any loss under a policy of insurance carried by the Owner pursuant to any of the provisions of this Article. The Owner shall have full right and authority to compromise any claim, or to enforce any claim by legal action or otherwise, or to release and discharge any insurer, by and on behalf of the Owner and Contractor. The Owner shall provide written notice to Contractor of: (i) its having reached any such settlement or adjustment with an insurer; and (ii) the receipt of any funds pursuant to this Article. Any objection by the Contractor to a settlement or adjustment made under this Article must be made in writing to the Owner within five (5) business days of the notice from the Owner. The Owner and the Contractor agree to attempt to resolve the dispute by mutual agreement.

SECTION 23.08 A loss under the Owner's property insurance shall be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause.

SECTION 23.09 The Owner shall deposit proceeds so received, in a manner in which such proceeds can be separately accounted for, which proceeds the Owner shall distribute in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made and unless the Owner terminates the Contract pursuant to Article 20, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 16.

SECTION 23.10 The Contractor shall pay subcontractors their shares of the insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require subcontractors to acknowledge the Owner's authority under this Article 23 and make payments to their sub-subcontractors in similar manner.

SECTION 23.11 Nothing contained in this Article 23 shall preclude the Contractor from obtaining, solely at its own expense, additional insurance not otherwise required.

ARTICLE 24. PERFORMANCE AND PAYMENT BONDS

SECTION 24.01 The Contractor shall furnish separate performance and payment bonds to the Owner. Each bond shall set forth a penal sum in an amount not less than the Fixed Price Contract Amount and shall include a power of attorney attached to each bond. The signature of both the Contractor (principal) and the Surety are required. If the Surety is incorporated, both bonds must have the corporate seal. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Fixed Price Contract Amount is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount. The performance and payment bonds furnished by the Contractor shall be AIA Document A312, or a standard surety form certified approved to be the same as the AIA Document A312, and shall be executed by a Surety, or Sureties, reasonably acceptable to the Owner and authorized to do business in the State of Idaho.

SECTION 24.02 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

SECTION 24.03 It is the Contractor's obligation to notify the Surety in the event of changes in the Contract Documents, which in the absence of notification might serve to discharge the Surety's obligations, duties or liability under bonds or the Contract.

ARTICLE 25. PROJECT RECORDS

SECTION 25.01 All documents relating in any manner whatsoever to the Project, or any designated portion thereof, which are in the possession of the Contractor or any subcontractor of the Contractor, shall be made available to the Owner or the Architect for inspection and copying upon written request. Furthermore, said documents shall be made available, upon request by the Owner, to any state, federal or other regulatory authority and any such authority may review, inspect and copy such records. Said records include all drawings, plans, specifications, submittals, correspondence, minutes, memoranda, tape recordings, videos or other writings or things which document the Project, its design and its construction. Said records expressly include those documents reflecting the cost of construction to the Contractor. The Contractor shall maintain and protect these documents for no less than four (4) years after final completion or termination of the Contract or for any longer period of time as may be required by law or good construction practice.

ARTICLE 26. MISCELLANEOUS PROVISIONS

SECTION 26.01 The law is hereby agreed to be the law of the State of Idaho. The parties further agree that venue for any proceeding related to this Contract shall be in Boise, Ada County, Idaho, unless otherwise mutually agreed by the parties.

SECTION 26.02 Pursuant to Section 54-1904A, Idaho Code, within thirty (30) days after award of this Contract, the Contractor shall file with the Idaho State Tax Commission, with a copy to the Owner, a signed statement showing the date of Contract award, the names and addresses of the home offices of contracting parties, including all subcontractors, the state of incorporation, the Project Number and a general description of the type and location of the Work, the amount of the prime contracts and all subcontracts and all other relevant information which may be required on forms which may be prescribed by the Idaho State Tax Commission.

SECTION 26.03 The Contractor, in consideration of securing the business of erecting or constructing public works in the State of Idaho, recognizing that the business in which it is engaged is of a transitory character, and that in the pursuit thereof, its property used therein may be without the state when taxes, excises or license fees to which it is liable become payable, agrees:

(1) To pay promptly when due all taxes (other than on real property), excises and license fees due to the State of Idaho, its sub-divisions, and municipal and quasi-municipal corporations therein, accrued or accruing during the term of this Contract, whether or not the same shall be payable at the end of such term;

(2) That if the said taxes, excises and license fees are not payable at the end of said term, but liability for the payment thereof exists even though the same constitute liens upon its property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and

(3) That, in the event of its default in the payment or securing of such taxes, excises and license fees, to consent that the department, officer, board or taxing unit entering into this Contract may withhold from any payment due it hereunder the estimated amount of such accrued and accruing taxes, excises and license fees for the benefit of all taxing units to which said Contractor is liable.

SECTION 26.04 Before entering into a Contract, the Contractor shall be authorized to do business in the State of Idaho and shall submit a properly executed Contractor's Affidavit Concerning Taxes (Exhibit D).

SECTION 26.05 Pursuant to Section 44-1002, Idaho Code, it is provided that each Contractor "must employ ninety-five percent (95%) bona fide Idaho residents as employees on any job under any such contract except where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work, and no contract shall be let to any person, firm, association, or corporation refusing to execute an agreement with the above mentioned provisions in it; provided, that, in contracts involving the expenditure of federal aid funds this act shall not be enforced in such a manner as to conflict with or be contrary to the federal statutes prescribing a labor preference to honorably discharged soldiers, sailors, and marines, prohibiting as unlawful any other preference or discrimination among citizens of the United States." (Ref. Section 44-1001, Idaho Code)

SECTION 26.06 The Contractor shall maintain, in compliance with Title 72, Chapter 17, Idaho Code, a drug-free workplace program throughout the duration of this Contract and shall only subcontract work to subcontractors who have programs that comply with Title 72, Chapter 17, Idaho Code.

SECTION 26.07 As between the Owner and Contractor as to acts or failures to act, any applicable statute of limitations shall commence to run and any legal cause of action shall be deemed to have accrued in any and all events in accordance with Idaho law.

SECTION 26.08 The Contractor and its subcontractors and sub-subcontractors shall comply with all applicable Idaho statutes with specific reference to Idaho Public Works Contractors' licensing laws in the State of Idaho, Title 54, Chapter 19, Idaho Code, as amended.

SECTION 26.09 The Contractor shall not knowingly hire or engage any illegal aliens or persons not authorized to work in the United States and take steps to verify that it does not hire or engage any illegal aliens or persons not authorized to work in the United States. Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and shall be cause for the imposition of monetary penalties not to exceed five percent (5%) of the Fixed Price Contract Amount per violation and/or Termination of this Contract. The Contractor also acknowledges that, if it is a natural person, it is subject to Title 67, Chapter 79, Idaho Code regarding verification of lawful presence in the United States.

ARTICLE 27. EQUAL OPPORTUNITY

The Contractor shall maintain policies of employment as follows:

SECTION 27.01 The Contractor and the Contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, color, sex, age, or national origin. Such action shall include the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

SECTION 27.02 The Contractor and the Contractor's subcontractors shall, in all solicitation or advertisements for employees placed by them or on their behalf; state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, age or national origin.

ARTICLE 28. SUCCESSORS AND ASSIGNS

SECTION 28.01 Each party binds itself, its successors, assigns, executors, administrators or other representatives to the other party hereto and to successors, assigns, executors, administrators or other representatives of such other party in connection with all terms and conditions of this Contract. The Contractor shall not assign this Contract or any part of it or right or obligation pursuant to it without prior written consent of the Owner. If Contractor attempts to make assignment without consent of Owner, Contractor shall remain legally responsible for all obligations under this Contract.

ARTICLE 29. SEVERABILITY

SECTION 29.01 In the event any provision or section of this Contract conflicts with applicable law or is otherwise held to be unenforceable, the remaining provisions shall nevertheless be enforceable and shall be carried into effect.

ARTICLE 30. MEDIATION

SECTION 30.01 Contractor Claims for additional cost or time are subject to Article 13, shall be reviewed as provided in accordance with that Article and, as a condition precedent to litigation, are subject to dispute resolution attempts and mediation in accordance with this Article. All other issues and disputes arising from this contract are also subject to dispute resolution attempts & mediation in accordance with this Article, as a condition precedent to litigation.

SECTION 30.02 The parties agree that resolution of any dispute or disagreement without formal legal proceedings is to their mutual benefit and to the benefit of the Project.

SECTION 30.03 The parties agree to make every reasonable attempt to resolve any issues or disputes informally. The parties further agree that prior to the institution by either of legal or equitable proceedings of any kind, and as a condition precedent thereto, any dispute between the Contractor and the Owner related to the Contract, including a dispute over the Owner's decision regarding a Claim, shall be subject to mediation as follows:

(1) If the issue to be mediated involves only a dispute regarding the Contract Time, no request to mediate shall be made unless liquidated damages have been assessed by the Owner. If the issue to be mediated involves a Claim or other financial dispute, no request to mediate shall be made unless the amount is $50,000 or more or until there are cumulative Claims or disputes amounting to $50,000 or more; provided, however, that a mediation request can be made as to any Claim or financial matter at any time after Substantial Completion;

(2) The party seeking mediation shall notify the other party in writing of its mediation request. In such written request, the requesting party must clearly describe the issues it believes are subject to mediation;

(3) Within fifteen (15) days of receipt of the mediation request, the non-requesting party shall respond in writing to the request;

(4) Unless the Owner and the Contractor agree to other rules for mediation, mediation shall be in accordance with the Construction Industry Rules of Arbitration and Mediation Procedures in effect at the time of the mediation;

(5) The parties shall share the mediator's fee and any filing fees equally; provided, however, that if a party makes a written request to the mediator without satisfying the requirements of this section and by doing so incurs any costs or fees, that party shall be solely responsible for the costs or fees;

(6) Unless otherwise mutually agreed to by the parties, the mediation shall be in Boise, Ada County, Idaho;

(7) The parties shall cooperate in arranging the other details of mediation, such as selection of the mediator, mediation dates and times;

(8) The parties agree that all parties necessary to resolve the matter shall be parties to the same mediation proceeding; provided, however, that no subcontractor or sub-subcontractor shall attend the mediation absent advance notice and consent from the Owner;

(9) Agreements reached in mediation shall be enforceable as settlement agreements in any court having proper jurisdiction; and

(10) Unless otherwise agreed in writing, the Contractor shall continue the Work and maintain the approved schedules during any mediation proceedings. If the Contractor continues to perform, the Owner shall continue to make payments in accordance with the Contract Documents.

SECTION 30.04 If mediation fails to resolve the dispute, either party may file an action in the courts of Idaho in accordance with the venue provision contained in this Contract.

ARTICLE 31. WAIVER OF CONSEQUENTIAL DAMAGES

SECTION 31.01 The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

(1) Damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation and for loss of management or employee productivity or of the services of such persons.

(2) Damages incurred by the Contractor for principal office expenses, including the compensation of personnel stationed there; for losses of income, financing, business and reputation; loss of management or employee productivity or of the services of such persons; and for loss of profit except profit arising directly from the Work.

SECTION 31.02 This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Articles 18 and 20. Nothing contained in this paragraph shall be deemed to preclude an award of the assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

IN WITNESS WHEREOF, the parties have executed this Contract on the dates set forth below.

OWNER

State of Idaho
Idaho Transportation Department

_____ By:_____

Date Executed

Travis Frei

Facility Management Contracting Officer

CONTRACTOR

_____

(Contractor's Name- Typed)

SEAL

_____ By:_____

Date Executed

Signature

_____

Printed Name

_____

Title

EXHIBIT A

OWNER'S PROJECT IDENTIFICATION INFORMATION:

ITD Project No.: FM12317
Project Title: Clarkia Salt Shed
Project Location: Mile Post 58.1 Highway 3 Clarkia, Idaho 83812

General Project Description:

60'-0" x 120'-0" Clear span wood framed building with salt containment concrete foundation and some minor site improvements as indicated in the construction documents.

ADDENDA: Addenda applicable to the Contract and made a part of are as follows:

Addendum No. _____Dated _____

Addendum No. _____Dated _____

Addendum No. _____Dated _____

FIXED PRICE CONTRACT AMOUNT AND ACCEPTED ALTERNATES:

Base Bid Amount:	_____		$0.00
Alternate No.: 1 (Mag Storage)	(_____)	add	$0.00
Alternate No.: 2 (Expanded Asphalt)	(_____)	add	$0.00

Total Fixed Price Contract Amount

(_____) Dollars $0.00

Contractor's Requests for Payment are to be submitted for Work accomplished through the_____day of each month as described in Paragraph 7.3.

TIME FOR PERFORMANCE AND LIQUIDATED DAMAGES:

A. The Contractor shall commence construction of its scope of the Work in accordance with the Notice to Proceed issued by the Owner, and which will become Exhibit F to this Contract.
B. The Contractor shall accomplish Substantial Completion as defined in Article 6 of the Contract within ONE HUNDRED TWENTY (120) consecutive calendar days from the date authorized to proceed in the Notice to Proceed.
C. The amount of liquidated damages per day for each and every day of unexcused delay as outlined in Article 6 on the Contract is: FIVE HUNDRED Dollars ($500.00)

DRAWINGS AND SPECIFICATIONS

The Owner shall furnish the Contractor sets of Drawings and Project Manuals.

SPECIAL CONDITIONS

EXHIBIT B

ADDRESSES and AUTHORIZED REPRESENTATIVES: The names, addresses and authorized representatives of the Owner, the Contractor and the Architect are:

OWNER:

State of Idaho
Idaho Transportation Department
3311 W. State Street.
Boise, Idaho 83703

Program Manager:

Tony Pirc
Facilities Manager
Idaho Transportation Department (ITD)
3311 W. State Street
Boise, Idaho 83703
Ph: (208) 334-8600
Email: tony.pirc@itd.idaho.gov

Contracting Officer:

Travis Frei
Facility Management Contracting Officer
Idaho Transportation Department (ITD)
3311 W. State Street
Boise, Idaho 83703
Ph: (208) 334-8622
Email: travis.frei@itd.idaho.gov
May Sign for Owner: YES [ ] NO[ ]

Field Representative:

Chris Williams
District Facility Manager
Idaho Transportation Department (ITD)
600 W. Prairie Ave.
Coeur d'Alene, Idaho 83815
Ph: (208) 772-1225
Email: chris.williams@itd.idaho.gov
May Sign for Owner: YES [ ] NO[ ]

CONTRACTOR: _____ (Company Name)

_____ (Address)

_____ (City, State, Zip)

_____ (Telephone and FAX)

Public Works Contractors License No._____

State of Idaho General Contractors License No._____

Officer:

_____ (Name and Title)

_____ (Telephone)

_____ (Email)

Contractor's Project Manager:

_____ (Name and Title)

_____ (Telephone)

_____ (Email)

May Sign for Contractor: YES [ ] NO[ ]

Change Orders: up to: $_____

Construction Change Authorizations: up to: $_____

Contractor's Request for Pay: YES [ ] NO[ ]

Contractor's Superintendent:

_____ (Name and Title)

_____ (Telephone)

_____ (Email)

May Sign for Contractor: YES [ ] NO[ ]

Change Orders: up to: $_____

Construction Change Authorizations: up to: $_____

Contractor's Request for Pay: YES [ ] NO[ ]

Architect:

Miller Stauffer Architects
601 E. Front Ave. Ste 201
Coeur d'Alene, Idaho 83814

Architect of Record / Principal:

Micheal Walker, NCARB
Principal
Miller Stauffer Architects
601 E. Front Ave. Ste 201
Coeur d'Alene, Idaho 83814
Ph: (208) 664-1773
Email: mike@millerstauffer.com

Project Manager:

Marc Nelson, NCARB
Architect
Miller Stauffer Architects
601 E. Front Ave. Ste 201
Coeur d'Alene, Idaho 83814
Ph: (208) 664-1773
Email: mike@millerstauffer.com

May Sign for Architect:

Field Reports	YES [X] NO[ ]
Change Order Proposals	YES [X] NO[ ]
Construction Change Authorization	YES [X] NO[ ]
Construction Change Order	YES [X] NO[ ]
Architectural Supplemental Instructions	YES [X] NO[ ]
Interpretations of the Contract Documents	YES [X] NO[ ]
Contractor's Request for Payment	YES [X] NO[ ]
Acceptance of Substantial Completion	YES [X] NO[ ]
Acceptance of Final Completion	YES [X] NO[ ]

EXHIBIT C

LIST OF DRAWINGS:

G1.0	PROJECT INFORMATION
A1.0	ARCHITECTURAL SITE DEMOLITION PLAN
A1.1	ARCHITECTURAL SITE PLAN
A1.2	ARCHITECTURAL SITE DETAILS
C0.0	CIVIL GENERAL INFORMATION
C0.1	CIVIL GENERAL NOTES
C1.0	CIVIL EXISTING SITE CONDITIONS
C1.1	CIVIL EROSION CONTROL PLAN
C1.2	CIVIL SITE PLAN
C5.0	CIVIL DETAILS
A1.0	SITE DEMO PLAN
A1.1	ARCHITECTURAL SITE PLAN
A2.1	FLOOR PLAN – BASE BID
A2.1A	FLOOR PLAN – ALTERNATE 1
A2.2	REFLECTED CEILING PLAN – BASE BID
A2.2A	REFLECTED CEILING PLAN – ALTERNATE 1
A2.3	ROOF PLAN – BASE BID
A2.3A	ROOF PLAN – ALTERNATE 1
A3.1	EXTERIOR ELEVATIONS – BASE BID
A3.1A	EXTERIOR ELEVATIONS – ALTERNATE 1
A4.1	BUILDING SECTIONS – BASE BID
A4.1A	BUILDING SECTIONS – ALTERNATE 1
A4.2	BUILDING DETAILS
A5.1	DOOR INFO AND ASSEMBLIES
S1.1	STRUCTURAL GENERAL NOTES
S1.2	STRUCTURAL GENERAL NOTES
S1.3	STRUCTURAL GENERAL NOTES
S1.4	SPECIAL INSPECTION NOTES
S2.1	FOUNDATION PLAN
S2.2	ROOF FRAMING PLAN
S2.3	SNOW DRIFT PLAN
S3.1	FOUNDATION DETAILS

S3.2	FOUNDATION DETAILS
S4.1	FRAMING DETAILS
S4.2	FRAMING DETAILS
M1.0	MECHANICAL GENERAL, HVAC PLAN AND SCHEDULES
M1.1	MECHANICAL GENERAL, HVAC PLAN AND SCHEDULES
E0.0	ELECTRICAL COVER SHEET
E0.1	ENERGY CODE
E0.2	ELECTRICAL SPECIFICATIONS
E0.3	ELECTRICAL SPECIFICATIONS
E0.4	ELECTRICAL SPECIFICATIONS
E0.5	ELECTRICAL SPECIFICATIONS
E0.6	ELECTRICAL SPECIFICATIONS
E0.7	ELECTRICAL SPECIFICATIONS
E0.8	ELECTRICAL SPECIFICATIONS
E0.9	ELECTRICAL SPECIFICATIONS
ES1.0	LEVEL 1 POWER PLAN
E1.0	LEVEL 1 LIGHTING PLAN AND SCHEDULES
E2.0	LEVEL 1 POWER PLAN, DETAILS AND SCHEDULES
E3.0	ELECTRICAL FLOOR PLAN

LIST OF SPECIFICATIONS:

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 00 01 01	TITLE PAGE
SECTION 00 01 02	TABLE OF CONTENTS
SECTION 00 03 02	LIST OF DRAWINGS
SECTION 00 11 00	ADVERTISEMENT FOR BIDS
SECTION 00 21 13	INSTRUCTIONS TO BIDDERS
SECTION 00 41 13	BID FORM STIPULATED SUM
SECTION 00 52 13	AGREEMENT FORM – STIPULATED SUM

DIVISION 01 – GENERAL REQUIREMENTS

SECTION 01 10 00	SUMMARY
SECTION 01 23 00	ALTERNATES
SECTION 01 50 00	TEMPORARY FACILITIES AND CONTROLS

DIVISION 02 – EXISTING CONDITIONS

SECTION 02 50 01	SITE PHOTOS (FOR REFERENCE ONLY)
SECTION 02 60 00	GEOTECHNICAL REPORT

DIVISION 03 – CONCRETE

SECTION 03 30 00	CAST-IN-PLACE CONCRETE
SECTION 03 35 00	CONCRETE FINISHING

DIVISION 04 – MASONRY

NOT USED

DIVISION 05 – METALS

SECTION 05 73 00	DECORATIVE METAL RAILINGS

DIVISION 06 – WOOD, PLASTICS, COMPOSITES

SECTION 06 10 00	ROUGH CARPENTRY
SECITON 06 16 00	SHEATHING
SECTION 06 17 53	SHOP-FABRICATED TRUSSES
SECTION 06 18 00	GLUE-LAMINATED CONSTRUCTION

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 07 21 00	THERMAL INSULATION
SECTION 07 25 00	WEATHER BARRIERS
SECTION 07 41 13.19	BATTEN-SEAM METAL ROOF PANELS
SECTION 07 46 19	STEEL SIDING
SECTION 07 62 00	SHEET METAL FLASHING AND TRIM
SECTION 07 92 00	JOINT SEALANTS

DIVISION 08 – OPENINGS

SECTION 08 11 13	HOLLOW METAL DOORS AND FRAMES
SECTION 08 36 13	SECTIONAL DOORS
SECTION 08 71 11	DOOR HARDWARE

DIVISION 09 – FINISHES

SECTION 09 06 00	PAINT SCHEDULE

DIVISION 10 – SPECIALTIES

NOT USED

DIVISION 11 – EQUIPMENT

NOT USED

DIVISION 12 – FURNISHINGS

NOT USED

DIVISION 13 – SPECIAL CONSTRUCTION

NOT USED

DIVISION 14 – CONVEYING EQUIPMENT

NOT USED

DIVISION 21 – FIRE SUPPRESSION

NOT USED

DIVISION 22 – PLUMBING

NOT USED

DIVISION 23 – HEATHING, VENTILATING, AND AIR CONDITIONING (HVAC)

NOT USED

DIVISION 25 – INTEGRATED AUTOMATION

NOT USED

DIVISION 26 – ELECTRICAL

NOT USED

DIVISION 27 – COMMUNICATIONS

NOT USED

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

NOT USED

DIVISION 31 – EARTHWORK

SECTION 31 20 00 EARTH MOVING

DIVISION 32 – EXTERIOR IMPROVEMENTS

NOT USED

DIVISION 33 – UTILITIES

NOT USED

DIVISION 34 – TRANSPORTATION

NOT USED

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION

NOT USED

DIVISION 40 – PROCESS INTEGRATION

NOT USED

DIVISION 41 – MATERIAL PROCESSING AND HANDELING EQUIPMENT

NOT USED

DIVISION 42 – PROCESS HEATHING, COOLING, AND DRYING EQUIPMENT

NOT USED

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

NOT USED

DIVISION 44 – POLLUTION AND WASTE CONTROL EQUIPMENT

NOT USED

DIVISION 45 – INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT

NOT USED

DIVISION 46 – WASTE AND WASTEWATER EQUIPMENT

NOT USED

DIVISION 48 – ELECTRIC POWER GENERATION

NOT USED

EXHIBIT D

CONTRACTOR'S AFFIDAVIT CONCERNING TAXES

STATE OF _____)

COUNTY OF _____)

Pursuant to the Title 63, Chapter 15, Idaho Code I, the undersigned, being duly sworn, depose and certify that all taxes, excises and license fees due to the State or its taxing units, for which I or my property is liable then due or delinquent, has been paid, or arrangements have been made, before entering into a Contract for construction of any public works in the State of Idaho.

SEAL

_____

Name of Contractor

_____

Address

_____

City and State

By:

_____

(Signature)

Subscribed and sworn to before me this _____ day of _____, .

_____

NOTARY PUBLIC

Residing at:_____

Commission expires:_____

EXHIBIT E

NAMED SUBCONTRACTORS:

Pursuant to Section 67-2310, Idaho Code, commonly known as the naming law, the names and addresses of the entities who will perform the plumbing, heating and air conditioning and electrical work were named in the bid and are as follows:

Plumbing (PWCL Category 15400)

(Name)_____

(Address)_____

Idaho Public Works Contractors License No._____

Idaho Plumbing Contractors License No._____

Heating, Ventilating & Air Conditioning (PWCL Category 15700-HVAC)

(Name)_____

(Address)_____

Idaho Public Works Contractors License No._____

Idaho Plumbing Contractors License No._____

Electrical (PWCL Category 16000)

(Name)_____

(Address)_____

Idaho Public Works Contractors License No._____

Idaho Plumbing Contractors License No._____

EXHIBIT F

NOTICE TO PROCEED

To Contractor:	ITD Number:	
Contract Date:	Architect:	Miller Stauffer Architects 601 E. Front Ave. Ste. 201
Contract Amount:		Coeur d'Alene, Idaho 83814
Date of Issuance:	Owner:	State of Idaho - ITD

You are hereby notified to commence work on the above referenced contract on/or before _____and are to substantially complete the work within **180** consecutive calendar days thereafter; therefore your contract completion date is _____.

The contract provides for the sum of **$500.00** as liquidated damages for each consecutive calendar day after the above established substantial completion date that the work remains incomplete. Completion date will be established by "Certificate of Substantial Completion."

You are reminded that any changes to the original contract document regarding either cost or completion date must be effected by a change order approved by this department.

Your payment estimates must be submitted on Idaho Transportation Department forms included herein. We will be most happy to assist you in preparing the payment estimate forms.

Chris Williams District Facility Manager has been appointed Field Representative for this project. Please contact him at **(208) 772-1225** prior to beginning work. A pre-construction meeting will be held _____**,** at _____, at _____**(location)**

Sincerely,

Travis Frei

Facilities Management Contracting Officer

Idaho Transportation Department

DISTRIBUTION: Tax Commission

Division of Building Safety

Risk Management (w/ Builder's Risk Application, if applicable)

(Project Manager)

Fiscal Office TAX ID xx-xxxxxxx

EXHIBIT G

IDAHO STATE TAX COMMISSION
REQUEST FOR TAX RELEASE

Date:_____

PART I -- AWARDING AGENCY INFORMATION:		
Name of agency	Mailing address	City, state, and ZIP Code
Contact name	Phone number	Email address

PART II -- CONTRACTOR INFORMATION:			
Name of contractor	Mailing address		City, state, and ZIP Code
Federal EIN	Contact name	Phone number	Email address

PART III -- CONSTRUCTION/CONTRACT MANAGER INFORMATION (if applicable):			
Name of business	Mailing address		City, state, and ZIP Code
Federal EIN	Contact name	Phone number	Email address

Send a copy of the approved Tax Release to: Awarding Agency ☐ Contractor ☐ Construction Manager ☐

NOTE: *We will email all copies unless otherwise requested*

PART IV -- PROJECT INFORMATION:	
Name of project	Location of project
Description of project	

Project number assigned by awarding agency	Project start date	Project completion date	Final/closing contract amount (includes all change orders)
			$

Did any government entities supply materials which were installed by this contractor or its subs?: Yes ☐ No ☐

If YES, list these materials and their dollar values. (Attach additional information if needed)

List Materials	List Dollar Values of Materials
	$
	$
	$

Send to: Contract Desk/Sales Tax Audit
Idaho State Tax Commission
PO Box 36
Boise ID 83722-0410
Phone: (208) 334-7618 • Fax: (208) 332-6619 • Email: **contractdesk@tax.idaho.gov**

NOTE: *Please allow 30 days to process a Tax Release Request. You must send a complete, signed Form WH-5 Public Works Contract Report to the Idaho State Tax Commission to complete this request.*

EXHIBIT H

RELEASE OF CLAIMS

(TO BE COMPLETED FOR FINAL PAYMENT)

I,_____, do hereby release the State of Idaho – Idaho Transportation Department from any and all claims of any character whatsoever arising under and by virtue of contract number_____Dated_____as amended, except as herein stated.

Dated_____ Contractor_____

EXHIBIT J

CONDITIONS PRECEDENT TO FINAL PAYMENT

Date:_____

ITD Project No.: FM12317
Project Title: Clarkia Salt Shed
Location: Milepost 58.1 Highway 3, Clarkia, Idaho 83812

Send to:
State of Idaho
Idaho Transportation Department
3311 w. State Street,
Boise, Idaho 83703

Copy to:
Miller Stauffer Architects
601 E. Front Ave. Ste 201
Coeur d'Alene, Idaho 83814

Contractor's Responsibilities:

Per Paragraph 7:13 of the Fixed Price Contract: As a condition precedent to final payment, the Contractor must furnish the owner, in the form and manner required by Idaho Transportation Department, to be submitted to Miller Stauffer Architects for approval, the following:

- ☐ Contractor's Final Request for Payment Form has been provided;
- ☐ Release of Claims form has been provided (ITD's Form, Exhibit H)
- ☐ Contractor's Affidavit of Payment of Debts and Claims Form has been provided (AIA G706);
- ☐ Consent of Surety to Final Payment has been provided (AIA G707);
- ☐ Confirmation of all required training (ITD's Training Confirmation Exhibit K), product warranties; operating manuals, instruction manuals and other record documents, drawings and items customarily required of the Contractor has been provided.
- ☐ Public Works Contract Tax Release from the Idaho Tax Commission has been provided;
- ☐ Division of Building Safety Letter of Completion / Final Inspection Sign-Off (as required);
- ☐ Project Finalization and Start Up has been provided (as required, Exhibit L);

_____ _____
Contractor's Signature Date

Architect's Approval for Payment:

All Documents Required per paragraph 7.13 of the Fixed Price Contract

All Warranties, Guarantees, etc. have been received, approved and have been provided.

As-Built Drawings have been received, reviewed and approved.

Record Drawings have been completed. All of the required copies of the Record Documents and electronic media are attached and/or uploaded to OMS.

All punch list items have been verified and signed off as complete

To the best of my knowledge, information, and belief, and on the basis of my observations and inspections, I certify the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the required documentation required by Paragraph 7.13 of the fixed priced contract has been received. The entire balance, as shown on the attached Final Request for Payment, is due and payable.

_____ _____
Architect's Signature Date

EXHIBIT K

TRAINING CONFIRMATION SIGN-IN SHEET

ITD Project Name: Clarkia, Salt Shed
ITD Project #: FM12317

Field Representative: Chris Williams – Field Manager

Idaho Transportation Department
Project Location: Mile Post 58.1, Hwy 3
Clarkia, Idaho
Architect: Micheal Walker, Principal MSA
Project Manager: Marc Nelson, Architect MSA

Name	Company	Email	Telephone	Signature

EXHIBIT L

PROJECT FINALIZATION AND START-UP

Upon completion of the equipment and systems installation and connections, the contractor shall assemble all equipment factory representative and subcontractors together for system start-up.

These people shall assist in start-up and check out their system(s) and remain at the site until the total system operation is acceptable and understood by Idaho Transportation Department representatives. The factory representative and system subcontractor shall also give instructions on operation and maintenance of their equipment to ITD's maintenance and or operation personnel. To prove acceptance of operation and instruction by Idaho Transportation Department's representative, this written statement of acceptance shall be signed below.

"I, the Contractor, associated factory representative and subcontractors, have started each system and the total system; and have proven their normal operation to Idaho Transportation Department representatives and maintenance / operation personnel and have instructed him / them in the operation and maintenance thereof."

_____	_____
(ITD Representative)	(Contractor)
_____	_____
(Signature)	(Signature)
_____	_____
(Date)	(Date)

END OF
AGREEMENT FORM

SECTION 01 10 00
SUMMARY

PART 1. GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

B. Refer to Owner's Invitation to Bid & Instructions to Bidder (ITB) for additional project requirements.

1.2 SUMMARY

A. Section Includes:

1. Project Information
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Work restrictions.
6. Specification and drawing conventions.

B. Related Requirements:

1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: Clarkia Salt Shed – RE-BID

1. Project Location: Milepost 58.1 on Hwy 3, Clarkia, Idaho 83812 on the east side of the highway

B. Owner: Idaho Transportation Department, District 1 (Coeur d'Alene)

1. Owner's Representative (Boise): Travis Frei, Contracting Officer,
2. Owner's Representative (Local): Chris Williams, Field Representative, District 1

C. Architect: Miller Stauffer Architects, 601 E. Front Ave. Ste 201, Coeur d'Alene, Idaho 83814

1. Architect: Micheal Walker, NCARB
2. Project Manager: Marc Nelson, NCARB

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Project Scope of work is defined by the Contract Documents and is summarized as follows:

1. Construct a new 120' x 60' wood frame salt storage building with engineered trusses and sheet metal roofing and siding with two proposed Alternates. Alternate 1 includes adding a 24' x120 foot addition to the north side of the building that has an enclosed loader parking area, magnesium chloride storage area, storage area and improved asphalt area as shown in the drawings. Alternate 2 includes adding asphalt driveway and apron as shown

B. Type of Contract

1. Project to be constructed under a single prime contract.

1.5 SCHEDULE

A. Construction Duration: 120 consecutive calendar days from Notice to Proceed to Substantial Completion.

1.6 ACCESS TO SITE

A. General: Contractor shall have full use of Project site for construction operations during construction period.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the specifications. The words “shall,” shall be,” or “shall comply with, depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the work of all sections in the specifications.

C. Drawing Coordination: Requirements for materials and products identified on drawings are described in detail in the Specifications. One or more of the following are used on drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

PART 2. PRODUCTS

2.1 NOT USED

PART 3. EXECUTION

3.1 NOT USED

END OF SUMMARY

SECTION 01 23 00
ALTERNATES

PART 1. GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

B. Refer to Owner's Invitation to Bid & Instructions to Bidder (ITB) for additional project requirements.

1.2 SUMMARY

A. Section Includes:

1. Administrative and Procedural requirements for alternates.

1.3 DEFINITIONS:

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work (Project Scope) only if enumerated in the agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the contract sum to incorporate alternate into the Work. No other adjustments are made to the contract sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate in Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule

1. Alternate No. 1: Storage Addition (Additive)
   ~~a.~~ Description: Alternate #1 project scope to include the addition of a 24' x 120' addition that has a separate enclosed loader shed, an enclosed storage room and an open covered containment mag storage area as shown in the contract documents. The alternate shall include the exterior asphalt flexible pavement apron as shown in the construction drawings.
2. Alternate No. 2: Asphalt Site Improvements (Additive)

a. Description: Alternate #2 project scope to include the cost add asphalt flexible pavement on the exterior of the structure as shown in the drawings. Included in this alternate project scope shall be the asphalt and aggregate subbase.

1.5 ALTERNATE SELECTION

A. The owner intends to select some, all, or none of the alternates. The lowest qualified bidder will be determined by any combination of alternates and base bid by qualified bidders.

END OF ALTERNATES

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1. GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

B. Refer to Owner's Invitation to Bid & Instructions to Bidder (ITB) for additional project requirements.

C. Standards: Comply with NFPA 241, "Standard for Safegaurding Construction, Alterations, and Demolition Operations"; ANSI A10 Series standards for "Safety Requirements for Construction Demolition"; and NECA Electrical Design Library's "Temporary Electrical Facilities"

1.2 SUMMARY

A. Section Includes:

1. Requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 01 10 00 "Summary"
   a. For work restrictions and limitations on utility interruptions.

1.3 UTILITIY SERVICES:

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Sewer Service and Restroom Facilities: There is no sewer service on site. The contractor will be required to include in Contract Sum portable restrooms.

C. Water Service: There is no water service on site. The contractor and sub-contractors will be required provide all necessary potable and non-potable water required for construction. Cost to bring the necessary water shall be included in the Contract Sum.

D. Electric Power Service: Temporary power is already on site. Owner will pay electric-power-service / use charges for electricity used by all entities for construction operations.

E. Telephone / Communications: Frontier telephone communications is on-site, but there is no active service. The contractor will be required to establish communications service if required for the construction operations. The cost shall be included in the Contract Sum.

1.4 INFORMATIONAL SUBMITTALS

A. The Contractor shall provide the following informational submittals:

1. Site Utilization Plan:

a. Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

2. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.
3. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.
4. Dust and Erosion Control Plan: Submit coordination drawing and narrative that indicates the dust and erosion control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
   a. Locations of dust and erosion control
5. Waste Control Plan: Submit coordination drawing and narrative that indicates the waste control plan. Including the following:
   a. Location construction waste bins.
6. Stormwater Pollution Prevention Plan (SWPPP): Submit a SWPPP plan that is compliant with EPA requirements. Contractor shall obtain all necessary required permits.
7. Moisture and Mold Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold.
   a. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
   b. Indicate procedures for discarding water damaged materials, protocols for mitigating water intrusion into completed work, and replacing water damaged work.
   c. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL Standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner’s acceptance, regardless of previously assigned responsibilities.

PART 2. PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Provide materials and equipment for construction of temporary facilities and controls that are in sound and good condition.

2.2 SAFETY SIGNAGE:

A. Contractor to provide all required safety signage necessary to maintain a OSHA complaint project site. Including but not limited to “Hard Hats Required”, “Closed Toe Shoes Required”, “Safety Vests Required”, “Please check with Job Superintendent Prior to entering Project Site”, etc.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3. EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials, Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

B. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Contractor to determine if required.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company and owner for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sewer & Temporary Restrooms: Provide temporary utilities to remove effluent lawfully. Provide and maintained required facilities and enclosures. Provide facilities at time of project mobilization.

C. Water Service: Provide potable water and non-potable water adequate for construction.

D. Electric Power Service: Provide electric power service and distribution systems of sufficient size, capacity, and power characteristics required for construction operations. Install temporary electric power service overhead unless otherwise indicated.

E. Construction Lighting: Provide temporary lighting that fulfills security and protection requirements without operating permanent system.

3.3 SUPPORT FACILITIES INSTALLATION

A. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment.

B. Parking: Clearly identify construction personnel parking areas.

C. Waste Disposal Facilities: Comply with requirements of authorities having jurisdiction. Provide portable waste collection containers for containment of construction waste for the full duration of the construction. Waste collection containers in sizes adequate to handle waste from construction operations. Comply with progress cleaning requirements in Section 01 73 00. Dispose of construction materials per authorities having jurisdiction.

D. Lifts, Cranes, and Hoists: Provide facilities and or equipment necessary for hoisting materials and personnel.

E. Install project identification and other signs in near construction entrances to inform the public and persons seeking entrance to Project.

1. Owner to confirm location of project identification location.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of existing facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project Site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Temporary Fire Protection: Install and maintain temporary fire protection facilities of types needed to protect against reasonable predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

D. Furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by lockable entrance gates, when applicable.

3.5 MOISTURE AND MOLD CONTROL

A. Contractor’s Moisture Protection Plan: Once approved contractor to follow moisture protection plan.

1. Avoid trapping water in finished work. Contractor shall be required to minimize all water intrusions that could cause water to be trapped in finished work.
2. Store and protect all materials per manufacture recommendations.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove stand water from all flat surfaces.
5. Keep openings covered and or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure of building, when materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protect from water damage.
3. Periodically collect and remove water containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install any material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material.

3.6 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict disciple in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
   At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

3.7 TEMPORARY CONSTRUCTION FACILITIES

A. Provide field offices, storage trailers, and other support facilities as necessary for efficient prosecution of the Work.

1. Temporary facilities located within the construction area or within 30 feet (9m) of a building lines shall be of noncombustible construction, unless noted otherwise.

END OF
TEMPORARY FACILITIES AND CONTROLS

SECTION 02 50 01
SITE PHOTOS (FOR REFERENCE ONLY)

PART 1. GENERAL

A. SITE PHOTOS

END OF
SITE PHOTOS

SECTION 02 60 00
GEOTECHNICAL REPORT

PART 1. GENERAL

1.1 REFERENCE TO DOCUMENT

A. Geotechnical Report

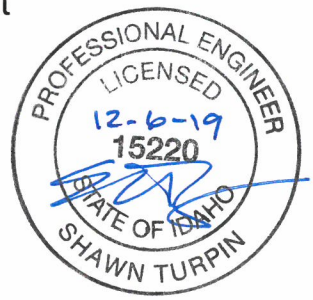
1. Produced by: Allwest Testing
   a. 2705 E. Main Street
   b. Lewiston, Idaho 83501
2. Engineer: Shawn Turpin
3. Date: December 6, 2019
4. Allwest Project No. 319-167G

PART 2. REPORT

GEOTECHNICAL EVALUATION
PROPOSED SALT SHED
STATE HIGHWAY 3 MILE POST 58.10
CLARKIA, IDAHO 83812
ALLWEST PROJECT NO. 319-167G

December 6, 2019

Prepared for:
Idaho Transportation Department
P.O. Box 7129
3311 State Street
Boise, Idaho 83707-1129



Prepared by:
ALLWEST
2705 E. Main Street
Lewiston, Idaho 83501

ALLWEST

WWW.ALLWESTTESTING.COM

December 6, 2019

Mr. Cody Hall
Idaho Transportation Department
P.O. Box 7129
3311 W. State Street
Boise Idaho 83707-1129

RE: Geotechnical Evaluation
Proposed Salt Shed
State Highway 3 Mile Post 58.10
Clarkia, Idaho 83812
ALLWEST Project No. 319-167G

Mr. Hall:

ALLWEST has completed the authorized geotechnical evaluation for the proposed salt shed at the Idaho Transportation Department property located at mile post 58.10 on State Highway 3, approximately 4 miles north of Clarkia, Idaho. The purpose of this evaluation was to characterize the soil and geologic conditions at the site. The attached report presents the results of the field evaluation and our recommendations to assist with planning, design, and construction of the proposed salt shed.

We appreciate the opportunity to work with you on this project. If you have any questions or need additional information, please do not hesitate to call us at (208) 743-5710.

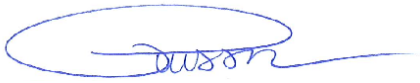
Sincerely,

ALLWEST

Prepared by:

Shawn Turpin, P.E.
Senior Geotechnical Engineer

Reviewed by:



James Thomasson, P.E.
Senior Geotechnical Engineer

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ALLWEST Project No. 319-167G
Proposed Salt Shed
Clarkia, Idaho

Geotechnical Evaluation
Proposed Salt Shed
Clarkia, Idaho

ALLWEST has completed the authorized geotechnical evaluation for the proposed salt shed to be constructed at the Idaho Transportation Department (ITD) property located at mile post 58.10 on State Highway 3, approximately 4 miles north of Clarkia, Idaho. The general location of the project is shown on the Vicinity Map, Figure A-1, in Appendix A of this report. The purpose of the evaluation was to assess the subsurface soil conditions on the property and provide geotechnical recommendations for the proposed construction. This report details the results of the field evaluation and laboratory testing and presents our recommendations to assist construction of the proposed salt shed.

1.0 SCOPE OF SERVICES

To complete the geotechnical evaluation, we accomplished the following scope of services:

1) Reviewed soil and geologic mapping of the site.

2) Completed a site reconnaissance by walking the property and observing exposed soil conditions, vegetation, surface drainage, and erosion features.

3) Observed the excavation of four test pits on the site. The soils observed within the test pits were described and classified in accordance with the *Unified Soil Classification System* (USCS) and the subsurface profiles were logged.

4) Performed laboratory tests on select soil samples to assess some of the soil engineering characteristics.

5) Reviewed the results of the field evaluation and laboratory testing with respect to the proposed construction.

6) Performed engineering analyses and provided recommendations for:
   a) Site preparation and earthwork
   b) Foundation design parameters and anticipated settlement
   c) Concrete slabs-on-grade
   d) Lateral earth pressures
   e) Seismic considerations
   f) Stormwater and drainage
   g) Construction materials testing and observation

7) Prepared this report.

Our services were provided in general accordance with our proposal number 319-167P, dated August 21, 2019.

2.0 PROJECT DESCRIPTION & UNDERSTANDING

We understand the proposed construction will include a slab-on-grade with a metal canopy. We anticipate the canopy will be supported on isolated spread footings. A grading plan and building loads were not available at the time this proposal was prepared. However, we anticipate cut and fill of less than 2 feet will be required to construct the building pad. Maximum column loads of 100 kips have been assumed for the metal canopy.

3.0 EVALUATION PROCEDURES

To complete this evaluation, we reviewed soil and geologic literature for the project area. We observed the excavation of four test pits at the site. The test pits were excavated with a track-mounted mini-excavator. Disturbed bulk and relatively undisturbed block samples of the soils observed in the test pits were collected for laboratory testing. The approximate locations of the test pits are shown on the Test Pit Location Map, Figure A-2, in Appendix A of this report.

4.0 SITE CONDITIONS

The project is located in the northwest ¼ of the southeast ¼ of Section 23, Township 43 North, Range 1 East of the Boise Meridian. The site is an ITD yard currently used to stockpile gravel. A concrete slab is located on the southern end of the site. The site is bordered by State Highway 3 to the west and wooded areas to the north, south, and east.

4.1 General Geologic Conditions

Geologic conditions at the site are mapped on the “Geologic Map of the St. Maries 30 x 60 Minute Quadrangle, Idaho”, prepared by Lewis, R.S., et al (2000), as alluvium (Qal) to sediment (TS).

The soils observed in the test pits are generally consistent with the geologic mapping.

4.2 General Soil Conditions

The USDA Natural Resources Conservation Service (NRCS) has mapped the soil on the property as Clarkia ashy silt loam. The Clarkia ashy silt loam reportedly consists of mixed alluvium.

The soils observed in the test pits are generally consistent with the NRCS mapping.

4.3 Hydrogeologic Conditions

We did not identify site-specific groundwater reports for this project area.

5.0 EXPLORATION AND SAMPLING

We observed the excavation of four test pits at the approximate locations shown on the Test Pit Location Map, Figure A-2, in Appendix A of this report. The test pits were excavated with a track-mounted mini-excavator.

We visually described, classified and logged the soil conditions observed in the test pits in general accordance with ASTM D 2487 and D 2488. We obtained disturbed bulk and relatively undisturbed block soil samples from the test pits. The test pits were loosely backfilled with spoils immediately after excavation. The test pit backfill will densify with time. The test pit backfill should be re-excavated and replaced in properly compacted lifts during construction if located in structural areas.

5.1 Subsurface Soil Conditions

The subsurface soil profile observed in the test pits generally consisted of undocumented fill overlying topsoil. The topsoil is underlain by silt with sand overlying silty sand to the maximum depth explored, approximately 9½ feet.

Descriptions of the soil types observed follow:

Undocumented fill – Two layers of undocumented fill were observed in the test pits. The surficial fill consists of silty gravel. It appeared to be poorly to moderately compacted, moist, fine to medium-grained, angular, and black to dark gray to brown to light brown in color.

The lower layer of fill consists of poorly graded gravel with silt and sand. It contains occasional cobbles and appeared to be moderately compacted, moist, medium to coarse-grained, angular, and yellow-brown in color.

Topsoil – The topsoil consists of silt with sand and roots and organics. It appeared to be stiff, moist, and black to dark gray in color. The topsoil in test pit TP-4 exhibited an odor.

Silt with sand – The silt with sand contains occasional roots. It appeared to be stiff to very stiff, moist, low plastic, and gray in color.

Silty sand – The silty sand appeared to be medium dense to dense, moist, fine-grained, and gray to brown to gray-brown mottled orange (iron staining).

Detailed descriptions of the soils observed in the test pits are presented on the Test Pit Logs in Appendix B of this report. The descriptive soil terms used on the test pit logs and in this report, can be referenced by the USCS. A summary of the USCS is included in Appendix B. The subsurface conditions may vary between test pit locations. Such changes in conditions may not be apparent until construction. If the subsurface

conditions do change from those observed in the test pits, the construction timing, plans, and costs may change.

5.2 Groundwater

Groundwater was not observed in the test pits to the maximum depth explored, approximately 9½ feet below the existing grade. Changes in precipitation, construction, or other factors may impact the presence and/or depth to groundwater on the property. The presence of groundwater and/or fluctuations in the groundwater level should be expected.

6.0 LABORATORY TESTING

We performed laboratory testing to supplement field classifications and to assess some of the soil engineering properties. The laboratory tests conducted included natural water content (ASTM D2216), percent finer than the No. 200 sieve (ASTM D1140), sieve analysis (ASTM D6913), and Atterberg Limits (ASTM D4318). The laboratory test results are summarized in Table C-1 in Appendix C. The sieve analysis test results are shown graphically on Figures C-1 and C-2 in Appendix C. The laboratory test results are also summarized on the test pit logs in Appendix B.

7.0 CONCLUSIONS AND RECOMMENDATIONS

It is our opinion the site is suitable for the proposed construction provided the recommendations in this report are followed and the associated risks are acceptable.

The following recommendations are presented to assist the construction of the proposed salt shed. The recommendations are based on our understanding of the proposed construction, the stated assumptions, the conditions observed in the test pits, laboratory test results, and engineering analysis. If the scope of the construction changes, or if conditions are encountered during construction that are different than those described in this report, we should be notified so we can review our recommendations and provide revisions if necessary.

7.1 Planning Considerations

Undocumented fill and buried topsoil were observed in the test pits to depths ranging from approximately 1½ to 4½ feet below the existing grade. Undocumented fill presents the risk of excessive differential settlement of supported structures. For this reason, it is typical practice to remove and replace the fill and topsoil its full depth within structural areas.

The undocumented fill and topsoil should be removed their full depth in these areas and replaced with properly compacted, imported structural fill. These materials should be removed the full depth from the building pad.

7.2 Grading Recommendations

We have assumed cut and fill of less than two feet (not including fill/topsoil removal) will be required to grade the building pad.

7.2.1 Site Preparation

Prior to conducting site grading, undocumented fill and topsoil should be removed their full depth from the building pad. Removal of the undocumented fill and topsoil should extend at least 5 feet horizontally beyond the building perimeter. The undocumented fill may be stockpiled and reused as structural fill provided it is relatively free of organics and deleterious material. Care should be taken not to mix the buried topsoil with the undocumented fill during excavation and stockpiling. The topsoil is not suitable for use as structural fill.

Prior to placing fill, the exposed subgrade should be scarified to a depth of eight inches, properly moisture conditioned, and compacted to at least 90 percent of the maximum dry density determined by ASTM D1557 (modified Proctor).

7.2.2 Subgrade Stabilization

If the subgrade is observed to pump or deflect significantly during grading, it should be stabilized prior to placement of fill. The subgrade may be stabilized using either crushed, angular cobble, or with geosynthetic reinforcement in conjunction with imported structural fill. The required thicknesses of crushed cobble or structural fill (used in conjunction with geosynthetic reinforcement) will be dependent on the construction traffic loading, which is unknown at this time. Therefore, a certain degree of trial and error may be required during construction to verify the recommended stabilization section thicknesses.

If crushed, angular cobble is selected to stabilize the subgrade it should have a maximum particle size of 8 inches and should be relatively free of sand and fines (silt and clay). The first layer of cobble should be placed in an 18-inch-thick loose lift and trafficked with tracked-construction and vibratory drum compaction equipment until it is observed to densify. If vibratory compaction destabilizes the subgrade it should be discontinued.

If geosynthetic reinforcement is selected, it should consist of BX-1200, Tensar TX-5 or TX-7, Mirafi RS380i, or approved equivalent. Alternatives should be approved by the geotechnical engineer prior to use on site. The following recommendations are provided for subgrade stabilization using geosynthetic reinforcement.

- Geosynthetic reinforcement materials should be placed on a properly prepared subgrade with a smooth surface. Loose and disturbed soil should be removed prior to placement of geosynthetic reinforcement materials.

- The geosynthetic materials should be pulled taut. If the material does not remain taut during fill placement, its effectiveness will be reduced.

- Construction equipment should not be operated directly on the geosynthetic materials. Fill should be placed from outside the excavation to create a pad to operate equipment on. We recommend a minimum of 12 inches of structural fill be placed over the geosynthetic reinforcement before operating construction equipment on the fill. Low pressure, track-mounted equipment should be used to place fill over the geosynthetic reinforcement.

- Fill placed directly over the geosynthetic reinforcement should be properly moisture conditioned prior to placement and should consist of ITD ¾ inch Type B base course.

- The fill material should be properly compacted. Care should be taken with the use of vibratory compaction equipment. Vibration should be discontinued if it reduces the subgrade stability.

A representative of the geotechnical engineer should be on site during subgrade stabilization activities to verify our recommendations are followed and to provide additional recommendations as appropriate.

7.2.3 Excavation

Excavation of the on-site soil can be accomplished with typical excavation equipment. Regarding trench wall support, the native soils are considered Type C soils according to Occupational Safety and Health Administration (OSHA) guidelines. Ultimately, the contractor is responsible to provide appropriate trench wall support and/or sloping and job site safety.

7.2.4 Materials

The on-site undocumented fill, relatively free of organics, debris and deleterious material, may be used as site grading fill and structural fill. The on-site natural soils are not suitable for use as structural fill.

Import materials should be granular soil free of organics, debris, and other deleterious material and meet the following recommendations. Import materials should be approved by the geotechnical engineer prior to delivery to the site.

Fill Type	Recommendations
Structural Fill (Building Pad and Foundations)	Idaho Transportation Department (ITD) ¾-inch Type B Base Course Standard Specification 703.04

7.2.5 Fill Placement and Compaction

Fill should be placed in lift thicknesses which are appropriate for the compaction equipment used. Typically, 8-inch loose lifts are appropriate for typical rubber tire and steel drum compaction equipment. Lift thicknesses should be reduced to 4 inches for hand operated compaction equipment. Fill should be moisture conditioned to within 2

percentage points of the optimum moisture content prior to placement to facilitate compaction. In wet weather or spring conditions, using silty or fine-grained soil for fill may delay construction and increase costs. Fill should be compacted to the following percentages of the maximum dry density determined by ASTM D1557 (modified Proctor).

Fill Area	Compaction (%)
Subgrade	90*
Foundations / Slabs	95

*May be substituted with proof rolling at the discretion of the geotechnical engineer.

7.2.6 Stormwater and Drainage

We recommend the grading plan include slopes such that stormwater run-off is directed away from the building.

7.2.7 Wet Weather Construction

We recommend earthwork for this site be scheduled for the drier periods of the year (typically June through August). If construction is undertaken in wet periods of the year, it will be important to slope the ground surface to provide drainage away from construction. If construction occurs during or immediately after excessive precipitation, it may be necessary to over-excavate and replace saturated subgrade soil which might otherwise be suitable.

The soils encountered at the site are sensitive to disturbance when wet. If these soils become wet and unstable, we recommend construction traffic is minimized where these soils are exposed. Low ground pressure (tracked) equipment should be used to minimize disturbance. Soft and disturbed subgrade areas should be excavated to undisturbed soil and backfilled with structural fill.

In addition, it should be noted the site soils tend to have notable adhesion when wet and may be easily transported off-site by construction traffic.

7.2.8 Cold Weather Construction

The soils encountered in the test pits are frost susceptible. If site grading and construction are anticipated during cold weather, we recommend good winter construction practices be observed. Snow and ice should be removed from excavated and fill areas prior to additional earthwork or construction. Footings, slabs, pavement or structural portions of the construction should not be placed on frozen ground; nor should the supporting soils for buildings be permitted to freeze during or after construction. Frozen soils should not be used as fill.

7.3 Foundation Recommendations

The proposed building may be supported on spread footings bearing on a minimum of 2 feet of properly compacted structural fill. Ideally, this structural fill should eb provided during over-excavation and replacement of the building pad.

7.3.1 Shallow Foundation Design and Construction

The following recommendations are provided for design and construction of spread footings.

- Spread footings should be supported entirely on a minimum of 2 feet of properly compacted structural fill which extends through the existing undocumented fill and topsoil.

- Footings bearing on a minimum of 2 feet of structural fill underlain by a properly prepared subgrade may be designed for a net allowable bearing pressure of 2,500 psf.

  The net allowable bearing pressure may be increased by one-third to account for transient loads such as wind and seismic.

- Footings should be embedded at least 24 inches below the lowest adjacent grade for frost protection and to achieve the design bearing pressure.

- If the previous recommendations are implemented, it is our opinion total settlement will be approximately 1 inch and differential settlement will be approximately ½ of an inch in a 30-foot span.

- A coefficient of friction of 0.45 may be used for sliding resistance between concrete footings and structural fill.

- The ground surface around foundations should be sloped away from foundations at a minimum grade of 5 percent in the first 10 feet.

- Backfill placed adjacent to foundation walls should be compacted to a minimum of 95 percent of the maximum dry density as determined by modified Proctor (ASTM D 1557). Backfill should be placed in uniform lifts on both sides of the foundation walls to reduce potential for displacement of the foundation walls.

7.3.2 Concrete Slabs-On-Grade

Slabs-on-grade should be supported on a minimum of 1 foot of properly compacted structural fill underlain by a properly prepared subgrade. We recommend placing a minimum of 6 inches of crushed base course immediately below slabs. Base course should be compacted as recommended in the Fill Placement and Compaction section of this report.

Consideration should be given to replacement of frost susceptible native soils with structural fill, below slabs, within the frost zone (upper 24 inches), to reduce the potential for frost heave.

7.3.3 Lateral Earth Pressures

Retaining walls should be designed to resist lateral pressures from the salt. The lateral earth pressures for retained salt may be calculated using the following equivalent fluid pressures:

Condition	Equivalent Fluid Pressure Salt (pcf)
At-rest	35
Active	30
Passive	NA

The equivalent fluid pressures do not include surcharge loading. Surcharge loading will increase the above equivalent fluid pressures.

The active and at-rest pressures should be increased by an equivalent fluid weight of 15 pounds per cubic foot (pcf) and the passive pressure should be reduced by 15 pcf for seismic design. The dynamic component of the active pressure acts at a height of approximately ⅓ the height of the wall.

The values in the table do not account for hydrostatic forces.

7.3.4 Seismic Design Parameters

We anticipate the 2015 International Building Code (IBC) will be used as the basis for design of the proposed structure. The soil observed in the test pits can be characterized as Site Class D for seismic design.

The following seismic parameters were calculated using USGS Seismic Design software. We used the latitude and longitude for the site to specify the location of the subject property. The following maximum earthquake spectral response accelerations may be used for design.

Latitude (degrees)	Longitude (degrees)	Spectral Accelerations		Site Coefficients	
		S_s	S_1	F_a	F_v
47.057865	-116.298939	0.311g	0.105g	1.551	2.378

8.0 ADDITIONAL RECOMMENDED SERVICES

To maintain continuity and efficiency, we recommend ALLWEST be retained to provide observations and testing throughout construction. As an independent testing laboratory, ALLWEST can document the recommendations included in this report are properly implemented, test structural materials and inspect for conformance to project specifications. As a minimum, we recommend the following testing and observations be provided by ALLWEST:

- Observe removal of unsuitable soils.
- Conduct compaction testing of fill placed in building, utility trench, and flatwork areas.
- Observe placement of concrete and test for slump, air entrainment, and compressive strength.
- Provide special inspections as required by the IBC and structural engineer.

If we are not retained to provide the recommended construction observation and testing services, we cannot be responsible for soil engineering related construction errors or omissions.

9.0 EVALUATION LIMITATIONS

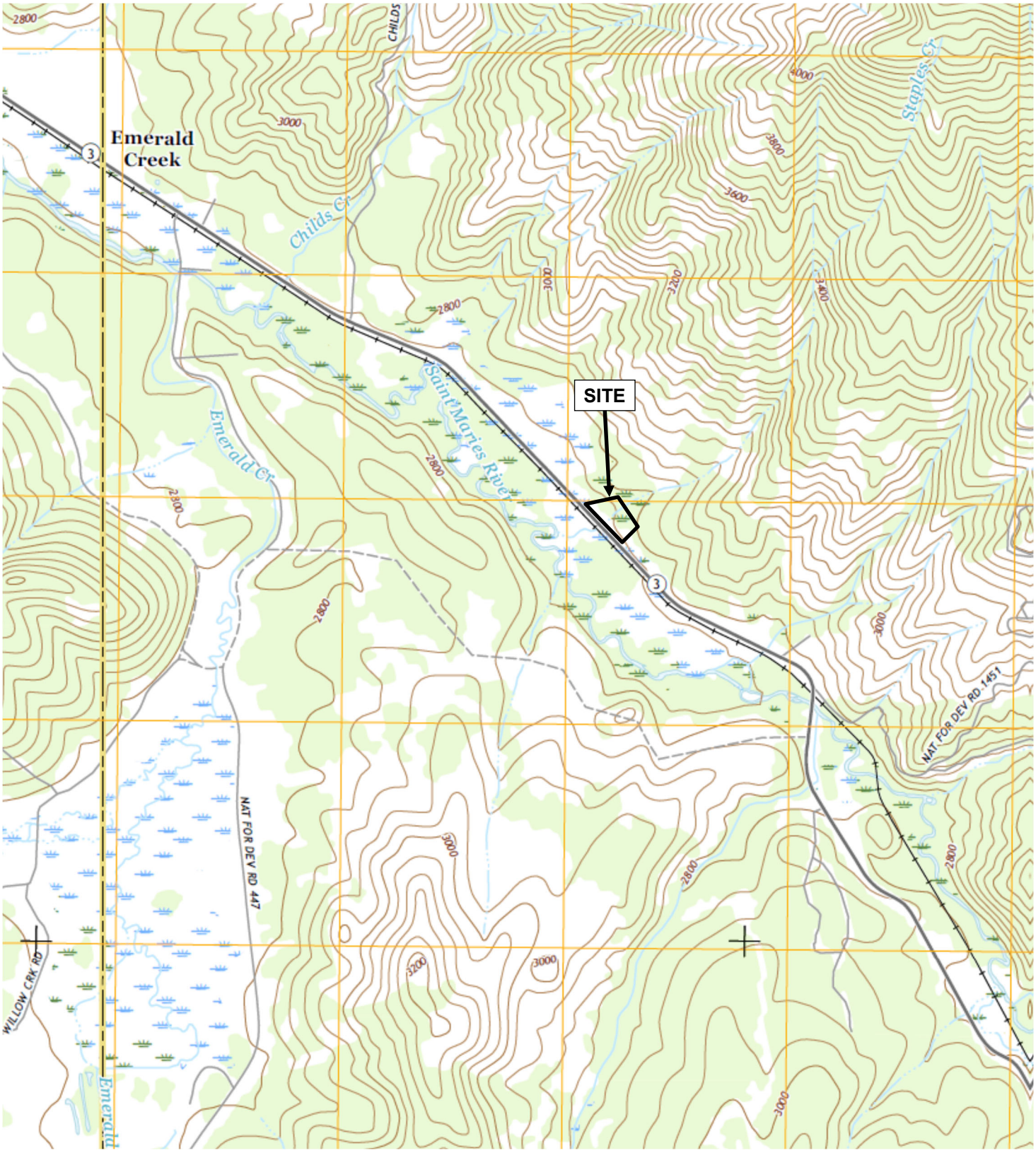
This report has been prepared to assist the planning and design of the proposed salt shed at the ITD property on State Highway 3, approximately 4 miles north of Clarkia, Idaho. Our services consist of professional opinions and conclusions made in accordance with generally accepted geotechnical engineering principles and practices. This acknowledgement is in lieu of all warranties, express or implied.

The following plates complete this report:

Appendix A – Vicinity Map, Test Pit Location Map
Appendix B – Test Pit Logs, Unified Soil Classification System
Appendix C – Laboratory Test Results

Appendix A

Vicinity Map
Test Pit Location Map



USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP
CLARKIA, IDAHO, QUADRANGLE
2017

DIAGRAM IS FOR GENERAL LOCATION ONLY

N
W E
S

ALLWEST

2705 E. Main Street
Lewiston, Idaho
www.allwesttesting.com

FIGURE A-1 - VICINITY MAP	
Proposed Salt Shed	
State Highway 3 Mile Post 58.10	
Clarkia, Idaho	
Client Name:	Idaho Transportation Department
Project No.:	319-167G
Date:	December 2019

GOOGLE EARTH, 2019
(Image date: June 4, 2016)

⊠ Approximate test pit location

N
W E
S

ALLWEST

2705 E. Main Street
Lewiston, Idaho
www.allwesttesting.com

Figure A-2 - TEST PIT LOCATION MAP

Proposed Salt Shed

State Highway 3 Mile Post 58.10

Clarkia, Idaho

Client Name Idaho Transportation Department

Project No. 319-167G

Date December 2019

Appendix B

Test Pit Logs
Unified Soil Classification System

ALLWEST
LEWISTON, IDAHO

TEST PIT LOG

DATE STARTED: 11/26/2019
DATE FINISHED: 11/26/2019
OPERATOR: N/A
COMPANY: Quality Contractors
LOGGER: ST
WEATHER:

TP - 1

EXCAVATOR: John Deere 50G Mini-Ex
EXCAVATION METHOD: 24 inch wide bucket

PROJECT: 319-167G
Clarkia Salt Shed

NOTES: See Figure A-2

TOTAL DEPTH: 9'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES
0	FILL	Silty GRAVEL; appears poorly compacted, moist, medium-grained, angular, black			
1	FILL	Poorly graded GRAVEL with silt and sand; occasional cobbles; appears moderately compacted, moist, coarse-grained, angular, yellow-brown		BULK	WC = 6% +4 = 66% -200 = 7.2%
2					
	ML	Topsoil; SILT with sand; appears stiff, moist, roots and organics, black			
3	ML	SILT with sand; appears stiff, moist, low plastic, gray		BLOCK	WC = 36% -200 = 78.1% LL = 33% PI = 1%
4					
5	SM	Silty SAND; appears medium dense to dense, moist, fine-grained, brown mottled orange (iron staining)			
6					
7					
8				BLOCK	WC = 23% -200 = 34.6%
9		Test pit terminated at 9 feet. Groundwater not observed at time of excavation.			
10					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
LEWISTON, IDAHO

TEST PIT LOG

DATE STARTED: 11/26/2019
DATE FINISHED: 11/26/2019
OPERATOR: N/A
COMPANY: Quality Contractors
LOGGER: ST
WEATHER:

TP - 2

EXCAVATOR: John Deere 50G Mini-Ex
EXCAVATION METHOD: 24 inch wide bucket

PROJECT: 319-167G
Clarkia Salt Shed

NOTES: See Figure A-2

TOTAL DEPTH: 8'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES
0	FILL	Silty GRAVEL; appears poorly to moderately compacted, moist, medium-grained, dark gray to brown			
1	FILL	Poorly graded GRAVEL with silt and sand; appears moderately compacted, moist, coarse-grained, angular, yellow-brown		BULK	WC = 6% +4 = 60% -200 = 8.1%
5	SM	Silty SAND; appears medium dense to dense, moist, fine-grained, gray to brown mottled orange (iron staining)		BLOCK	
8		Test pit terminated at 8 feet. Groundwater not observed at time of excavation.			
10					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
LEWISTON, IDAHO

TEST PIT LOG

DATE STARTED: 11/26/2019
DATE FINISHED: 11/26/2019
OPERATOR: N/A
COMPANY: Quality Contractors
LOGGER: ST
WEATHER:

TP - 3

EXCAVATOR: John Deere 50G Mini-Ex
EXCAVATION METHOD: 24 inch wide bucket

PROJECT: 319-167G
Clarkia Salt Shed

NOTES: See Figure A-2

TOTAL DEPTH: 8.5'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES
0	FILL	Silty GRAVEL; appears moderately compacted, moist, fine to medium-grained, angular, black to light brown			
1	ML	Topsoil; SILT with sand; appears very stiff, moist, roots and organics, dark gray			
2	ML	SILT with sand; appears very stiff, moist, low plastic, occasional roots, gray		BLOCK	WC = 25% -200 = 85.6% LL = 33% PI = 4%
3	SM	Silty SAND; appears medium dense to dense, moist, fine-grained, gray-brown mottled orange (iron staining)			
4					
5					
6				BULK	WC = 24% -200 = 53.1%
7				BLOCK	
8					
		Test pit terminated at 8-1/2 feet. Groundwater not observed at time of excavation.			
9					
10					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
LEWISTON, IDAHO

TEST PIT LOG

DATE STARTED: 11/26/2019
DATE FINISHED: 11/26/2019
OPERATOR: N/A
COMPANY: Quality Contractors
LOGGER: ST
WEATHER:

TP - 4

EXCAVATOR: John Deere 50G Mini-Ex
EXCAVATION METHOD: 24 inch wide bucket

PROJECT: 319-167G
Clarkia Salt Shed

NOTES: See Figure A-2

TOTAL DEPTH: 9.5'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES
0	FILL	Silty GRAVEL; apperas moderately compacted, moist, fine-grained, angular, black			
1	FILL	Poorly graded GRAVEL with silt and sand, appears moderately compacted, moist, medium to coarse-grained, angular, yellow-brown			
2	ML	Topsoil; SILT; appears stiff, moist, roots and organics, odor, black			
3	ML	SILT with sand; appears stiff, moist, low plastic, gray		BLOCK	
4					
5					
6					
7	SM	Silty SAND; appears medium dense, moist, fine-grained, brown with iron staining at 9 feet		BLOCK	WC = 23% -200 = 44.4%
8					
9					
		Test pit terminated at 9-1/2 feet. Groundwater not observed at time of excavation.			
10					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

Unified Soil Classification System

MAJOR DIVISIONS			SYMBOL	TYPICAL NAMES
COARSE GRAINED SOILS	GRAVELS	CLEAN GRAVELS	GW	Well-Graded Gravel, Gravel-Sand Mixtures.
			GP	Poorly-Graded Gravel, Gravel-Sand Mixtures.
		GRAVELS WITH FINES	GM	Silty Gravel, Gravel-Sand-Silt Mixtures.
			GC	Clayey Gravel, Gravel-Sand-Clay Mixtures.
	SANDS	CLEAN SANDS	SW	Well-Graded Sand, Gravelly Sand.
			SP	Poorly-Graded Sand, Gravelly Sand.
		SANDS WITH FINES	SM	Silty Sand, Sand-Silt Mixtures.
			SC	Clayey Sand, Sand-Clay Mixtures.
FINE GRAINED SOILS	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50%		ML	Inorganic Silt, Silty or Clayey Fine Sand.
			CL	Inorganic Clay of Low to Medium Plasticity, Sandy or Silty Clay.
			OL	Organic Silt and Clay of Low Plasticity.
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH	Inorganic Silt, Elastic Silt, Micaceous Silt, Fine Sand or Silt.
			CH	Inorganic Clay of High Plasticity, Fat Clay.
			OH	Organic Clay of Medium to High Plasticity.
Highly Organic Soils			PT	Peat, Muck and Other Highly Organic Soils.

ALLWEST

Appendix C

Laboratory Test Results

Table C-1: Summary of Laboratory Test Results

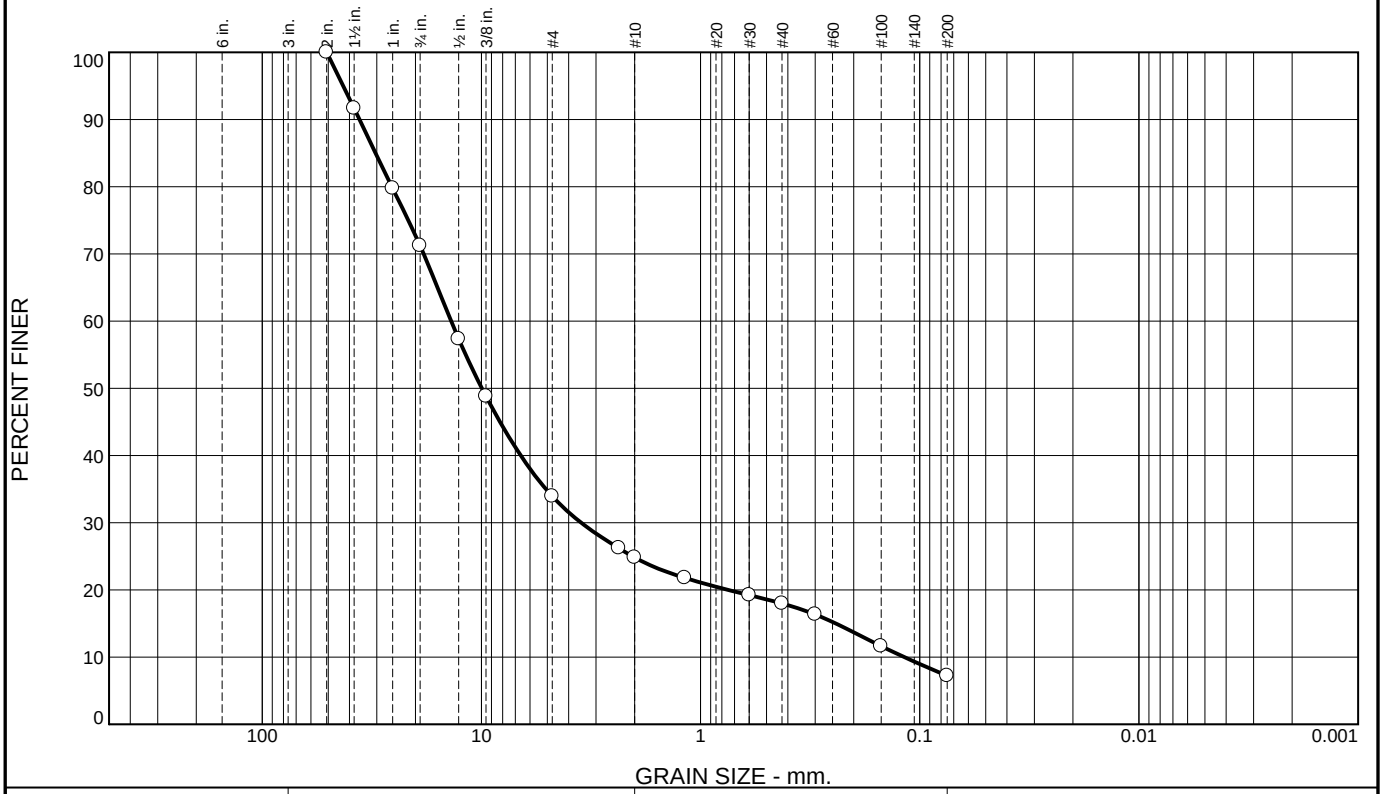
Test Pit No.	Depth (feet)	Water Content (%)	Gradation			Atterberg Limits		Sample Classification
			Gravel (%)	Sand (%)	Silt / Clay (%)	Liquid Limit (%)	Plasticity Index (%)	
TP-1	1½	6	66	27	7.2			Fill; poorly graded gravel with silt and sand (GP-GM)
TP-1	3½	36			78.1	33	1	Silt with sand (ML)
TP-1	8	23			34.6			Silty sand (SM)
TP-2	2	6	60	32	8.1			Fill; poorly graded gravel with silt and sand (GP-GM)
TP-3	2	25			85.6	33	4	Silt with sand (ML)
TP-3	6	24			53.1			Sandy silt (ML)
TP-4	7½	23			44.4			Silty sand (SM)

ALLWEST

Summary of Laboratory Test Results
Proposed Salt Shed
State Highway 3 Mile Post 58.10
Clarkia, Idaho

Project No.: 319-167G

Particle Size Distribution Report



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100		
1 1/2"	92		
1"	80		
3/4"	71		
1/2"	57		
3/8"	49		
#4	34		
#8	26		
#10	25		
#16	22		
#30	19		
#40	18		
#50	16		
#100	12		
#200	7.2		

* (no specification provided)

Material Description

Poorly graded GRAVEL with silt and sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 36.0112 D_{85}= 30.4057 D_{60}= 13.7464
D_{50}= 9.9539 D_{30}= 3.5088 D_{15}= 0.2415
D_{10}= 0.1175 C_u= 116.99 C_c= 7.62

Classification

USCS= GP-GM AASHTO=

Remarks

Location: TP-1 @ 1 1/2'
Sample Number: S319-1037

Date: 11/26/19

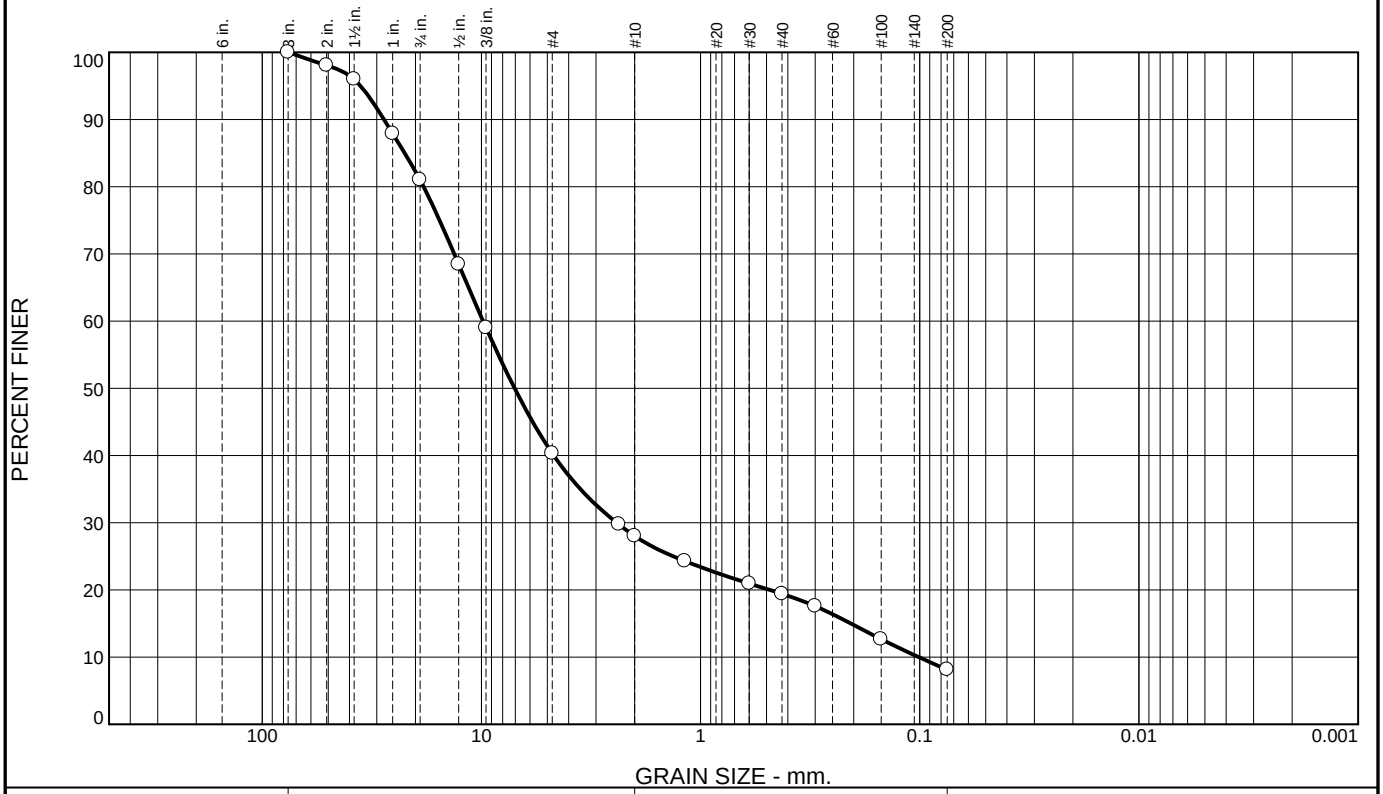
ALLWEST TESTING & ENGINEERING
Hayden, ID

Client: ITD
Project: Clarkia Salt Shed

Project No: 319-167G **Figure** C-1

Tested By: B. Eikum **Checked By:** S. Turpin

Particle Size Distribution Report



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3"	100		
2"	98		
1 1/2"	96		
1"	88		
3/4'	81		
1/2"	68		
3/8"	59		
#4	40		
#8	30		
#10	28		
#16	24		
#30	21		
#40	19		
#50	18		
#100	13		
#200	8.1		

* (no specification provided)

Material Description

Poorly graded GRAVEL with silt and sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 27.8340 D_{85}= 22.3964 D_{60}= 9.8258
D_{50}= 7.0535 D_{30}= 2.4147 D_{15}= 0.2061
D_{10}= 0.1010 C_u= 97.24 C_c= 5.87

Classification

USCS= GP-GM AASHTO=

Remarks

Location: TP-2 @ 2'
Sample Number: S319-1038 **Date:** 11/26/19

ALLWEST
TESTING & ENGINEERING
Hayden, ID

Client: ITD
Project: Clarkia Salt Shed
Project No: 319-167G **Figure** C-2

Tested By: B. Eikum **Checked By:** S. Turpin

END OF
GEOTECHNICAL REPORT

SECTION 03 30 00
CAST IN PLACE CONCRETE

PART 1. GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

B. Refer to Owner's Invitation to Bid & Instructions to Bidder (ITB) for additional project requirements.

1.2 SUMMARY

A. Section Includes:

a. Cast-in-concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.3 ACTION SUBMITTALS:

A. Product Date: For each type of product indicated.

B. Design Mixtures: For each concrete mixture.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement.

D. Cold weather curing procedures per ACI 308.1 section. 1.5.4

1.4 QUALITY ASSURANCE

A. Manufacture Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacture certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Testing Agency Qualifications: An independent agency, qualified according to ASTMC 1077 and ASTM E 329 for testing indicated.

C. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5.
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
3. ACI 308.1 "Standard Specifications for Curing Concrete"

D. Concrete Testing Service: Owner to engage a qualified independent testing agency to perform material evaluation tests.

PART 2. PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Rubbed Formed Finished Concrete: Form-Facing panels that will provide continuous true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints. Coordinate concrete form joints with concrete control joints.

1. Phenolic coated plywood

B. Rough- Formed Finished Concrete: Plywood, Lumber, Metal, or Another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Refer to Structural Engineers General Notes & Specifications.

2.3 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301 and ACI 318-11 with exposure class S3.

B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as specified in ACI 318-11 table 4.3.1. and the specified concrete type based on availability. Coordinate with concrete supplier and engineer to select mix design to ensure S3 exposure requirements.

2.4 CONCRETE SCHEDULE

A. Concrete Stem Wall & Pilasters:

1. Design Mixtures:
   a. Refer to Structural General Notes
2. Cementitious Material: to be of the same type, brand, and source, throughout Project:
   a. Refer to Structural General Notes
3. Reinforcement:
   a. Standard Steel Reinforcement: Refer to Structural General Notes
4. Aggregates: to be of the same type, brand, and source, throughout Project
   a. Refer to Structural General Notes
5. Water:
   a. Refer to Structural General Notes
6. Admixtures:
   a. Refer to Structural General Notes
7. Finish and Color:
   a. Form Finish, Standard Gray – Interior
   b. Form Finish, Standard Gray - Exterior

B. Concrete Footings:

1. Design Mixtures:
   a. Refer to Structural General Notes
2. Cementitious Material: to be of the same type, brand, and source, throughout Project:
   a. Refer to Structural General Notes

3. Reinforcement: Deformed Steel: Refer to Structural General Notes
4. Aggregates: to be of the same type, brand, and source, throughout Project
   a. Refer to Structural General Notes
5. Water:
   a. Refer to Structural General Notes
6. Admixtures:
   a. Refer to Structural General Notes
7. Finish and Color:
   a. Rough-Formed Finished Concrete, and Standard Gray

C. Interior Concrete Flatwork:

1. Design Mixtures:
   a. Refer to Structural General Notes
2. Cementitious Material: to be of the same type, brand, and source, throughout Project:
   a. Refer to Structural General Notes
3. Reinforcement: Deformed Steel: Refer to Structural General Notes
4. Aggregates: to be of the same type, brand, and source, throughout Project
   a. Refer to Structural General Notes
5. Water:
   a. Refer to Structural General Notes
6. Admixtures:
   a. Refer to Structural General Notes
7. Finish:
   a. Light Broom Finished Concrete, Standard Gray

2.5 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Moisture-Retaining Cover: ASTMC 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, Dissipating.

F. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

1. VOC Content: Curing and sealing compounds shall have a VOC content of 200 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.6 RELATED MATERIALS

A. Expansion, Isolation, and Construction Joint Filler: Sikaflex -1c SL

B. Fibre Expansion Joint: ½" W.R. Meadows Sealtight

PART 3. EXECUTION

3.1 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice"

3.2 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTMC 94/C 94M and ASTMC 1116/C 1116/M and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

3.3 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construction formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, with tolerance limits of ACI 117.

C. Chamfer all exterior corners and edges of permanently exposed concrete.

3.4 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.5 VAPOR RETARDERS

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacture's written instructions.

1. Lap joints 6" (inches) and seal with manufacture's recommended tape.

3.6 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

3.7 JOINTS

A. General: Construct joint true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired at locations indicated or as approved by Architect.

1. All construction Joints to be filled.

C. Contraction Joints in Slabs-on-Grade: Form Weakened-plane contraction joints sectioning concrete into areas as indicated and approved by Architect. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8" (Inch) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks
   a. All horizontal Sawed joints are to be filled with the exception of the storage rooms.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install Fibre joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Fibre joint-filler strips should be install ½" below top of concrete and filled with joint filler

3.8 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: comply with ACI 306.1

D. Hot-Weather Placement: Comply with ACI 301

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Related Unformed Surfaces: At Tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

C. Light Broom Finish: Apply a light broom to all horizontal concrete platforms, steps, and ramps, unless indicated otherwise.

3.10 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from pre-mature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Cure concrete according to ACI 308.1 section 1.7 “Curing in cold weather”. Follow submittal procedure in ACI 308.1 section 1.5.4: Submit cold weather curing procedures at least 1 month prior to cold weather concreting.

1. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer’s written instructions. Recoat areas subject to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.11 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect’s approval.

3.12 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

END OF
CAST-IN-PLACE CONCRETE

SECTION 03 35 00
CONCRETE FINISHING

PART 1. GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

B. Refer to Owner's Invitation to Bid & Instructions to Bidder (ITB) for additional project requirements.

1.2 SUMMARY

A. Section Includes:

a. Finishing Concrete Floors
b. Floor Surface Treatment
c. Finishing Exposed Vertical Stem Walls

1.3 REFERENCES

A. American Concrete Institute:

1. ACI 301 – Specifications for Structural Concrete
2. ACI 302.1 – Guide for Concrete Floor and Slab Construction
3. ACI 318 – Building Code requirements for Structural Concrete
4. ACI 360R – Design of Slabs on Ground

B. ASTM International:

1. ASTM E 1155 – Standard Test Method for Determining Floor Flatness and of Levelness using the F-number System
2. C150, standard Specification for Portland Cement
3. C1315, Standard Specification for Liquid Membrane -Forming Compounds having special properties for Curing and Sealing Concrete

1.4 ACTION SUBMITTALS:

A. Product Data: Submit data on concrete hardener, sealer, curing compounds, coatings, and slip resistant treatment, compatibilities, and limitations.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Date: Submit data on maintenance renewal of applied coatings.

1.6 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 301 and ACI 302.1.

1.7 QUALIFICATIONS

A. Manufacture: Company specializing in manufacturing Products specified in this section with minimum five years documented experience.

B. Applicator: Company specializing in performing work of this section with minimum five years documented experience and approved by the manufacture.

1.8 MOCK-UP

A. Construct mock-up area under conditions like those, which will exist during actual placing, three feet long by three feet wide, with specified finishes, and coatings applied.

B. Location to be onsite adjacent to project.

C. Remove unacceptable mockup as directed by Architect.

D. Mockup to be removed at time of Substantial Completion.

1.9 ENVIRONMENTAL REQUIREMENTS

A. Provide Temporary Lighting: Minimum 200 W light source, placed 8 feet above floor surface for each 425 Sq. Ft. of floor being finished.

B. Do not finish floors until ambient temperature is above 50 degrees F and below 85 degrees F.

C. Ventilation: Sufficient to prevent injurious gases from temporary heat or other sources affecting concrete and application personnel.

PART 2. PRODUCTS

2.1 APPROVED MANUFACTURERS

A. Dayton Superior Corporation

B. Euclid Chemical Company

C. L&M Construction Chemicals, Inc.

D. W.R. Meadows, Inc.

E. Sika Corporation U.S.

F. Sherwin Williams Company

G. Or Approved Equal Product or System

2.2 PRODUCT SCHEDULE

A. Interior concrete slab finish

1. Two Coats - Silane Based Reactive Water Repellant
   a. Finish: Two (2) Coats - Sika Corporation: Sikagard-705L

B. Interior concrete stem wall finish – Top of Concrete Stem Wall (+8’-0”)

1. Two Coats - Silane Based Reactive Water Repellant
   a. Finish: Two (2) Coats - Sika Corporation: Sikagard-705L

C. Exterior Concrete Stem Wall finish – Above Grade

1. Two coat Silicone Rubber water sealant & anti-graffiti system
   a. Finish: Two (2) Coats- Professional Products of Kansas: PWS-15 Super

D. Exterior Concrete Stem Wall Finish – Below Grade

1. One Coat: Fluid Applied Concrete Waterproofing – W.R. Meadows – Hydralastic 836

PART 3. EXECUTION

3.1 EXAMINATION

A. Verify concrete surfaces are free of defects and acceptable to receive the work of this section.

B. Remove all standing water and verify concrete drains as indicated in drawings.

C. Prepare all concrete surfaces per section 03 30 00 Cast-in-Place Concrete.

D. Remove all unacceptable materials that do not meet design tolerances and specifications.

3.2 TOLERANCES

A. Maximum Variation of Surface Flatness for Exposed Concrete Floors: 1/8 inch in 10 feet.

B. Maximum Variation of Surface Flatness and plumb for Exposed Concrete Walls & Foundations: 1/4 inch in 10 feet in any direction.

C. Maximum Variation of footing dimensions in plan: 1/2 inch

3.3 FLOOR FINISHING

A. Cure concrete floor surfaces.

B. Finish concrete floor surfaces in accordance with ACI 301 and ACI 302.1

C. Clean concrete surfaces per manufacture requirements prior to application of finishing compounds.

3.4 FINISH

A. Finish all surfaces per product schedule and manufacture instructions and recommendations.

END OF
CONCRETE FINISHING

SECTION 057300
DECORATIVE METAL RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Steel handrails and railings.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Manufacturer's product lines of decorative metal railings assembled from standard components.
2. Handrail brackets.
3. Shop primer.
4. Intermediate coats and topcoats.
5. Nonshrink, nonmetallic grout.
6. Anchoring cement.
7. Metal finishes.

B. Shop Drawings: Include plans, elevations, sections, and attachment details.

C. Samples: For each type of exposed finish required.

D. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer to design railings, including attachment to building construction.

B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ft. (0.73 kN/m) applied in any direction.
b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
b. Infill load and other loads need not be assumed to act concurrently.

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Same metal and finish as supported rails unless otherwise indicated.

2.3 STEEL AND IRON DECORATIVE RAILINGS

A. Tubing: ASTM A500/A500M (cold formed) or ASTM A513/A513M, Type 5.

B. Bars: Hot-rolled, carbon steel complying with ASTM A29/A29M, Grade 1010.

C. Plates, Shapes, and Bars: ASTM A36/A36M.

2.4 FASTENERS

A. Fastener Materials:

B. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, in accordance with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193.
1. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 (A1) stainless steel bolts, ASTM F593 and nuts, ASTM F594.

2.5 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

1. For steel railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

E. Epoxy Intermediate Coat: Complying with MPI#77 and compatible with primer and topcoat.

F. Polyurethane Topcoat: Complying with MPI#72 and compatible with undercoat.

G. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

H. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

1. Water-Resistant Product: At exterior locations provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

2.6 FABRICATION

A. Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Connections: Fabricate railings with welded or mechanical connections unless otherwise indicated.

C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Finish #1 welds; ornamental quality with no evidence of a welded joint.

D. Mechanical Connections: Connect members with concealed mechanical fasteners and fittings.

E. Form changes in direction as follows:
1. By bending or by inserting prefabricated elbow fittings.

F. Bend members in jigs to produce uniform curvature for each configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

G. Close exposed ends of hollow railing members with prefabricated cap and end fittings of same metal and finish as railings.

H. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns, unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.

I. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, handrail brackets, miscellaneous fittings, and anchors to interconnect railing members to other Work unless otherwise indicated.

J. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 6/NACE No. 3.

K. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1 for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

L. High-Performance Coating: Apply epoxy intermediate and polyurethane topcoats to prime-coated surfaces. Comply with coating manufacturer's written instructions and with requirements in SSPC-PA 1 for shop painting. Apply at spreading rates recommended by coating manufacturer.

1. Color: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Perform cutting, drilling, and fitting required for installing railings.

1. Fit exposed connections together to form tight, hairline joints.
2. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
3. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
4. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
5. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
6. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (6 mm in 3 m).

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1. Coat concealed surfaces that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

3.2 ANCHORING POSTS

A. Anchor posts to metal surfaces with flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:

B. Install removable railing sections, where indicated on Drawings, in slip-fit metal sockets cast in concrete.

3.3 ATTACHING RAILINGS

A. Secure brackets and railing end flanges to anchoring posts
   1. For steel posts, fasten brackets directly to steel framing or concealed steel reinforcements.

B. Touchup Painting:

   1. Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

3.4 CLEANING

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

END OF SECTION 057300

SECTION 061000
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Framing with engineered wood products.
3. Shear wall panels.
4. Wood blocking and nailers.
5. Wood furring.

1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of process and factory-fabricated product.
2. For preservative-treated wood products.

1.3 INFORMATIONAL SUBMITTALS

A. Material Certificates:

1. For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Engineered wood products.
3. Shear panels.
4. Power-driven fasteners.
5. Post-installed anchors.
6. Metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: Comply with DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Dress lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content:

1. Boards: 19 percent, unless noted otherwise in Structural General Notes
2. Dimension Lumber: 19 percent, unless noted otherwise in Structural General Notes.
3. Timber. 19 percent, unless noted otherwise in Structural General Notes.

C. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model c ode research or evaluation reports exist that show compliance with building code in effect for Project.

1. Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.2 PRESERVATIVE TREATMENT

A. Preservative Treatment: Wood materials that are required to be “treated wood” in accordance with IBC Section 2304.12. “Protection Against Decay and Termite Protection” shall conform to the appropriate standards of the AWPA for sawn lumber, glue laminated timber, round poles, wood piles and marine piles. Follow ASLC quality assurance procedures.

1. Preservative Chemicals: As per Structural General Notes

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat all rough carpentry unless otherwise indicated in Structural General Notes.

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, and similar concealed members in contact with masonry or concrete.
3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions by Grade: No. 2 grade, or as indicated in Structural General Notes.

1. Application: Interior partitions not indicated as load bearing.
2. Species:

    a. As per Structural General Notes.

B. Framing Other Than Non-Load-Bearing Partitions by Grade: No. 2 grade or as indicated in Structural General Notes.

1. Application: Framing other than interior partitions not indicated as load bearing.
2. Species:

    a. As per Structural General Notes.

3. Application: Framing other than interior partitions not indicated as load-bearing.

C. Exposed Framing: Hand-select material for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.

1. Species and Grade: As indicated above for load-bearing construction of same type.

2.4 ENGINEERED WOOD PRODUCTS

A. Laminated-Veneer Lumber: Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D5456 and manufactured with an exterior-type adhesive complying with ASTM D2559.
1. Extreme Fiber Stress in Bending, Edgewise: See Structural General Notes.
2. Modulus of Elasticity, Edgewise: See Structural General Notes.

2.5 SHEAR WALL PANELS

A. Wood-Framed Shear Wall Panels: Prefabricated assembly consisting of wood perimeter framing, tie downs, and Exposure I, Structural I plywood or OSB sheathing.

B. Allowable design loads, as published by manufacturer, shall meet or exceed those indicated in Structural General Notes. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.6 MISCELLANEOUS LUMBER

A. Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.

B. Dimension Lumber Items: No. 2 grade lumber of any species.

C. Concealed Boards: 19 percent maximum moisture content and any of the following species and grades:

1. Northern species; No. 2 Common grade; NLGA.
2. Western woods; Construction or No. 2 Common grade; WCLIB or WWPA.

2.7 MISCELLANEOUS MATERIALS

A. Sill-Sealer Gaskets:

1. Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch (0.8 mm); selected from manufacturer's standard widths to suit width of sill members indicated.
2. Closed-cell neoprene foam, 1/4 inch (6.4 mm) thick, selected from manufacturer's standard widths to suit width of sill members indicated.
3. Self-adhering sheet consisting of 64mils (1.6 mm) of rubberized asphalt laminated on one side to a 4-mil- (0.10-mm-) thick, polyethylene-film reinforcement, and with release liner on adhesive side.

B. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch (0.6 mm).

C. Adhesives for Gluing Furring to Concrete or Masonry: Formulation complying with ASTM D3498 that is approved for use indicated by adhesive manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

C. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.

D. Install shear wall panels to comply with manufacturer's written instructions.

E. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

F. Do not splice structural members between supports unless otherwise indicated.

G. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

H. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

I. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).

3.2 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet enough that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 061600
SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.
3. Sheathing joint and penetration treatment.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated plywood.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Ratings: As tested according to ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 PRESERVATIVE-TREATED PLYWOOD

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.

B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.

C. Application: Treat all plywood unless otherwise indicated in Structural General Notes.

2.3 WALL SHEATHING

A. Plywood Sheathing: Exposure 1 sheathing as noted in Structural General Notes.

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1 sheathing as noted in Structural General Notes.

2.4 ROOF SHEATHING

A. Plywood Sheathing: Exposure 1 sheathing as noted in Structural General Notes.

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1 sheathing as noted in Structural General Notes.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in Structural General Notes.

2.6 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Wood Framing: Formulation that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

D. Coordinate wall and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. See Structural General Notes for structural panel sheathing locations.

C. Fastening Methods: Fasten panels as indicated below:

1. Wall and Roof Sheathing:

a. Nail or staple to wood framing. Apply a continuous bead of glue to framing members at edges of wall sheathing panels.
b. Space panels 1/8 inch (3 mm) apart at edges and ends.

END OF SECTION 061600

SECTION 061753
SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wood roof trusses.

1.2 ACTION SUBMITTALS

A. Product Data: For metal-plate connectors, metal truss accessories, and fasteners.

B. Shop Drawings: Show fabrication and installation details for trusses.

1. Show location, pitch, span, camber, configuration, and spacing for each type of truss required.
2. Indicate sizes, stress grades, and species of lumber.
3. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design loads.
4. Indicate locations, sizes, and materials for permanent bracing required to prevent buckling of individual truss members due to design loads.
5. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
6. Show splice details and bearing details.

C. Delegated-Design Submittal: For metal-plate-connected wood trusses indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

A. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss-fabricating firm.

B. Evaluation Reports: For the following, from ICC-ES:

1. Metal-plate connectors.
2. Metal truss accessories.

1.4 QUALITY ASSURANCE

A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with quality-control procedures in TPI 1 for manufacture of connector plates.

1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Handle and store trusses to comply with recommendations in SBCA BCSI, "Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining, & Bracing Metal Plate Connected Wood Trusses."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design metal-plate-connected wood trusses.

B. Structural Performance: Metal-plate-connected wood trusses shall be capable of withstanding design loads within limits and under conditions indicated. Comply with requirements in TPI 1.

C. Comply with applicable requirements and recommendations of TPI 1, TPI DSB, and SBCA BCSI.

D. Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."

2.2 DIMENSION LUMBER

A. Lumber: DOC PS 20 and applicable rules of any rules-writing agency certified by the American Lumber Standard Committee (ALSC) Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Provide dry lumber with 19 percent maximum moisture content at time of dressing.

B. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Section 061000 "Rough Carpentry."

2.3 METAL CONNECTOR PLATES

A. Fabricate connector plates to comply with TPI 1.

B. Hot-Dip Galvanized-Steel Sheet: ASTM A653/A653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G60 (Z180) coating designation; and not less than 0.036 inch (0.9 mm) thick.

2.4 FASTENERS

A. Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Provide fasteners for use with metal framing anchors that comply with written recommendations of metal framing manufacturer.
2. Where trusses are exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.

B. Nails, Brads, and Staples: ASTM F1667.

2.5 METAL FRAMING ANCHORS AND ACCESSORIES

A. Allowable design loads, as published by manufacturer, shall comply with or exceed those indicated in Structural General Notes. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.

B. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A653/A653M, G60 (Z180) coating designation.

2.6 FABRICATION

A. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly, with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.

1. Fabricate wood trusses within manufacturing tolerances in TPI 1.

B. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install wood trusses only after supporting construction is in place and is braced and secured.

B. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.

C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Install and brace trusses according to TPI recommendations and as indicated.

E. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in metal framing anchors according to manufacturer's fastening schedules and written instructions.

F. Securely connect each truss ply required for forming built-up girder trusses.

G. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.

1. Install bracing to comply with Section 061000 "Rough Carpentry."
2. Install and fasten strongback bracing vertically against vertical web of parallel-chord floor trusses at centers indicated.

H. Install wood trusses within installation tolerances in TPI 1.

I. Do not alter trusses in field. Do not cut, drill, notch, or remove truss members.

J. Replace wood trusses that are damaged or do not comply with requirements.

END OF SECTION 061753

SECTION 061800
GLUED-LAMINATED CONSTRUCTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Structural glued-laminated timber.
2. Timber connectors.
3. Factory finishing.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. Certificates of Conformance: Issued by a qualified testing and inspecting agency indicating that structural glued-laminated timber complies with requirements in ANSI A190.1.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: An AITC- or APA-EWS-licensed firm.

1.5 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with provisions in AITC 111.

B. Individually wrap members using plastic-coated paper covering with water-resistant seams.

PART 2 - PRODUCTS

2.1 STRUCTURAL GLUED-LAMINATED TIMBER

A. General: Provide structural glued-laminated timber that complies with ANSI A190.1 and ANSI 117 or research/evaluation reports acceptable to authorities having jurisdiction.

1. Factory mark each piece of structural glued-laminated timber with AITC Quality Mark or APA-EWS trademark. Place mark on surfaces that are not exposed in the completed Work.

2. Provide structural glued-laminated timber made with wet-use adhesive complying with ANSI A190.1.

B. Species and Grades for Structural Glued-Laminated Timber: As indicated in Structural General Notes.

C. Species and Grades for Beams:

1. Species and Beam Stress Classification: As indicated on Structural General Notes.
2. Lay-up: As indicated on Structural General Notes.

D. Appearance Grade: Premium, complying with AITC 110.

2.2 TIMBER CONNECTORS

A. Materials: Unless otherwise indicated, fabricate from the following materials:

1. Structural-steel shapes, plates, and flat bars complying with ASTM A36/A36M.
2. Round steel bars complying with ASTM A575, Grade M 1020.
3. Hot-rolled steel sheet complying with ASTM A1011/A1011M, Structural Steel, Type SS, Grade 33.

B. Finish steel assemblies and fasteners with rust-inhibitive primer, 2-mil (0.05-mm) dry film thickness.

C. Hot-dip galvanize steel assemblies and fasteners after fabrication to comply with ASTM A123/A123M or ASTM A153/A153M.

2.3 MISCELLANEOUS MATERIALS

A. End Sealer: Manufacturer's standard, transparent, colorless wood sealer that is effective in retarding the transmission of moisture at cross-grain cuts and is compatible with indicated finish.

B. Penetrating Sealer: Manufacturer's standard, transparent, penetrating wood sealer that is compatible with indicated finish.

2.4 FABRICATION

A. Shop fabricate for connections to greatest extent possible, including cutting to length and drilling bolt holes.

B. Camber: Fabricate horizontal and inclined members of less than 1:1 slope with either circular or parabolic camber equal to 1/500 of span.

C. End-Cut Sealing: Immediately after end cutting each member to final length, apply a saturation coat of end sealer to ends and other cross-cut surfaces, keeping surfaces flood coated for not less than 10 minutes.

D. Seal Coat: After fabricating, sanding, and end-coat sealing, apply a heavy saturation coat of penetrating sealer on surfaces of each unit.

E. Finishing: Semi-transparent station with urethane sealer.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Erect structural glued-laminated timber true and plumb and with uniform, close-fitting joints. Provide temporary bracing to maintain lines and levels until permanent supporting members are in place.

1. Handle and temporarily support glued-laminated timber to prevent surface damage, compression, and other effects that might interfere with indicated finish.

B. Cutting: Avoid extra cutting after fabrication. Where field fitting is unavoidable, comply with requirements for shop fabrication.

C. Fit structural glued-laminated timber by cutting and restoring exposed surfaces to match specified surfacing.

1. Predrill for fasteners using timber connectors as templates.
2. Finish exposed surfaces to remove planing or surfacing marks.
3. Coat cross cuts with end sealer.

3.2 ADJUSTING

A. Repair damaged surfaces after completing erection. Replace damaged structural glued-laminated timber if repairs are not approved by Architect.

3.3 PROTECTION

A. Do not remove wrappings on individually wrapped members until they no longer serve a useful purpose, including protection from weather, sunlight, soiling, and damage from work of other trades.

1. Slit underside of wrapping to prevent accumulation of moisture inside the wrapping.

END OF SECTION 061800

SECTION 072100
THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Extruded polystyrene foam-plastic board insulation.
2. Glass-fiber blanket insulation.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Extruded polystyrene foam-plastic board insulation.
2. Mineral-fiber blanket insulation.

1.3 INFORMATIONAL SUBMITTALS

A. Installer's Certification: Listing type, manufacturer, and R-value of insulation installed in each element of the building thermal envelope.

1. Sign, date, and post the certification in a conspicuous location on Project site.

B. Product test reports.

C. Research reports.

PART 2 - PRODUCTS

2.1 EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD INSULATION

A. Extruded Polystyrene Board Insulation, Type IV ASTM C578, Type IV, 25-psi (173-kPa) minimum compressive strength; unfaced.
1. Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.
2. Smoke-Developed Index: Not more than 450 when tested in accordance with ASTM E84.
3. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
4. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

2.2 GLASS-FIBER BLANKET INSULATION

A. Glass-Fiber Blanket Insulation, Polypropylene Faced: ASTM C665, Type II (non-reflective faced).
   1. Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.
   2. Smoke-Developed Index: Not more than 50 when tested in accordance with ASTM E84.
   3. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

B. Glass-Fiber Blanket Insulation, Unfaced: ASTM C665, Type I, Passing ASTME136 for combustion characteristics..
   1. Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.
   2. Smoke-Developed Index: Not more than 50 when tested in accordance with ASTM E84.
   3. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

2.3 ACCESSORIES

A. Insulation for Miscellaneous Voids:

   1. Glass-Fiber Insulation: ASTM C764, Type II, loose fill; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E84.

B. Insulation Anchors, Spindles, and Standoffs: As recommended by manufacturer.

C. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

D. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide ventilation between insulated attic spaces and vented eaves.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Install insulation with manufacturer's R-value label exposed after insulation is installed.

D. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

E. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

3.2 INSTALLATION OF FOUNDATION WALL INSULATION

A. Butt panels together for tight fit.

B. Anchor Installation: Install board insulation on concrete substrates by adhesively attached, spindle-type insulation anchors.

C. Adhesive Installation: Install with adhesive or press into tacky waterproofing or dampproofing according to manufacturer's written instructions.

3.3 INSTALLATION OF CAVITY-WALL INSULATION

A. Mineral-Wool Board Insulation: Install insulation fasteners 4 inches (100 mm) from each corner of board insulation, at center of board, and as recommended by manufacturer.

1. Fit courses of insulation between obstructions, with edges butted tightly in both directions, and with faces flush.
2. Press units firmly against inside substrates.

3.4 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

A. Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
5. For wood-framed construction, install blankets according to ASTM C1320 and as follows:

    a. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

6. Vapor-Retarder-Faced Blankets: Tape joints and ruptures in vapor-retarder facings, and seal each continuous area of insulation to ensure airtight installation.

    a. Exterior Walls: Set units with facing placed toward as indicated on Drawings.

B. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Glass-Fiber Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

END OF SECTION 072100

SECTION 072500
WEATHER BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Building paper.
2. Building wrap.
3. Flexible flashing.
4. Drainage material.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

A. Building Paper: ASTM D226, Type 1 (No. 15 asphalt-saturated organic felt), unperforated.

B. Building Paper: Water-vapor-permeable, asphalt-saturated kraft building paper that complies with ICC-ES AC38, Grade D.

C. Building Wrap: ASTM E1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E84; UV stabilized; and acceptable to authorities having jurisdiction.
1. Water-Vapor Permeance: Not less than 20 perms (1150 ng/Pa x s x sq. m) per ASTM E96/E96M, Desiccant Method (Procedure A).
2. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

D. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.2 FLEXIBLE FLASHING

A. Butyl Rubber Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch (0.6 mm).

1. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

B. Rubberized-Asphalt Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch (0.6 mm).
1. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

A. Cover sheathing with water-resistive barrier as follows:

1. Cut back barrier 1/2 inch (13 mm) on each side of the break in supporting members at expansion- or control-joint locations.
2. Apply barrier to cover vertical flashing with a minimum 4-inch (100-mm) overlap unless otherwise indicated.

B. Building Paper: Apply horizontally with a 2-inch (50-mm) overlap and a 6-inch (150-mm) end lap; fasten to sheathing with galvanized staples or roofing nails.

C. Building Wrap: Comply with manufacturer's written instructions and warranty requirements.

1. Seal seams, edges, fasteners, and penetrations with tape.
2. Extend into jambs of openings and seal corners with tape.

3.2 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing where indicated to comply with manufacturer's written instructions.

1. Lap seams and junctures with other materials at least 4 inches (100 mm) except that at flashing flanges of other construction, laps need not exceed flange width.
2. Lap flashing over water-resistive barrier at bottom and sides of openings.
3. Lap water-resistive barrier over flashing at heads of openings.

3.3 DRAINAGE MATERIAL INSTALLATION

A. Install drainage material over building wrap and flashing to comply with manufacturer's written instructions.

END OF SECTION 072500

SECTION 074113.19
BATTEN-SEAM METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Batten-seam metal roof panels.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

B. Manufacturer’s standard warranty data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 BATTEN-SEAM METAL ROOF PANELS

A. Provide factory-formed metal roof panel assembly designed to be installed by covering vertical side edges of adjacent panels with battens and mechanically attaching panels to supports using concealed clips. Include battens and accessories required for weathertight installation.

B. Manufacturer: Metal Sales or approved equal.

C. Model: Box-Batten

D. Description: 16” Wide Panel Coverage, Batten Profile 1 1/2" with snap on batten cap.

E. Nominal Thickness: 26 GA, 0.0179 inch (0.45 mm).

F. Finish: Manufacturer's standard.

1. Colors: As selected by Architect from manufacturer’s standard colors.

2.3 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils (0.76 mm) thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D1970.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D1970.

2.4 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C645; cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A792/A792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

D. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C920; as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.5 FABRICATION

A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

2.6 FINISHES

A. Panels and Accessories:
   1. Manufacture’s standard powder-coated finish.
      a. Colors: As selected by Architect from full range of colors.

PART 3 - EXECUTION

3.1 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal panel manufacturer's written recommendations.

3.2 INSTALLATION OF UNDERLAYMENT

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation.

   1. Apply over the entire roof surface.

B. Slip Sheet: Apply slip sheet over underlayment before installing metal roof panels.

C. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

3.3 INSTALLATION OF BATTEN-SEAM METAL ROOF PANELS

A. Batten-Seam Metal Roof Panel Installation: install as per manufacturer’s instructions.

B. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

C. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible and set units true to line and level. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

3.4 CLEANING

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain a clean condition during construction.

END OF SECTION 074113.19

SECTION 074619
STEEL SIDING AND SOFFIT

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes steel siding and soffit.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For steel siding and soffit including related accessories.

1.3 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Research/evaluation reports.

C. Sample warranty.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

B. Manufacturer’s standard warranty data.

PART 2 - PRODUCTS

2.1 STEEL SIDING

A. Manufacturer: Metal Sales or approved equal.

B. Model: Classic Rib.

C. Description: Steel wall panel with bell top trapezoidal ribs on 9” centers.

D. Nominal Thickness: 26 GA, 0.0179 inch (0.45 mm).

E. Finish: Manufacturer's standard.

1. Colors: As selected by Architect from manufacturer’s standard colors.

2.2 SOFFIT PANEL

A. Manufacturer: Metal Sales or approved equal.

B. Model: Linear Soffit Panel

C. Description: Linear Flat Pan Soffit Panel

D. Nominal Thickness: 26 GA, 0.0179 inch (0.45 mm).

E. Finish: Manufacturer's standard.

1. Colors: As selected by Architect from manufacturer’s standard colors.

2.3 PERFORATED SOFFIT PANEL

A. Manufacturer: Metal Sales or approved equal.

B. Model: Linear Soffit Panel

C. Description: Linear Flat Pan Soffit Panel - Lanced

D. Nominal Thickness: 26 GA, 0.0179 inch (0.45 mm).

E. Finish: Manufacturer's standard.

1. Colors: As selected by Architect from manufacturer’s standard colors.

2.4 ACCESSORIES

A. Colors for Decorative Accessories: Matched to adjacent material unless noted otherwise.

B. Flashing: Provide flashing complying with Section 076200 "Sheet Metal Flashing and Trim" at window and door heads and where indicated.

C. Fasteners:
1. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch (6 mm), or three screw-threads, into substrate.
2. For fastening galvanized steel, use hot-dip galvanized-steel fasteners. Where fasteners are exposed to view, use prefinished galvanized-steel fasteners in color to match item being fastened.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

B. Install joint sealants as recommended by manufacturer’s instructions.

C. Where steel siding contacts dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape or installing nonconductive spacers as recommended by manufacturer for this purpose.

3.2 ADJUSTING AND CLEANING

A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.

B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 074619

SECTION 076200
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Formed wall sheet metal fabrications.

1.2 ACTION SUBMITTALS

A. Samples: For each exposed product and for each color and texture specified, 12 inches (300 mm) long by actual width.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

B. Manufacturer’s standard warranty data.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1. For copings and roof edge flashings that are ANSI/SPRI/FM 4435/ES-1 tested shop shall be listed as able to fabricate required details as tested and approved.

1.5 WARRANTY

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual: Architectural Metal Flashing, Condensation and Air Leakage Control, and Reroofing" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

2.2 SHEET METALS

A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet in accordance with ASTM A653/A653M, G90 (Z275) coating designation or aluminum-zinc alloy-coated steel sheet in accordance with ASTM A792/A792M, Class AZ50 (Class AZM150) coating designation, Grade 40 (Grade 275)]; prepainted by coil-coating process to comply with ASTM A755/A755M.
1. Surface: Smooth, flat and mill phosphatized for field painting.
2. Exposed Coil-Coated Finish:

a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

Color: As indicated by manufacturer's designations as selected by Architect from manufacturer's full range, see architectural drawings.

2.3 UNDERLAYMENT MATERIALS

A. Felt: ASTM D226/D226M, Type II (No. 30), asphalt-saturated organic felt; nonperforated.

B. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. (0.16 kg/sq. m) minimum.

2.4 MISCELLANEOUS MATERIALS

A. Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

D. Elastomeric Sealant: ASTM C920, elastomeric polyurethane polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

F. Bituminous Coating: Cold-applied asphalt emulsion in accordance with ASTM D1187/D1187M.

G. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

2.5 FABRICATION, GENERAL

A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.

1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.

3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Fabrication Tolerances:
1. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.

C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.

D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.

E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

F. Seams:

1. Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

A. Roof Edge Flashing and Fascia Cap: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long sections. Furnish with 6-inch- (150-mm-) wide, joint cover plates. Shop fabricate interior and exterior corners.

1. Fabricate from the following materials:
a. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

B. Base Flashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
1. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

C. Counterflashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
1. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

D. Roof-Penetration Flashing: Fabricate from the following materials:
1. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

PART 3 - EXECUTION

3.1 INSTALLATION OF UNDERLAYMENT

A. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, in accordance with manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.

1. Lap horizontal joints not less than 4 inches (100 mm).
2. Lap end joints not less than 12 inches (300 mm).

3.2 INSTALLATION, GENERAL

A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.

1. Install fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder.
3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
5. Install continuous cleats with fasteners spaced not more than 12 inches (300 mm) o.c.
6. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
7. Do not field cut sheet metal flashing and trim by torch.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.

1. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.

2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
3. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction.

1. Use sealant-filled joints unless otherwise indicated.
   a. Form joints to completely conceal sealant.
   b. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way.
   c. Adjust setting proportionately for installation at higher ambient temperatures.

      1) Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).

2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

3.3 INSTALLATION OF WALL FLASHINGS

A. Install sheet metal wall flashing to intercept and exclude penetrating moisture in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings.

C. Reglet: Install reglets per Industry Standard for each substrate.

3.4 INSTALLATION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.5 CLEANING

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder.

C. Clean off excess sealants.

3.6 PROTECTION

A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

B. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION 076200

SECTION 079200
JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Silicone joint sealants.
2. Nonstaining silicone joint sealants.
3. Urethane joint sealants.
4. Immersible joint sealants.
5. Mildew-resistant joint sealants.
6. Latex joint sealants.

1.2 ACTION SUBMITTALS

A. Product data.

B. Samples: Manufacturer's standard color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Joint-sealant schedule.

1.3 INFORMATIONAL SUBMITTALS

A. Field Quality-Control Submittals:

1. Field-Adhesion-Test Reports: For each sealant application tested.

B. Sample warranties.

1.4 CLOSEOUT SUBMITTALS

A. Warranty Documentation:

1. Manufacturers' special warranties.
2. Installer's special warranties.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Installers: Authorized representative who is trained and approved by manufacturer.

2. Testing Agency: Qualified in accordance with ASTM C1021 to conduct the testing indicated.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 SILICONE JOINT SEALANTS

A. Silicone, S, NS, 100/50, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Use T, M and O.

B. Silicone, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use T, NT, M, G, A, and O.

2.3 URETHANE JOINT SEALANTS

A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use T, NT, M, G, A and O.

B. Urethane, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade P, Class 25, Uses T, M, G, A and O.

2.4 MILDEW-RESISTANT JOINT SEALANTS

A. MIdew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.

B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.

2.5 LATEX JOINT SEALANTS

A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.

2.6 JOINT-SEALANT BACKING

A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.7 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

    a. Concrete.

3. Remove laitance and form-release agents from concrete.
4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

    a. Metal.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.

2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile in accordance with ASTM C1193 unless otherwise indicated.

G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

H. 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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Tests and Inspections:

1. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

a. Extent of Testing: Test completed and cured sealant joints as follows:

1) Perform 5 tests for the first **1000 ft. (300 m)** of joint length for each kind of sealant and joint substrate.
2) Perform one test for each **1000 ft. (300 m)** of joint length thereafter or one test per each floor per elevation.

b. Test Method: Test joint sealants in accordance with Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.

1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.

c. Inspect tested joints and report on the following:

1) Whether sealants filled joint cavities and are free of voids.
2) Whether sealant dimensions and configurations comply with specified requirements.
3) Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.

d. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.

e. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

2. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

C. Prepare test and inspection reports.

END OF SECTION 079200

SECTION 081113
HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
1. Exterior standard steel doors and frames.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.

C. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings indicated on Drawings, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.

1. Smoke- and Draft-Control Door Assemblies: Listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing in accordance with UL 1784 and installed in compliance with NFPA 105.
2. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not

more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.

B. Fire-Rated, Borrowed-Lite Assemblies: Assemblies complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing in accordance with NFPA 257 or UL 9.

C. Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not less than R-8 when tested in accordance with ASTM C518.

2.3 EXTERIOR STANDARD STEEL DOORS AND FRAMES

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Extra Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level A. At locations indicated in the Door and Frame Schedule.

1. Doors:

a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4 inches (44.5 mm).
c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch (1.0 mm), with minimum A40 (ZF120) coating.
d. Edge Construction: Model 2, Seamless.
e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
g. Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
h. Core: Polyurethane.

2. Frames:

a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum A40 (ZF120) coating.
b. Construction: Full profile welded.

2.4 FRAME ANCHORS

A. Jamb Anchors:

1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.

2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches (610 mm) of frame height above 7 feet (2.1 m).
3. Postinstalled Expansion Anchor: Minimum 3/8-inch- (9.5-mm-) diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch (51-mm) height adjustment. Terminate bottom of frames at top of underlayment.

D. Material: ASTM A879/A879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A1008/A1008M or ASTM A1011/A1011M; hot-dip galvanized in accordance with ASTM A153/A153M, Class B.

2.5 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized in accordance with ASTM A153/A153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Mineral-Fiber Insulation: ASTM C665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E136 for combustion characteristics.

G. Glazing: Comply with requirements in Section 088000 "Glazing."

2.6 FABRICATION

A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch (19 mm) beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

B. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.

1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

C. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping in accordance with ANSI/SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

D. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with mitered hairline joints.

1. Provide stops and moldings flush with face of door, and with beveled stops unless otherwise indicated.
2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.
4. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
5. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.

2.7 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

A. Hollow-Metal Frames: Comply with ANSI/SDI A250.11.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.

    a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
    b. Install frames with removable stops located on secure side of ening.

2. Fire-Rated Openings: Install frames in accordance with NFPA 80.
3. Floor Anchors: Secure with postinstalled expansion anchors.

    a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

4. Solidly pack mineral-fiber insulation inside frames.
5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

    a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

B. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.

1. Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8 NAAMM-HMMA 841 and NAAMM-HMMA guide specification indicated.
2. Fire-Rated Doors: Install doors with clearances in accordance with NFPA 80.
3. Smoke-Control Doors: Install doors in accordance with NFPA 105.

C. Glazing: Comply with installation requirements in Section 088000 "Glazing" and with hollow-metal manufacturer's written instructions.

3.3 REPAIR

A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

C. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

SECTION 083613
SECTIONAL DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sectional-door assemblies.

1.2 ACTION SUBMITTALS

A. Product Data: For each type and size of sectional door and accessory.

B. Shop Drawings: For each installation and for components not dimensioned or detailed in manufacturer's product data.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.4 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.

1. Warranty Period: One year from date of Substantial Completion.

B. Finish Warranty: Manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Warranty Period: 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Provide sectional doors that comply with performance requirements specified without failure from defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.

B. Structural Performance, Exterior Doors: Capable of withstanding the design wind loads.

1. Design Wind Load: As indicated in Structural General Notes.

2.2 SECTIONAL-DOOR ASSEMBLY

A. Steel Sectional Door: Provide sectional door formed with hinged sections and fabricated so that finished door assembly is rigid and aligned with tight hairline joints; free of warp, twist, and deformation; and complies with requirements in DASMA 102.

B. Operation Cycles: Door components and operators capable of operating for not less than 100,000 operation cycles. One operation cycle is complete when door is opened from closed position to the open position and returned to closed position.

C. Air Infiltration: Maximum rate of 0.4 cfm/sq. ft. (2.03 L/s per sq. m) when tested in accordance with ASTM E283 or DASMA 105.

D. Steel Door Sections: ASTM A653/A653M, zinc-coated (galvanized), cold-rolled, commercial steel sheet with zinc coating.

1. Door-Section Thickness: 2 inches (51 mm).
2. Section Faces:

a. Thermal-Break Construction: Provide sections with continuous thermal-break construction separating the exterior and interior faces of door.
b. Exterior Face: Fabricated from single sheets, not more than 24 inches (610 mm) high; with horizontal meeting edges rolled to continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove, weather- and pinch-resistant seals and reinforcing flange return.

1) Steel Sheet Thickness: 24GA nominal coated thickness.
2) Surface: Manufacturer's standard, minor and deep rib.

c. Interior Face: Enclose insulation completely within steel exterior facing and interior facing material, with no exposed insulation. Provide the following interior-facing material:

1) Plastic: Polyethene vinyl black cover
2) R-Value: 6.6.

3. End Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet not less than 0.040-inch (1.02-mm) nominal coated thickness and welded to door section.
4. Intermediate Stiles: Provide intermediate stiles formed from not less than 0.040-inch- (1.02-mm-) thick galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches (1219 mm) apart.
5. Section Reinforcing: Horizontal and diagonal reinforcement as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip

steel, formed to depth and bolted or welded in place. Ensure that reinforcement does not obstruct vision lites.

a. Bottom Section: Reinforce section with a continuous channel or angle conforming to bottom-section profile and allowing installation of astragal (weatherseal).
b. Hardware Locations: Provide reinforcement for hardware attachment.

6. Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard insulation of type indicated below:

a. Board Insulation: Polystyrene, secured to exterior face sheet.
b. Foamed-in-Place Insulation: Polyurethane, foamed in place to completely fill interior of section and pressure bonded to face sheets to prevent delamination under wind load.
c. Fire-Resistance Characteristics: Maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, in accordance with ASTM E84.

E. Track: Manufacturer's standard, galvanized-steel, track system. Provide complete system including brackets, bracing, and reinforcement to ensure rigid support of ball-bearing roller guides.

1. Material: Galvanized steel, ASTM A653/A653M, minimum G60 (Z180) zinc coating.
2. Size: As recommended in writing by manufacturer for door size, weight.
3. Track Reinforcement and Supports: Provide galvanized-steel members to support track without sag, sway, and vibration during opening and closing of doors. Slot vertical sections of track spaced 2 inches (51 mm) apart for door-drop safety device.

a. Vertical Track: Incline vertical track to ensure weathertight closure at jambs. Provide continuous angle attached to track and wall.
b. Horizontal Track: Provide continuous reinforcing angle from curve in track to end of track, attached to track and supported at points by laterally braced attachments to overhead structural members.

F. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom top and jambs of door.

G. Hardware: Heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless steel, or other corrosion-resistant fasteners, to suit door type.

1. Hinges: Heavy-duty, galvanized-steel hinges of not less than 0.079-inch (2.01-mm) nominal coated thickness at each end stile and at each intermediate stile, in accordance with manufacturer's written recommendations for door size.

a. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is impossible.

2. Rollers: Heavy-duty rollers with steel ball bearings in case-hardened steel races, mounted to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Match roller-tire diameter to track width.

H. Counterbalance Mechanism:

1. Torsion Spring: Adjustable-tension torsion springs complying with requirements of DASMA 102 for number of operation cycles indicated, mounted on torsion shaft.
2. Cable Drums and Shaft for Doors: Cast-aluminum cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised.

    a. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.

3. Cables: Galvanized-steel, multistrand, lifting cables.
4. Cable Safety Device: Include a spring-loaded steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if lifting cable breaks.
5. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.
6. Bumper: Provide spring bumper at each horizontal track to cushion door at end of opening operation.

I. Electric Door Operator: Electric door operator assembly of size and capacity recommended by door manufacturer for door and operation cycles specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

1. Comply with NFPA 70.
2. Control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6; with NFPA 70, Class 2 control circuit, maximum 24 V ac or dc.
3. Safety: Listed in accordance with UL 325 by a qualified testing agency for commercial or industrial use.
4. Operator Type: Jackshaft.
5. Motor: Reversible-type with controller disconnect switch motor exposure. Use adjustable motor-mounting bases for belt-driven operators.

    a. Motor Size: 1/3 hp (246 W).

6. Limit Switches: Equip motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.
7. Obstruction Detection: Automatic external entrapment protection consisting of automatic safety sensor capable of protecting full width of door opening. Activation of device immediately stops and reverses downward door travel.

    a. Monitored Entrapment Protection: Electric sensor edge on bottom section designed to interface with door-operator control circuit to detect damage to or disconnection of sensor and complying with requirements in UL 325.

b. Unmonitored Entrapment Protection: Retro-reflective photo sensor.

8. Control Station: Surface mounted, three-position (open, close, and stop) control.

a. Operation: Push button.
b. Interior-Mounted Unit: Full-guarded, surface-mounted, [heavy-duty type, with general-purpose NEMA ICS 6, Type 1] enclosure.
c. Features: Provide the following:

1) Vehicle detection operation.
2) Radio-control operation.
3) Photocell operation.
4) Audible and visual signals that comply with regulatory requirements for accessibility.

9. Emergency Manual Operation: Chain type designed so required force for door operation does not exceed 25 lbf (111 N).
10. Emergency Operation Disconnect Device: Hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
11. Motor Removal: Design operator so motor can be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.

J. Metal Finish:

1. Field Painted Finish
a. Color: Black.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; in accordance with manufacturer's written instructions.

B. Tracks:

1. Fasten vertical track assembly to opening jambs and framing with fasteners spaced not more than 24 inches (610 mm) apart.
2. Hang horizontal track assembly from structural overhead framing with angles or channel hangers attached to framing by welding or bolting, or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

C. Accessibility: Install sectional doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

D. Power-Operated Doors: Install automatic garage doors openers in accordance with UL 325.

3.2 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 083613

SECTION 087111
DOOR HARDWARE (DESCRIPTIVE SPECIFICATION)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Mechanical door hardware for the following:

a. Swinging doors.

2. Cylinders for door hardware specified in other Sections.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product in each finish specified.

C. Door hardware schedule.

D. Keying schedule.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.

1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) < at the tested pressure differential of 0.3-inch wg (75 Pa) of water.

B. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

2.2 HINGES

A. Hinges: BHMA A156.1., Stainless Steel,
1. Stanley, Hager, McKinney
2. Non removeable hinge pins for exterior and public interior exposure
3. Ball-bearing hinges for doors with closers and entry doors.

2.3 SELF-CLOSING HINGES AND PIVOTS

A. Self-Closing Hinges and Pivots: BHMA A156.17.

2.4 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: As indicated in door hardware schedule.

B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Bored Locks: Minimum 1/2-inch (13-mm) latchbolt throw.
2. Mortise Locks: Minimum 3/4-inch (19-mm) latchbolt throw.
3. Deadbolts: Minimum 1-inch (25-mm) bolt throw.

C. Lock Backset: 2-3/4 inches (70 mm) unless otherwise indicated.

D. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.

E. Bored Locks: BHMA A156.2; Grade 1; Series 4000.

1. Schlage, Yale, Best

2.5 AUXILIARY LOCKS

A. Bored Auxiliary Locks: BHMA A156.36: Grade 1; with strike that suits frame.

1. Schlage, Yale, Best

2.6 EXIT LOCKS

A. Exit Locks and Alarms: BHMA A156.29, Grade 1.

2.7 MANUAL FLUSH BOLTS

A. Manual Flush Bolts: BHMA A156.16; minimum 3/4-inch (19-mm) throw; designed for mortising into door edge.

1. Schlage, Yale, Best

2.8 EXIT DEVICES AND AUXILIARY ITEMS

A. Exit Devices and Auxiliary Items: BHMA A156.3.

2.9 LOCK CYLINDERS

A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver. Provide cylinder from same manufacturer of locking devices.

B. Standard Lock Cylinders: BHMA A156.5; Grade 1 permanent cores; face finished to match lockset.

1. Core Type: Removable.

C. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.

D. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

2.10 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock.

1. Master Key System: Change keys and a master key operate cylinders.
   a. Provide three cylinder change keys and five master keys.
   b. Provide cylinders for other locking doors that do not require hardware.

2.11 OPERATING TRIM

A. Operating Trim: BHMA A156.6; aluminum unless otherwise indicated.

2.12 SURFACE CLOSERS

A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

1. LCN 4000 Series

2.13 MECHANICAL STOPS AND HOLDERS

A. Wall- and Floor-Mounted Stops: BHMA A156.16.

2.14 DOOR GASKETING

A. Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

B. Maximum Air Leakage: When tested in accordance with ASTM E283 with tested pressure differential of 0.3-inch wg (75 Pa), as follows:

1. Smoke-Rated Gasketing: 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) of door opening.
2. Gasketing on Single Doors: 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) of door opening.
3. Gasketing on Double Doors: 0.50 cfm per ft. (0.000774 cu.) m/s per m) of door opening.

2.15 THRESHOLDS

A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

2.16 METAL PROTECTIVE TRIM UNITS

A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch- (1.3-mm-) thick [aluminum] [brass] [bronze] [stainless steel]; with manufacturer's standard machine or self-tapping screw fasteners.

2.17 AUXILIARY DOOR HARDWARE

A. Auxiliary Hardware: BHMA A156.16.

2.18 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.

C. Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

D. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule, but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches (750 mm) of door height greater than 90 inches (2286 mm).

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as directed by Owner.
2. Furnish permanent cores to Owner for installation.

F. Key Control Cabinet: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

G. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

H. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

I. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

1. Do not notch perimeter gasketing to install other surface-applied hardware.

J. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

K. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.2 ADJUSTING

A. Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.3 HARDWARE SCHEDULE

A. See Door Schedule in Architectural Drawings.

END OF SECTION 087111

SECTION 09 06 00
PAINT SCHEDULE

PART 1. GENERAL

1.1 SUMMARY

A. Section Includes:

1. This section covers the only the color of exterior and interior materials and products that are exposed to view in the finished construction. The word “color”, as used herein, includes surface color and pattern. When color is not designated for items, propose a color for approval.

PART 2. PRODUCTS

2.1 COLOR SCHEDULE

A. Exterior Concrete Stem Wall – Above grade

1. Two coat Silicone Rubber water sealant & anti-graffiti system
   a. First Coat: Professional Products of Kansas: PWS-15 Super
   b. Second Coat: Professional Products of Kansas: PWS-8 Extra

B. Exterior Concrete Stem Wall Finish – Below grade

1. Fluid Applied Concrete Waterproofing – W.R. Meadows – Hydralastic 836

C. Interior Concrete Stem Wall

1. Two Coats -Silane Based Reactive Water Repellant – Sika Corporation: Sikagard-705L

D. Interior Concrete Floor

1. Two Coats- Silane Based Reactive Water Repellant Concrete Sealer: Sikagard-705L by Sika Corporation U.S.

E. Exterior Concrete Flatwork

1. One Coat Concrete Sealer: Sikagard-705L by Sika Corporation U.S.

F. Steel Rigid Frames

1. Factory Steel Primer
2. One Coat – Fast Cure Epoxy Primer (5.0-8.0 mils)
3. Two coats – Acrylic Polyurethane (3.0-5.0 mils/coat)

G. Steel Bollards

1. One Coat - Alkyd Primer (3.0-4.0mils)
2. Two coats - Urethane Alkyd Enamel (2.0-4.0mils/coat)

H. Steel Purlins & Girts

1. None – Factory Galvanized Finish

I. Interior Surface of Metal Siding & Roofing

1. None – Factory Finish

J. Exterior Surface of Metal Siding & Roofing

1. None – Factory Finish

PART 3. EXECUTION

A. Prepare all substrates per manufacture recommendations and guidelines.

B. Install all coatings and systems per manufacture guidelines.

END OF SECTION 090600

SECTION 312000

EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavating and filling for rough grading the Site.
2. Preparing subgrades for slabs-on-grade walks pavements turf and grasses and plants.
3. Excavating and backfilling for buildings and structures.
4. Drainage course for concrete slabs-on-grade.
5. Subbase course for concrete walks pavements.
6. Subbase course and base course for asphalt paving.
7. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.2 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

K. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.3 INFORMATIONAL SUBMITTALS

A. Material test reports.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Refer to Civil General Notes and Soil Analysis for soil material types and requirements.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.

B. Protect and maintain erosion and sedimentation controls during earth-moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.3 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches (300 mm) each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

D. Trenches in Tree- and Plant-Protection Zones:

1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.
3. Cut and protect roots according to requirements in Section 015639 "Temporary Tree and Plant Protection."

3.6 SUBGRADE INSPECTION

A. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired dump truck to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Architect.

1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.8 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.9 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches (450 mm)] of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 033000 "Cast-in-Place Concrete."

D. Trenches under Roadways: Provide 4-inch- (100-mm-) thick, concrete-base slab support for piping or conduit less than [30 inches (750 mm) below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches (100 mm) of concrete before backfilling or placing roadway subbase course. Concrete is specified in Section 033000 "Cast-in-Place Concrete."

E. Initial Backfill: Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

F. Final Backfill: Place and compact final backfill of satisfactory soil to final subgrade elevation.

3.10 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

3.11 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers as indicated in Civil General Notes and Geotechnical Evaluation.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D698.

3.13 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch (25 mm).
2. Walks: Plus or minus 1 inch (25 mm).
3. Pavements: Plus or minus 1/2 inch (13 mm).

C. Grading inside Building Lines: Finish subgrade to a tolerance of [1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

3.14 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:

1. Shape subbase course and base course to required crown elevations and cross-slope grades.
2. Place subbase course and base course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
3. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than [95] <Insert number> percent of maximum dry unit weight according to [ASTM D698] [ASTM D1557].

3.15 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:

1. Place drainage course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D698.

3.16 FIELD QUALITY CONTROL

A. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.

B. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.17 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000