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Project Number: 2019-0222-3961

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END OF SECTION



DRAWINGS INDEX

STATE FUNDED BUILDINGS

Project Name: JSOB Front Stair Replacement

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<u>DRAWING TITLE</u>	<u>DRAWING NUMBER</u>
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GENERAL

TITLE SHEET / GENERAL INFO	G.01
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CIVIL

EXISTING CONDITIONS	C1.0
SITE DEMOLITION PLAN	C2.0
CIVIL SITE PLAN	C2.1
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CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND REVIEW OF
COMPLETE SET OF DOCUMENTS.



INVITATION FOR BIDS

FOR CONSTRUCTION CONTRACTS

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

Date: August 21, 2018

Location of Project: Juneau State Office Building
333 Willoughby Avenue
Juneau, Alaska 99801

☒ State Funded

Procurement Officer: Justin B. Papenbrock
Contracting Officer

☐ Federal Aid

Issuing Office: Physical Address:
Department of Administration
Division of Shared Services
141 Willoughby Ave
Juneau, Alaska 99801

Funding:

Description of Work:

Replacement of failed existing stairs at the Calhoun Entrance of the Juneau State Office Building and disposal of all associated refuse.

Project completion date no later than December 31, 2018.

The Engineer's Estimate is:

- | | |
|---|--|
| <input type="checkbox"/> Less than \$100,000 | <input type="checkbox"/> Between \$650,000 and \$1,000,000 |
| <input type="checkbox"/> Between \$100,000 and \$200,000 | <input type="checkbox"/> Between \$1,000,000 and |
| <input checked="" type="checkbox"/> Between \$200,000 and \$500,000 | <input type="checkbox"/> Greater than \$2,000,000 |
| <input type="checkbox"/> Between \$400,000 and \$650,000 | |

Bidders are invited to submit sealed bids, in single copy, for furnishing all labor, equipment, and materials and for performing all work for the project described above. Bids will be opened publicly at **2:00pm** local time, Friday, September 14, 2018 at 141 Willoughby Avenue, Juneau, Alaska 99801 in the 2nd floor Conference Room.

SUBMISSION OF BIDS

ALL BIDS INCLUDING ANY AMENDMENTS OR WITHDRAWALS MUST BE RECEIVED PRIOR TO BID OPENING. BIDS SHALL BE SUBMITTED ON THE FORMS FURNISHED AND MUST BE IN A SEALED ENVELOPE MARKED AS FOLLOWS:

BID FOR PROJECT:	MAIL TO:	OR DELIVER TO:
JSOB Front Stair Replacement Project #2019-0222-3961 Attention: Justin Papenbrock	Department of Administration Division of Shared Services PO Box 110210 Juneau, Alaska 99811-0210	Department of Administration Division of Shared Services 141 Willoughby Avenue Juneau, Alaska 99801

Bids, amendments or withdrawals transmitted must be received prior to the scheduled time of bid opening. Hand-delivered bids, amendments or withdrawals must be received by the Department of Administration, Division of Shared Services, 141 Willoughby Avenue, Juneau, Alaska 99801, prior to the scheduled time of opening. Faxed bid amendments must be addressed to Justin Papenbrock, Construction Contracting Officer at 907 465 2189.

A bid guaranty is required with each bid in the amount of 5% of the amount bid. (Alternate bid items as well as supplemental bid items appearing on the bid schedule shall be included as part of the total amount bid when determining the amount of bid guaranty required for the project.)

The Department hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this Invitation, Disadvantaged Business Enterprises (DBEs) will be afforded full opportunity to

submit bids and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

NOTICE TO BIDDERS

Bidders are hereby notified that data to assist in preparing bids is available as follows:

- Laborers' and Mechanics' Minimum Rates of Pay:
All available online at: <http://www.labor.state.ak.us/lss/pamp600.htm>
- Non-Mandatory Pre-Bid and Site Visit. **HOWEVER, IT IS STRONGLY ENCOURAGED.**

Thursday August 30, at 10:00am

Department of Administration
Division of Shared Services
141 Willoughby Avenue
2nd Floor Conference Room
Juneau, Alaska 99801

Plans and Specifications are located online at: <http://notes4.state.ak.us/pn/pubnotic.nsf>

All questions relating to bidding procedures, design features, constructability, quantities, or other technical aspects of the project should be directed to the following. Bidders requesting assistance in viewing the project must make arrangements at least 48 hours in advance with one of the following Construction Contracting Officers: Justin Papenbrock or Brent Fagerstrom.

Justin Papenbrock
Phone: (907) 465-5331
Fax: (907) 465-2189
Email: justin.papenbrock@alaska.gov

Brent Fagerstrom
(907) 465-6877
brent.fagerstrom@alaska.gov

Other Information:

All bids shall be accompanied by a bid guaranty in the form of an acceptable Bid Bond (section 004313) or a certified check, cashier's check or money order made payable to the State of Alaska. Bid Bonds must be accompanied by a legible Power of Attorney. The amount of the bid guaranty is specified on page two of this Invitation to Bid.



REQUIRED DOCUMENTS

STATE FUNDED CONTRACTS

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

REQUIRED FOR BID

Bids will not be considered if the following documents are not completely filled out and submitted at the time of bidding:

1. Bid Form
2. Bid Schedule
3. Bid Security
4. Any bid revisions must be submitted by the bidder prior to bid opening on the following form:
Bid Modification
5. Veteran Certification (Military Service Discharge DD Form 214 or NGB Form 22) if Contractor is claiming the Veteran's Preference

REQUIRED AFTER NOTICE OF APPARENT LOW BIDDER

The apparent low bidder is required to complete and submit the following document within 5 working days after receipt of written notification:

1. Subcontractor List

REQUIRED FOR AWARD

In order to be awarded the contract, the successful bidder must completely fill out and submit the following documents within the time specified in the intent to award letter:

1. Construction Contract
2. Payment Bond
3. Performance Bond
4. Contractor's Questionnaire
5. Certificate of Insurance (from carrier)



INFORMATION TO BIDDERS

Project Name: JSOB Front Stairs Replacement
Project Number: 2019-0222-3961

The Department is concerned over the manner in which bids are submitted. Bidders are requested to study and follow the bid assembly instructions as to the method and form for submitting bids so there will be no reason to reject a bid.

EXAMINATION OF CONTRACT REQUIREMENTS

Bidders are expected to examine carefully the plans, specifications and all other documents incorporated in the contract to determine the requirements thereof before preparing bids.

Any explanation desired by bidders regarding the meaning or interpretation of drawings and specifications must be requested in writing and with sufficient time allowed for a reply to reach them before the submission of their bids. Oral explanations or instructions given before the award of the contract will not be binding. Any interpretation made will be in the form of an addendum to the specifications or drawings and will be furnished to all bidders and its receipt by the bidder shall be acknowledged.

CONDITIONS AT SITE OF WORK

Bidders are expected to visit the site to ascertain pertinent local conditions such as the location, accessibility and character of the site, labor conditions, the character and extent of the existing work within or adjacent thereto, and any other work being performed thereon.

PREPARATION OF BIDS

- a) Bids shall be submitted on the forms furnished, and must be manually signed in ink. The person signing the proposal must initial any erasures or changes made to the bid.
- b) The bid schedule will provide for quotation of a price or prices for one or more pay items which may include unit price or lump sum items and alternative, optional or supplemental price schedules or a combination thereof which will result in a total bid amount for the proposed construction. Where required on the bid form, bidders must quote on all items and **THEY ARE WARNED** that failure to do so will disqualify them. When quotations on all items are not required, bidders should insert the words "no bid" in the space provided for any item not requiring a quotation and for which no quotation is made.

- c) The bidder shall specify the price or prices bid in figures. On unit price contracts the bidder shall also show the products of the respective unit prices and quantities written in figures in the column provided for the purpose and the total amount of the proposal obtained by adding the amounts of the several items. All the figures shall be in ink or typed.
- d) Neither conditional nor alternative bids will be considered unless called for.
- e) Unless specifically called for, telegraphic or facsimile bids will not be considered.
- f) Bid Schedule form should be enclosed in a separate sealed envelope and enclosed with all other bidding forms required at the opening.

BID SECURITY

All bids shall be accompanied by a bid security in the form of an acceptable Bid Bond (Section 004313), or a certified check, cashier's check or money order made payable to the State of Alaska. The amount of the bid security is specified on the Invitation for Bids.

Bid Bonds must be accompanied by a legible Power of Attorney.

If the bidder fails to furnish an acceptable bid security with the bid, the bid shall be rejected as non-responsive. Telegraphic notification of execution of Bid Bond does not meet the requirements of bid security accompanying the bid. An individual surety will not be accepted as a bid security.

The Department will hold the bid securities of the two lowest bid offers until the Contract has been executed, after which they will be returned. All other bid securities will be returned as soon as practicable.

BIDDERS QUALIFICATIONS

Before a bid is considered for award, the bidder may be requested by the Department to submit a statement of facts, in detail, as to his previous experience in performing comparable work, his business and technical organization, financial resources, and plant available to be used in performing the contemplated work.

SUBMISSION OF BIDS

Bids must be submitted as directed on the Invitation for Bids. Do not include in the envelope any bids for other work.

ADDENDA REQUIREMENTS

The bid documents provide for acknowledgement individually of all addenda to the drawings and/or specifications on the signature page of the Proposal. All addenda shall be acknowledged on the Proposal or

by telegram prior to the scheduled time of bid opening. If the bidder received no addenda, the word "None" should be shown as specified.

Every effort will be made by the Department to insure that Contractors receive all addenda when issued. Addenda will be issued to the individual or company to whom bidding documents were issued. Addenda may be issued by any reasonable method such as hand delivery, mail, facsimile, telegraph, courier, and in special circumstances by phone. Addenda will be issued to the address, facsimile number or phone number as stated on the planholder's list unless picked up in person or included with the bid documents. It is the bidder's responsibility to insure that he has received all addenda affecting the Invitation for Bids. No claim or protest will be allowed based on the bidder's allegation that he did not receive all of the addenda for an Invitation for Bids.

WITHDRAWAL OR REVISION OF BIDS

A bidder may withdraw or revise a bid after it has been deposited with the Department, provided that the request for such withdrawal or revision is received by the designated office, in writing, by telegram, or by facsimile, before the time set for opening of bids.

Telegraphic or facsimile modifications shall include both the modification of the unit bid price and the total modification of each item modified, but shall not reveal the amount of the total original or revised bids. Section 006310 shall be used to submit such modifications.

RECEIPT AND OPENING OF BIDS

- (a) The Department must receive all bids, including any amendment or withdrawal prior to the scheduled time of bid opening. Any bid, amendment, or withdrawal that has not actually been received by the Department prior to the time of the scheduled bid opening will not be considered.
- (b) No responsibility will be attached to any officer or employee of the Department for the premature opening of, or failure to open, a bid improperly addressed or identified.
- (c) The Department reserves the right to waive any technicality in bids received when such waiver is in the interest of the State.

BIDDERS PRESENT

At the time fixed for bid opening, bids will be publicly opened and read for the information of bidders and others properly interested, who may be present either in person or by representative. The amount of the bid and the name of the bidder shall be compiled and distributed as soon as possible after bid opening. Bids are not open for public inspection until after the Notice of Intent to Award is issued.

BIDDERS INTERESTED IN MORE THAN ONE BID

If more than one bid is offered by any one party; by or in the name of his or their clerk or partner, all such

bids will be rejected. A party who has quoted prices to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the work.

REJECTION OF BIDS

The Department reserves the right to reject any and all bids when such rejection is in the best interest of the State; to reject the bid of a bidder who has previously failed to perform properly, or complete on time, contracts of a similar nature; to reject the bid of a bidder who is not, in the opinion of the Contracting Officer, in a position to perform the contract; and to reject a bid as non-responsive where the bidder fails to furnish the required documents, fails to complete required documents in the manner directed, or makes unauthorized alterations to the bid documents.

AWARD OF CONTRACT

- a) The letter of award, if the contract is to be awarded, will be issued to the lowest responsible and responsive bidder as soon as practical and usually within 40 calendar days after opening of proposals.
- b) The successful bidder will be notified of the Department's intent to award the contract and requested to execute certain documents, including the contract form and bonds.
- c) The contract will be awarded to the successful bidder following receipt by the Department of all required documents, properly executed, within the time specified in the intent to award. Failure to enter into a contract within the specified time shall be grounds for forfeiture of the bid security and consideration of the second low bidder for award.



SUPPLEMENTARY INFORMATION TO BIDDERS

This document modifies or adds to the provisions of DEPARTMENT OF ADMINISTRATION Section 002100, INFORMATION TO BIDDERS.

Following subparagraph (c) under subject area "PREPARATION OF BIDS", add the following subparagraph:

"(C-1) When provided within the supplements to the bid schedule the Bidder shall specify those Alaska bidder and product preferences applicable to their bid. All entries made by the Bidder and designating applicable preferences must conform to the requirements of AS 36.30 and the instructions on the forms to warrant consideration."

Following subject area "REJECTION OF BIDS", add the following subject area:

CONSIDERATION OF PROPOSALS

After the Proposals are opened and read, they will be compared on the basis identified on the bid schedule and the apparent low Bidder announced. The apparent low Bidder shall, within 5 working days following identification as the apparent low Bidder, submit a list of all firms with which the prime CONTRACTOR intends to execute subcontracts for the performance of the Contract. The list shall include the name, business address, Alaska business license number and contractor's registration number of each proposed Subcontractor.

Upon confirmation of the contents of the proposal the low Bidder will be identified by the DEPARTMENT by telephone and in writing. If the low Bidder differs from the apparent low Bidder then the requirements for Subcontractor listing, as noted above, shall become effective upon the low Bidder at the time of identification.

If a Bidder fails to list a Subcontractor or lists more than one Subcontractor for the same portion of Work and the value of that Work is in excess of one-half of one percent of the total bid, the Bidder agrees that it shall be considered to have agreed to perform that portion of Work without the use of a Subcontractor and to have represented that the Bidder is qualified to perform the Work.

A Bidder who attempts to circumvent the requirements of this section by listing as a Subcontractor another contractor who, in turn, sublets the majority of the Work required under the Contract, violates this section.

If a Contract is awarded to a Bidder who violates this section, the Bidder agrees that the Contracting Officer may:

- (1) cancel the Contract without any damages accruing to the State; or
- (2) after notice and a hearing, assess a penalty on the Bidder in an amount that does not exceed 10 percent of the value of the Subcontract at issue.

A Bidder may replace a listed Subcontractor who:

- (1) fails to comply with AS 08.18;
- (2) files for bankruptcy or becomes insolvent;
- (3) fails to execute a contract with the Bidder involving performance of the Work for which the Subcontractor was listed and the Bidder acted in good faith;
- (4) fails to obtain bonding;
- (5) fails to obtain insurance acceptable to the State;
- (6) fails to perform the Contract with the Bidder involving Work for which the Subcontractor was listed;
- (7) must be substituted in order for the prime CONTRACTOR to satisfy required State and Federal affirmative action requirements;
- (8) refuses to agree or abide with the bidder's labor agreement; or
- (9) is determined by the Contracting Officer to be nonresponsive."

Modify subject area "AWARD OF CONTRACT" as follows:

Subparagraph (a) substitute the word "generally" for the phrase "as soon as practical and"

Subparagraph (b) delete and substitute the following:

"All Bidders will be notified of the DEPARTMENT's intent to Award the Contract and the successful Bidder will be requested to execute certain documents, including the Contract form and bonds."



BID FORM

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

Company Name:	
Company Address: (State or PO Box, City, Zip)	

TO THE CONTRACTING OFFICER:

DEPARTMENT OF ADMINISTRATION, DIVISION OF SHARED SERVICES:

In compliance with your Invitation for Bid Dated: August 21, 2018 the Undersigned proposes to furnish and deliver all the materials and do all the work and labor required in the construction of the above-referenced Project, located in Juneau, Alaska, according to the plans and specifications and for the amount and prices named herein as indicated on the Bid Schedule, Section 004310, consisting of 1 sheet, which is made a part of this Bid.

The Undersigned declares that he has carefully examined the contract requirements and that he has made a personal examination of the site of the work; that he understands that the quantities, where such are specified in the Bid Schedule or on the plans for this project, are approximate only and subject to increase or decrease, and that he is willing to perform increased or decreased quantities of work at unit prices bid under the conditions set forth in the Contract Documents.

The Undersigned hereby agrees to execute the said contract and bonds within fifteen calendar days, or such further time as may be allowed in writing by the Contracting Officer, after receiving notification of the acceptance of this bid, and it is hereby mutually understood and agreed that in case the Undersigned does not, the accompanying bid guarantee shall be forfeited to the State of Alaska, Department of Administration Division of Shared Services Facilities Section , as liquidated damages, and the said Contracting officer may proceed to award the contract to others.

The Undersigned agrees to commence the work immediately, and to complete the work within the schedule requirements identified herein, after the effective date of the Notice to Proceed, and no later than December 31, 2018, unless extended in writing by the Contracting Officer.

The Undersigned proposes to furnish **Payment Bond** in the amount of **50%** (of the contract) and **Performance Bond** in the amount of **50%** (of the contract), as surety conditioned for the full, complete and faithful performance of this contract.

The Undersigned acknowledges receipt of the following addenda to the drawings and/or specifications (give number and date of each):

Addenda #:	Date Issued:	Addenda #:	Date Issued:	Addenda #:	Date Issued:

NON-COLLUSION DECLARATION

The Undersigned declares, under penalty of perjury under the laws of the United States, that neither he nor the firm; association, or corporation of which he is a member, has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this bid.

The Undersigned has read the foregoing and hereby agrees to the conditions stated therein by affixing his signature below:

**SIGNATURE OF AUTHORIZED COMPANY
REPRESENTATIVE**

TYPED NAME AND TITLE

PHONE NUMBER

FAX NUMBER

ALASKA PRODUCTS PREFERENCE WORKSHEET INSTRUCTIONS

Special Note: All procurements, except those funded from Federal sources, shall contain Contract provisions for the preference of Alaska products. The products listed by the Bidder or Proposer on this worksheet must have current certifications from the Alaska Products Preference program as of the date specified for bid opening or the proposal due date in order to be considered for the Alaska Products preference. A product with an expired Certification as of the date specified for bid opening or the proposal due date, will not be considered for the Alaska Products preference. In addition, and in accordance with the program, the products must be specified for use on the project. The listing of Certified Products is available from <http://www.commerce.state.ak.us/oed/prodpref/prodpref.htm>.

BIDDERS INSTRUCTIONS:

A. General. The Contracting Agency may request documentation to support entries made on this form. False presentations may be subject to AS 36.30.687. All Bidder's entries must conform to the requirements covering bid preparations in general. Discrepancies in price extensions shall be resolved by multiplying the declared total value times the preference percentage and adjusting any resulting computation accordingly.

B. Form Completion - BASIC BIDS.

- (1) Enter project number and name, the words "Basic Bid" and the CONTRACTOR'S name in the heading of each page as provided.
- (2) The Bidder shall compare those candidate products appearing on the preference listing (see Special Notice comments above) against the requirements of the technical specifications appearing in the contract documents. If the Bidder determines that a candidate product can suitably meet the contract requirements, then that product may be included in the worksheet as follows.
- (3) For each suitable product submitted under the "Basic Bid" enter:
 - a. the product name, generic description and its corresponding technical specification section number under the heading "PRODUCT",
 - b. the company name of the Alaska producer under the heading "MANUFACTURER", and,
 - c. the product class (I, II, or III) and preference percentage (3, 5, or 7%, respectively) under the "CLASS/%" heading.
- (4) For each product appearing on the list and to be utilized by the CONTRACTOR enter:
 - d. under the heading "TOTAL DECLARED VALUE" the manufacturer's quoted price of the product, (caution: this value is to be the manufacturer's quoted price at the place of origin and shall not include costs for freight, handling or miscellaneous charges of incorporating the product into the Work), and
 - e. the resulting preference--ie.: the preference percentage times the total declared value amount -- under the heading "REDUCTION AMOUNT".
- (5) Continue for all "suitable" basic bid products. If the listing exceeds one page enter the words "Page # ___SUB" in front of the word "TOTAL" and on the first entry line of the following page enter "SUBTOTAL OF REDUCTION AMOUNT FROM PREVIOUS PAGE".
- (6) On the final page of the listing enter "BASIC BID PREFERENCE GRAND" immediately before the word "TOTAL".
- (7) Total the entries in the "REDUCTION AMOUNT" column for each page by commencing at the first entry for that page. If a continuation page exists, ensure that the subtotal from the previous page is computed into the running total. Number pages as appropriate.
- (8) Compute a Grand Total for the Basic Bid Preference. Enter this amount on the final page of the worksheet and at line or column "C" on the Bid Schedule or Bid Schedule Summary Sheet as appropriate. Submit worksheet(s) with Bid Schedule Summary Sheet.

C. Forms Completion - ALTERNATE BIDS.

- (1) Enter project number and name, the words "ALTERNATE BID # _____", and CONTRACTOR'S name in the heading of each page as provided.
- (2) On the first entry line enter "ADDITIONAL ALASKA PRODUCTS FOR ALTERNATE BID # _____", and repeat procedures 2 through 5 under part B of these Bidder's instructions except that references to "Basic Bid" shall be replaced with the words "Alternate Bid # _____".
- (3) Following the listing of all additional Alaska products enter the words "ADDITIONAL PRODUCTS PREFERENCE FOR ALTERNATE BID # _____--SUBTOTAL" and enter a subtotal amount for all additional products as listed. Subtotal amount to be determined by adding all additional product entries in the "REDUCTION AMOUNT" column.
- (4) Skip three lines and enter "LESS THE FOLLOWING NON-APPLICABLE ALASKA PRODUCTS".
- (5) Beginning on the next line enter the product name and manufacturer of each Alaska Product appearing on the "Basic Bid" listing which would be deleted or reduced from the Project should the "Alternate Bid" be selected. Details of entry need only be sufficient to clearly reference the subject product. (ie. "Prehung Doors by Alaska Door Co. in lieu of "Prehung Solid Core Wood Door, model "Super Door", Section 08210, by Alaska Door Co., Anchorage.) Products being reduced shall specify the amount of the reduction. Should no products require deletion enter "None". When a product is listed as a "NON-APPLICABLE ALASKA PRODUCT" for this alternate bid and if under the basic bid the Bidder received a preference on his basic bid as a result of that product, then the applicable entries under the headings "TOTAL DECLARED VALUE" and "REDUCTION AMOUNT" (for each product and from the basic bid listing) shall also be entered into the corresponding headings of this form. Where only a portion of the product has been deleted, the entry (which will differ from those on the basic bid listing) may be "pro-rated" or as otherwise substantiated.
- (6) Following the listing of all non-applicable Alaska products enter the words "NON-APPLICABLE PRODUCTS PREFERENCE FORM BASIC BID --SUBTOTAL" and enter a subtotal amount for all non-applicable products as listed. Subtotal amount to be determined by adding all non-applicable entries in the "REDUCTION AMOUNT" column.
- (7) At the bottom of the final page enter the words "ALTERNATE BID # _____ PREFERENCE GRAND" immediately before the word "TOTAL".
- (8) Compute a Grand Total for the Alternate Bid Preference (for Alternate # _____) by subtracting the non-applicable product preference subtotal from the additional product preference subtotal. Enter on the final page as provided and at the corresponding line in column "C" on the Bid Schedule Summary Sheet. Submit worksheet(s) with the Bid Schedule Summary Sheet.
- (9) A separate listing for each alternate bid is required.



BID SCHEDULE

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

Bidders Please Note: Before preparing this Bid Schedule, read carefully, **Section 002100 "Information to Bidders"**, **Section 002200 "Supplementary Information to Bidders"** and the following: The Bidder shall insert a Fixed Price in figures opposite each pay item which appears in the Bid Schedule. No price is to be entered or tendered for any item not appearing in the Bid Schedule.

Conditioned or qualified bids will be declared non-responsive.

NOTICE: In order to establish a clear and definitive basis of Award, the State has established a budgeted Award amount from which the order of Bidders will be determined. The amount will be announced just prior to opening bids. The low bid will be determined by considering the Basic Bid and Additive Alternate(s) as adjusted for Alaska Bidders Preference (col. b) and Alaska Products Preference (col. c) in the order listed on the Bid Schedule up to a total not to exceed the budgeted Award amount less the low bidder's preferences. The State reserves the right to reject all bids. The State also reserves the right to award the contract above or below the low bidder based on any combination of alternate(s) or not alternate(s), providing that the low bidder remains unchanged. **The final contract award will be for the unadjusted amount(s).**

DESCRIPTION	(a) BID AMOUNT (figures)	(b) ALASKA BIDDER PREFERENCE 5% of Column	(c) ALASKA PRODUCTS PREFERENCE (figures)	(d) ADJUSTED BID AMOUNT (figures) (a)-(b)- (c)
Base Bid: (Lump Sum)				
Add Alternate 01				
Add Alternate 02				
Add Alternate 03				
Total Base Bid: (used in determining the low Bidder.)				

***Bidder must supply a dollar amount for each line item on the Bid Schedule. Failure to supply an amount for each line item will cause the bid to be considered non-responsive and rejected.** Contractor shall hold the Base Bid, and alternates, price for 90 days.

Contractor's Signature		Business License Number, Expiration Date
Contractor's Name (Printed)		Contractor's Registration Number, Expiration Date



BID BOND

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

Date Bond Executed:

PRINCIPAL (Legal Name and Business Address):

TYPE OF ORGANIZATION:

	<input type="checkbox"/> Individual	<input type="checkbox"/> Partnership	<input type="checkbox"/> Other:
	<input type="checkbox"/> Joint Venture	<input type="checkbox"/> Corporation	_____
	STATE OF INCORPORATION:		

SURETY (IES) (Name and Business Address):

A	B	C
PENAL SUM OF BOND:		DATE OF BID:

We, the PRINCIPAL and SURETY above named, are held and firmly bound to the State (State of Alaska), in the penal sum of the amount stated above, for the payment of which sum will be made, we bind ourselves and our legal representatives and successors, jointly and severally, by this instrument.

THE CONDITION OF THE FOREGOING OBLIGATION is that the Principal has submitted the accompanying bid in writing, date as shown above, on the above-referenced Project in accordance with contract documents filed in the office of the Contracting Officer, and under the Invitation for Bids therefore, and is required to furnish a bond in the amount stated above.

If the Principal's bid is accepted and he is offered the proposed contract for award, and if the Principal fails to enter into the contract, then the obligation to the State created by this bond shall be in full force and effect. If the Principal enters into the contract, then the foregoing obligation is null and void.

PRINCIPAL			
SIGNATURE(S)	1	2	3
NAME(S) and TITLE(S) (typed)	1	2	3
<p>See Instructions on following page</p>			Corporate Seal

CORPORATE SURETY (IES)			
SURETY A	NAME OF CORPORATION	STATE OF INCORPORATION	LIABILITY LIMIT \$
SIGNATURE(S)	1	2	Corporate Seal
NAME(S) and TITLE(S) (typed)	1	2	
SURETY B	NAME OF CORPORATION	STATE OF INCORPORATION	LIABILITY LIMIT \$
SIGNATURE(S)	1	2	Corporate Seal
NAME(S) and TITLE(S) (typed)	1	2	
SURETY C	NAME OF CORPORATION	STATE OF INCORPORATION	LIABILITY LIMIT \$
SIGNATURE(S)	1	2	Corporate Seal
NAME(S) and TITLE(S) (typed)	1	2	

INSTRUCTIONS

1. This form shall be used whenever a bid bond is submitted.
2. Insert the full legal name and business address of the Principal in the space designated. If the Principal is a partnership or joint venture, the names of all principal parties must be included (e.g., "Smith Construction, Inc. and Jones Contracting, Inc. DBA Smith/Jones Builders, a joint venture"). If the Principal is a corporation, the name of the state in which incorporated shall be inserted in the space provided.
3. Insert the full legal name and business address of the Surety in the space designated. The Surety on the bond may be any corporation or partnership authorized to do business in Alaska as an insurer under AS 21.09. Individual sureties will not be accepted.
4. The penal amount of the bond may be shown either as an amount (in words and figures) or as a percent of the contract bid price (a not-to-exceed amount may be included).
5. The scheduled bid opening date shall be entered in the space marked Date of Bid.
6. The bond shall be executed by authorized representatives of the Principal and Surety. Corporations executing the bond shall also affix their corporate seal.
7. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
8. The states of incorporation and the limits of liability of each surety shall be indicated in the spaces provided.
9. The date that bond is executed must not be later than the bid opening date.



SUBCONTRACTOR LIST

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

The apparent low bidder shall complete this form and submit it so as to be received by the Contracting Officer prior to the close of business on the fifth working day after receipt of written notice from the Department.

Failure to submit this form with all required information by the due date will result in the bidder being declared nonresponsive and may result in the forfeiture of the Bid Security.

Scope of work must be clearly defined. If an item of work is to be performed by more than one firm, indicate the portion or percent of work to be done by each.

Check as applicable:

☐

All Work on the above-referenced project will be accomplished without subcontracts greater than ½ of 1% of the contract amount.

OR

☐

Subcontractor List is as follows:

LIST FIRST TIER SUBCONTRACTORS ONLY		
FIRM NAME, ADDRESS, PHONE #	AK BUSINESS LICENSE #, CONTRACTOR'S REG #	SCOPE OF WORK TO BE PERFORMED

I hereby certify that the listed licenses and registrations were valid at the time bids were received for this project. For contracts involving Federal-aid funding, Alaska Business License and Contractor Registration will be required prior to award of a subcontract.

Signature of Authorized Company Representative

Title

Company Name

Company Address (Street or PO Box, City, State, Zip)

Date

Phone Number



CONSTRUCTION CONTRACT

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

This CONTRACT, between the STATE OF ALASKA, DEPARTMENT OF ADMINISTRATION, herein called the Department, acting by and through its Contracting Officer, and

COMPANY NAME

COMPANY ADDRESS (Street or PO Box, City, State, Zip)

a/an

- ☐ Individual
- ☐ Partnership
- ☐ Joint Venture
- ☐ Sole Proprietorship
- ☐ Corporation Incorporated

Under the laws of the State of Alaska, its successors and assigns, herein called the Contractor, is effective the date of the signature of the Contracting Officer on this document.

WITNESSETH: That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the Department, hereby covenants and agrees to furnish and deliver all the materials and to do and perform all the work and labor required in the construction of the above-referenced project at the prices bid by the Contractor for the respective estimated quantities aggregating approximately the sum of

	Dollars (words)
	\$ (figures)

and such other items as are mentioned in the original Bid, which Bid and prices named, together with the Contract Documents are made a part of this Contract and accepted as such.

It is distinctly understood and agreed that no claim for additional work or materials, done or furnished by the Contractor and not specifically herein provided for, will be allowed by the Department, nor shall the Contractor do any work or furnish any material not covered by this Contract, unless such work is ordered in writing by the Department. In no event shall the Department be liable for any materials furnished or used, or for any work or labor done, unless the materials, work, or labor are required by the Contract or on written order furnished by the Department. Any such work or materials which may be done or furnished by the Contractor without written order first being given shall be at the Contractor's own risk, cost, and expense and the Contractor hereby covenants and agrees to make no claim for compensation for work or materials done or furnished without such written order.

The Contractor further covenants and agrees that all materials shall be furnished and delivered and all labor shall be done and performed, in every respect, to the satisfaction of the Department, on or before: December 31, 2018. It is expressly understood and agreed that in case of the failure on the part of the Contractor, for any reason, except with the written consent of the Department, to complete the furnishing and delivery of materials and the doing and performance of the work before the aforesaid date, the Department shall have the right to deduct from any money due or which may become due the Contractor, or if no money shall be due, the Department shall have the right to recover

Two Hundred and Fifty	Dollars (words)
250.00	\$ (figures)

per day for each calendar day elapsing between the time stipulated for the completion and the actual date of completion in accordance with the terms hereof; such deduction to be made, or sum to be recovered, not as a penalty but as liquidated damages.

The bonds given by the Contractor in the sum of \$ Payment Bond, and \$ Performance Bond, to secure the proper compliance with the terms and provisions of this Contract, are submitted herewith and made a part hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Contract and hereby agree to its terms and conditions.

CONTRACTOR

COMPANY NAME

SIGNATURE OF AUTHORIZED COMPANY REPRESENTATIVE

PRINTED NAME AND TITLE

DATE

(Corporate Seal)

**STATE OF ALASKA
DEPARTMENT OF ADMINISTRATION
DIVISION OF SHARED SERVICES**

SIGNATURE OF CONTRACTING OFFICER

PRINTED NAME

DATE



PERFORMANCE BOND

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

Bond No.

KNOW ALL WHO SHALL SEE THESE PRESENTS:

That _____
of _____ as Principal
and _____
of _____ as Surety,

firmly bound and held unto the State of Alaska in the penal sum of

Dollars (words)

\$ (figures)

good and lawful money of the United States of America for the payment whereof, well and truly to be paid to the State of Alaska, we bind ourselves, our heirs, successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

Now, THEREFORE, the conditions of the foregoing obligation are such that if the said Principal shall well and truly perform and complete all obligations and work under said contract and if the Principal shall reimburse upon demand of the Department of Administration any sums paid him which exceed the final payment determined to be due upon completion of the project, then these presents shall become null and void; otherwise they shall remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals at this day of
A.D., 20 .

PRINCIPAL: _____
ADDRESS: _____
BY: _____
CONTACT NAME: _____
PHONE: _____

SURETY: _____
ADDRESS: _____
BY: _____
CONTACT NAME: _____
PHONE: _____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

Alaska Department of Administration Authorized Representative

Date

INSTRUCTIONS

1. This form shall be used whenever a performance bond is required. There shall be no deviation from this form without approval from the Contracting Officer.
2. The full legal name, business address, phone number, and point of contact of the Principal and Surety shall be typed on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be typed in words and in figures.
4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Contracting Officer.
5. The bond shall be signed by authorized persons. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.



PAYMENT BOND

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

Bond No.

KNOW ALL WHO SHALL SEE THESE PRESENTS:

That _____
of _____ as Principal
and _____
of _____ as Surety,

firmly bound and held unto the State of Alaska in the penal sum of

	Dollars (words)
	\$ (figures)

good and lawful money of the United States of America for the payment whereof, well and truly to be paid to the State of Alaska, we bind ourselves, our heirs, successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

Now, THEREFORE, the conditions of the foregoing obligation are such that if the said Principal shall well and truly perform and complete all obligations and work under said contract and if the Principal shall reimburse upon demand of the Department of Administration any sums paid him which exceed the final payment determined to be due upon completion of the project, then these presents shall become null and void; otherwise they shall remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals at this day of
A.D., 20 .

PRINCIPAL: _____

ADDRESS: _____

BY: _____

CONTACT NAME: _____

PHONE: _____

SURETY: _____
ADDRESS: _____
BY: _____
CONTACT NAME: _____
PHONE: _____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

Alaska Department of Administration Authorized Representative

Date

INSTRUCTIONS

1. This form shall be used whenever a performance bond is required. There shall be no deviation from this form without approval from the Contracting Officer.
2. The full legal name, business address, phone number, and point of contact of the Principal and Surety shall be typed on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be typed in words and in figures.
4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Contracting Officer.
5. The bond shall be signed by authorized persons. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.



CONTRACTOR'S QUESTIONNAIRE

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

A. FINANCIAL

1. Have you ever failed to complete a contract due to insufficient resources?

☐ No ☐ Yes If YES, explain:

2. Describe any arrangements you have made to finance this work:

B. EQUIPMENT

1. Describe below the equipment you have available and intend to use for this project.

ITEM	QUANTITY	MAKE	MODEL	SIZE/ CAPACITY	PRESENT MARKET VALUE

2. What percent of the total value of this contract do you intend to subcontract? %

3. Do you propose to purchase any equipment for use on this project?

☐ No ☐ Yes If YES, describe type, quantity, and approximate cost:

4. Do you propose to rent any equipment for this work?

☐ No ☐ Yes If YES, describe type and quantity:

5. Is your bid based on firm offers for all materials necessary for this project?

☐ Yes ☐ No If NO, please explain:

C. EXPERIENCE

1. Have you had previous construction contracts or subcontracts with the State of Alaska?

☐ Yes ☐ No

2. Describe the most recent or current contract, its completion date, and scope of work:

3. List, as an attachment to this questionnaire, other construction projects you have completed, the dates of completion, scope of work, and total contract amount for each project completed in the past 12 months.

I HEREBY CERTIFY THAT THE ABOVE STATEMENTS ARE TRUE AND COMPLETE.

NAME OF CONTRACTOR

NAME AND TITLE OF PERSON SIGNING

SIGNATURE

DATE

Project Number: 2019-0222-3961

Note: All revisions shall be made to the unadjusted bid amount(s). Changes to the adjusted bid amounts will be computed by the Department.

[illegible]

Page 1 of 1



GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT FOR BUILDINGS

ISSUED JULY 1985

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

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- 2.2 Evaluations by Contracting Officer
- 2.3 Means and Methods
- 2.4 Visits to Site

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- 6.2 Superintendence by CONTRACTOR
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- 6.13 Subcontractors
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- 13.13 Final Completion and Application for Payment

- 13.14 Final Payment
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- 14.1 DEPARTMENT May Suspend Work
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- 15.1 Notification
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- 15.3 Claim Validity, Additional Information & Contracting Officer's Action
- 15.4 Contracting Officer's Decision

ACKNOWLEDGMENT

"The State of Alaska, General Conditions of the Construction Contract for Buildings " is based on the "Standard General Conditions of the Construction Contract" as published by the National Society of Professional Engineers (document number 1910-8, 1983 edition) on behalf of the Engineers Joint Construction Documents Committee. Portions of the NSPE General Conditions are reprinted herein by the express permission of NSPE. Modifications to the NSPE text are made to provide for State laws, regulations, and established procedures.

The granting of permission by NSPE to allow the State of Alaska to preprint portions of the NSPE document 1910-8, 1983 edition does not constitute approval of the State of Alaska General Conditions of the Construction Contract for Buildings.

ARTICLE 1 – DEFINITIONS

Wherever used in the Contract Documents the following terms, or pronouns in place of them, are used, the intent and meaning, unless a different intent or meaning is clearly indicated, shall be interpreted as set forth below.

The titles and headings of the articles, sections, and subsections herein are intended for convenience of reference and shall not be considered as having bearing on their interpretation.

Whenever used in the Specifications or other Contract Documents the following terms have the meaning indicated which are applicable to both the singular and plural thereof. Working titles that have a masculine gender, are intended to refer to persons of either sex.

Terms not defined below shall have their ordinary accepted meanings within the context that they are used. Words that have a well-known technical or trade meaning when used to describe work, materials or equipment shall be interpreted in accordance with such meaning. Words defined in Article 1 are capitalized throughout these General Conditions.

ADDENDA - All clarifications, corrections, or changes issued graphically or in writing by the DEPARTMENT after the Advertisement but prior to the opening of Proposals.

ADVERTISEMENT - The public announcement, as required by law, inviting bids for Work to be performed or materials to be furnished.

APPLICATION FOR PAYMENT - The form provided by the DEPARTMENT which is to be used by the CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

APPROVED OR APPROVAL - Means written approval by the Contracting Officer or his authorized representative as defined in Article 2.1.

A.S - Initials that stand for Alaska Statute.

AWARD - The acceptance, by the DEPARTMENT, of the successful bid.

BID BOND - A type of Proposal Guaranty.

BIDDER - Any individual, firm, corporation or any acceptable combination thereof, or joint venture submitting a bid for the advertised Work.

CALENDAR DAY - Every day shown on the calendar, beginning and ending at midnight.

CHANGE ORDER - A written order by the DEPARTMENT directing changes to the Contract Documents, within their general scope.

CONDITIONS OF THE CONTRACT - Those portions of the Contract Documents that define the rights and responsibilities of the contracting parties and of others involved in the Work. The Conditions of the Contract include General Conditions, Supplementary Conditions and other conditions.

CONSULTANT - The person, firm, or corporation retained directly by the DEPARTMENT to prepare Contract Documents, perform construction administration services, or other Project related services.

CONTINGENT SUM WORK ITEM - When the bid schedule contains a Contingent Sum Work Item, the Work covered shall be performed only upon the written Directive of the Contracting Officer. Payment shall be made as provided in the Directive.

CONTRACT - The written agreement between the DEPARTMENT and the CONTRACTOR setting forth the obligations of the parties and covering the Work to be performed, all as required by the Contract Documents.

CONTRACT DOCUMENTS - The Contract form, Addenda, the bidding requirements and CONTRACTOR's bid (including all appropriate bid tender forms), the bonds, the Conditions of the Contract and all other Contract requirements, the Specifications, and the Drawings furnished by the DEPARTMENT to the CONTRACTOR, together with all Change Orders and documents approved by the Contracting Officer, for inclusion, modifications and supplements issued on or after the Effective Date of the Contract.

CONTRACTING OFFICER - The person authorized by the Commissioner to enter into and administer the Contract on behalf of the DEPARTMENT. He has authority to make findings, determinations and decisions with respect to the Contract and, when necessary, to modify or terminate the Contract. The Contracting Officer is identified on the construction Contract.

CONTRACTOR - The individual, firm, corporation or any acceptable combination thereof, contracting with the DEPARTMENT for performance of the Work.

CONTRACT PRICE - The total moneys payable by the DEPARTMENT to the CONTRACTOR under the terms of the Contract Documents.

CONTRACT TIME - The number of Calendar Days or the date specified in the construction Contract and authorized time extensions that identify how much time the CONTRACTOR is allowed to achieve Final Completion.

CONTROLLING ITEM - Any feature of the Work considered at the time by the Contracting Officer as essential to the orderly completion of the Work and which, if delayed, will delay the time of Final Completion of the Contract (such as an item of Work on the critical path of a network schedule).

DEFECTIVE - An adjective that refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or Approval referred to in the Contract Documents, or has been damaged prior to the DEPARTMENT's Approval.

DEPARTMENT - The Alaska DEPARTMENT OF ADMINISTRATION. References to "Owner", "State", "Contracting Agency", mean the DEPARTMENT.

DIRECTIVE - A written communication to the CONTRACTOR from the Contracting Officer interpreting or enforcing a Contract requirement or ordering commencement of an item of Work.

DRAWINGS - The Drawings that show the character and scope of the Work to be performed and which have been furnished by the DEPARTMENT or the DEPARTMENT's Consultant and are by reference made a part of the Contract Documents.

Effective Date of the Contract - The date on which the Contract is fully executed by both CONTRACTOR and the DEPARTMENT.

FINAL ACCEPTANCE - The DEPARTMENT's written acceptance of the Work following Final Completion and the performance of all Contract requirements by the CONTRACTOR.

FINAL COMPLETION - The Project (or specified part thereof) has progressed to the point that all required Work is complete as determined by the Contracting Officer.

GENERAL REQUIREMENTS - Sections of Division 1 of the Specifications that contain administrative and procedural requirements as well as requirements for temporary facilities applying to Specification Divisions 2 through 16.

HOLIDAYS - In the State of Alaska, Legal Holidays occur on:

1. New Years Day - January 1
2. Martin Luther King's Birthday - Third Monday in January

3. President's Day - Third Monday in February
4. Seward's Day - Last Monday in March
5. Memorial Day - Last Monday in May
6. Independence Day - July 4
7. Labor Day - First Monday in September
8. Alaska Day - October 18
9. Veteran's Day - November 11
10. Thanksgiving Day - Fourth Thursday in November
11. Christmas Day - December 25
12. Every Sunday
13. Every day designated by public proclamation by the President of the United States or the Governor of the State as a legal Holiday.

If any Holiday listed above falls on a Saturday, Saturday and the preceding Friday are both legal Holidays. If the Holiday should fall on a Sunday, except (12) above, Sunday and the following Monday are both legal Holidays. See Title 44, Alaska Statutes.

INSTALL - Means to build into the Work, ready to be used in complete and operable condition and in compliance with Contract Documents.

INVITATION FOR BIDS - A portion of the bidding documents soliciting bids for the Work to be performed.

NOTICE OF INTENT TO AWARD - The written notice by the DEPARTMENT to all Bidders identifying the apparent successful Bidder and establishing the DEPARTMENT's intent to execute the Contract when all conditions required for execution of the Contract are met.

NOTICE TO PROCEED - A written notice to the CONTRACTOR to begin the Work and establishing the date on which the Contract Time begins.

PAYMENT BOND - The security furnished by the CONTRACTOR and his Surety to guarantee payment of the debts covered by the bond.

PERFORMANCE BOND - The security furnished by the CONTRACTOR and his Surety to guarantee performance and completion of the Work in accordance with the Contract.

PROJECT - The total construction, of which the Work performed under the Contract Documents is the whole or a part, where more than one CONTRACTOR may perform such total construction.

PROJECT MANAGER - The authorized representative of the Contracting Officer who is responsible for administration of the Contract.

PROPOSAL - The offer of a Bidder, on the prescribed forms, to perform the Work at the prices quoted.

PROPOSAL GUARANTY - The security furnished with a Proposal to guarantee that the bidder will enter into a Contract if the DEPARTMENT accepts his Proposal.

REGULATORY REQUIREMENTS - Laws, rules, regulations, ordinances, codes and/or orders.

SCHEDULE OF VALUES - The DEPARTMENT's document, submitted by the CONTRACTOR and reviewed by the Contracting Officer, which shall serve as the basis for computing payment and for establishing the value of separate items of Work that comprise the Contract Price.

SHOP DRAWINGS - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the CONTRACTOR to illustrate material, equipment, fabrication, or erection for some portion of the Work.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative and procedural details applicable thereto.

SUBCONTRACTOR - An individual, firm, or corporation to whom the CONTRACTOR or any other Subcontractor sublets part of the Contract.

SUBSTANTIAL COMPLETION - Although not fully completed, the Work (or a specified part thereof) has progressed to the point where, in the opinion of the Contracting Officer, as evidence by the DEPARTMENT's written notice, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended. The terms "Substantially Complete" and "Substantially Completed" as applied to any Work refer to Substantial Completion thereof.

SUPPLEMENTAL AGREEMENT - A written agreement between the CONTRACTOR and the DEPARTMENT covering work that is not within the general scope of the Contract.

Supplementary Conditions - The part of the Contract Documents that amends or supplements these General Conditions.

Supplier - A manufacturer, fabricator, distributor, material man or vendor of materials or equipment.

Surety - The corporation, partnership, or individual, other than the CONTRACTOR, executing a bond furnished by the CONTRACTOR.

UNIT PRICE WORK - Work to be paid for on the basis of unit prices.

USING AGENCY - The entity that will occupy or use the completed Project.

WORK - Work is the act of, and the result of, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as

required by the Contract Documents. Such Work, however incremental, will culminate in the entire completed Project, or the various separately identifiable parts thereof.

ARTICLE 2 - AUTHORITIES AND LIMITATIONS

2.1 AUTHORITIES AND LIMITATIONS

- 2.1.1 The Contracting Officer alone, shall have the power to bind the DEPARTMENT and to exercise the rights, responsibilities, authorities and functions vested in the Contracting Officer by the Contract Documents, except that the Contracting Officer shall have the right to designate in writing authorized representatives to act for him. Wherever any provision of the Contract Documents specifies an individual or organization, whether governmental or private, to perform any act on behalf of or in the interest of the DEPARTMENT that individual or organization shall be deemed to be the Contracting Officer's authorized representative under this Contract but only to the extent so specified. The Contracting Officer may, at any time during the performance of this Contract, vest in any such authorized representatives additional power and authority to act for the Contracting Officer or designate additional representatives, specifying the extent of their authority to act for the Contracting Officer; a copy of each document vesting additional authority in or removing that authority from an authorized representative or designating an additional authorized representative shall be furnished to the CONTRACTOR. The head of the Contracting Agency reserves the right to appoint a new Contracting Officer without affecting any of the CONTRACTOR's obligations to the DEPARTMENT under this Contract.
- 2.1.2 The CONTRACTOR shall perform the Work in accordance with any written order (including but not limited to instruction, direction, interpretation or determination) issued by an authorized representative in accordance with the authorized representative's authority to act for the Contracting Officer. The CONTRACTOR assumes all the risk and consequences of performing the Work in accordance with any order (including but not limited to instruction, direction, interpretation or determination) of anyone not authorized to issue such order, and of any order not in writing.
- 2.1.3 Should the Contracting Officer or his authorized representative designate Consultant(s) to act for the DEPARTMENT as provided for in Paragraph 2.1.1, the performance or nonperformance of the Consultant under such authority to act, shall not give rise to any contractual obligation or duty of the Consultant to the CONTRACTOR, any Subcontractor, any Supplier, or any other organization performing any of the Work or any Surety representing them.
- 2.1.4 The term "Contracting Officer" when used in the text of these General Conditions or other Contract Documents following this section shall also mean any duly authorized representative of the Contracting Officer when authorized in accordance with Paragraph 2.1.1.

2.2 EVALUATIONS BY CONTRACTING OFFICER:

- 2.2.1 The Contracting Officer will decide all questions which may arise as to:

- a. Quality and acceptability of materials furnished;
- b. Quality and acceptability of Work performed;
- c. Compliance with the schedule of progress;
- d. Interpretation of Contract Documents;
- e. Acceptable fulfillment of the Contract on the part of the CONTRACTOR.

2.2.2 In order to avoid cumbersome terms and confusing repetition of expressions in the Contract Documents the terms "as ordered", "as directed", "as required", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used it shall be understood as if the expression were followed by the words "the Contracting Officer".

When such terms are used to describe a requirement, direction, review or judgment of the Contracting Officer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise).

2.2.3 The use of any such term or adjective shall not be effective to assign to the DEPARTMENT any duty of authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

2.3 MEANS & METHODS:

The means, methods, techniques, sequences or procedures of construction, or safety precautions and the program incident thereto, and the failure to perform or furnish the Work in accordance with the Contract Documents are the sole responsibility of the CONTRACTOR.

2.4 VISITS TO SITE/PLACE OF BUSINESS:

The Contracting Officer will make visits to the site and approved remote storage sites at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Contracting Officer may, at reasonable times, inspect that part of the plant or place of business of the CONTRACTOR or Subcontractor that is related to the performance of the Contract. Such observations or the lack of such observations shall in no way relieve the CONTRACTOR from his duty to perform the Work in accordance with the Contract Documents.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 INCOMPLETE CONTRACT DOCUMENTS:

The submission of a bid by the Bidder is considered a representation that the Bidder examined the Contract Documents to make certain that all sheets and pages were provided and that the Bidder is

satisfied as to the conditions to be encountered in performing the Work. The DEPARTMENT expressly denies any responsibility or liability for a bid submitted on the basis of an incomplete set of Contract Documents.

3.2 COPIES OF CONTRACT DOCUMENTS:

The DEPARTMENT shall furnish to the CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished, upon request, at the cost of reproduction.

3.3 SCOPE OF WORK:

The Contract Documents comprise the entire Contract between the DEPARTMENT and the CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the Regulatory Requirements of the place of the Project.

It is specifically agreed between the parties executing this Contract that it is not intended by any of the provisions of the Contract to create in the public or any member thereof a third party benefit, or to authorize anyone not a party to this Contract to maintain a suit pursuant to the terms or provisions of the Contract.

3.4 INTENT OF CONTRACT DOCUMENTS:

- 3.4.1 It is the intent of the Contract Documents to describe a functionally complete Project to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied, without any adjustment in Contract Price or Contract Time, whether or not specifically called for.
- 3.4.2 Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Regulatory Requirements of any governmental authority, whether such reference be specific or by implication, shall mean the edition stated in the Contract Documents or if not stated the latest standard specification, manual, code or Regulatory Requirements in effect at the time of Advertisement for the Project (or, on the Effective Date of the Contract if there was no Advertisement). However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the DEPARTMENT and the CONTRACTOR, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the DEPARTMENT or any of the DEPARTMENT's Consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

3.5 DISCREPANCY IN CONTRACT DOCUMENTS:

3.5.1 Before undertaking the Work, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures, and dimensions shown thereon and all applicable field measurements. Work in the area by the CONTRACTOR shall imply verification of figures, dimensions and field measurements. If, during the above study or during the performance of the Work, the CONTRACTOR finds a conflict, error, discrepancy or omission in the Contract Documents, or a discrepancy between the Contract Documents and any standard specification, manual, code, or Regulatory Requirement which affects the Work, the CONTRACTOR shall promptly report such discrepancy in writing to the Contracting Officer. The CONTRACTOR shall obtain a written interpretation or clarification from the Contracting Officer before proceeding with any Work affected thereby. Any adjustment made by the CONTRACTOR without this determination shall be at his own risk and expense. However, the CONTRACTOR shall not be liable to the DEPARTMENT for failure to report any conflict, error or discrepancy in the Contract Documents unless the CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

3.5.2 Discrepancy - Order of Precedence:

When conflicts errors, or discrepancies within the Contract Documents exist, the order of precedence from most governing to least governing will be as follows:

- Contents of Addenda
- Supplementary Conditions
- General Conditions
- General Requirements
- Technical Specifications
- Drawings
- Recorded dimensions will govern over scaled dimensions
- Large scale details over small-scale details
- Schedules over plans
- Architectural drawings over structural drawings Structural drawings over mechanical and electrical drawings

3.6 CLARIFICATIONS AND INTERPRETATIONS:

The Contracting Officer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as the Contracting Officer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

3.7 REUSE OF DOCUMENTS:

Neither the CONTRACTOR nor any Subcontractor, or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with the

DEPARTMENT shall have or acquire any title to or ownership rights in any of the Contract Documents (or copies thereof) prepared by or for the DEPARTMENT and they shall not reuse any of the Contract Documents on extensions of the Project or any other project without written consent of the Contracting Officer.

Contract Documents prepared by the CONTRACTOR in connection with the Work shall become the property of the DEPARTMENT.

ARTICLE 4 - LANDS AND PHYSICAL CONDITIONS

4.1 AVAILABILITY OF LANDS:

The DEPARTMENT shall furnish as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for use of the CONTRACTOR in connection with the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the DEPARTMENT, unless otherwise provided in the Contract Documents. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 VISIT TO SITE:

The submission of a bid by the CONTRACTOR is considered a representation that the CONTRACTOR has visited and carefully examined the site and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the Contract Documents.

4.3 EXPLORATIONS AND REPORTS:

Reference is made to the Supplementary Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by the DEPARTMENT in preparation of the Contract Documents. The CONTRACTOR may for his purposes rely upon the accuracy of the factual data contained in such reports, but not upon interpretations or opinions drawn from such factual data contained therein or for the completeness or sufficiency thereof. Except as indicated in the immediately preceding sentence and in paragraphs 4.4 and 9.9, CONTRACTOR shall have full responsibility with respect to surface and subsurface conditions at the site.

4.4 UTILITIES:

The horizontal and vertical locations of known underground utilities as shown or indicated by the Contract Documents are approximate and are based on information and data furnished to the DEPARTMENT by the owners of such underground utilities.

4.4.1 NOT USED

4.4.2 The CONTRACTOR shall have full responsibility for:

- a. Reviewing and checking all information and data concerning utilities.
- b. Locating all underground utilities shown or indicated in the Contract Documents which are affected by the Work.
- c. Coordination of the Work with the owners of all utilities during construction.
- d. Safety and protection of all utilities as provided in paragraph 6.17.
- e. Repair of any damage to utilities resulting from the Work in accordance with 4.4.4 and 4.5.

4.4.3 If Work is to be performed by any utility owner, the CONTRACTOR shall cooperate with such owners to facilitate the Work.

4.4.4 In the event of interruption to any utility service as a result of accidental breakage or as result of being exposed or unsupported, the CONTRACTOR shall promptly notify the utility owner and the Contracting Officer. If service is interrupted, repair work shall be continuous until the service is restored. No Work shall be undertaken around fire hydrants until the local fire authority has approved provisions for continued service.

4.5 DAMAGED UTILITIES:

When the CONTRACTOR damages utilities, the utility owner shall have the choice of repairing the utility or having the CONTRACTOR repair the utility. In the following circumstances, the CONTRACTOR shall reimburse the utility owner for repair costs or provide at no cost to the utility owner or the DEPARTMENT, all materials, equipment and labor necessary to complete repair of the damage:

- a. When the utility is shown or indicated in the Contract Documents.
- b. When the utility owner has located the utility.
- c. When no locate was requested by the CONTRACTOR for utilities shown or indicated in the Contract Documents.
- d. All visible utilities.
- e. When the CONTRACTOR could have, otherwise, reasonably been expected to be aware of such utility.

4.6 UTILITIES NOT SHOWN OR INDICATED:

If, while directly performing the Work, an underground utility is uncovered or revealed at the site which was not shown or indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.19) identify the owner of such underground utility and give written notice thereof to that owner and to the Contracting Officer. The Contracting Officer will promptly review the underground utility to determine the extent to which the Contract Documents and the

Work should be modified to reflect the impacts of the discovered utility. The Contract Documents will be amended or supplemented in accordance with paragraph 9.2 and to the extent necessary through the issuance of a change document by the Contracting Officer. During such time, the CONTRACTOR shall be responsible for the safety and protection of such underground utility as provided in paragraph 6.17. The CONTRACTOR may be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are directly attributable to the existence of any underground utility that was not shown or indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of.

4.7 SURVEY CONTROL:

The DEPARTMENT will identify sufficient horizontal and vertical control data to enable the CONTRACTOR to survey and layout the Work. All survey work shall be performed under the direct supervision of a registered land surveyor when required by paragraph 7.8. Copies of all survey notes will be provided the DEPARTMENT on a weekly basis with variations between the Contract Documents and actual field conditions identified. Survey notes are to be in a format acceptable to the DEPARTMENT.

ARTICLE 5 - BONDS, INSURANCE, AND INDEMNIFICATION

5.1 DELIVERY OF BONDS:

When the CONTRACTOR delivers the executed Contract to the Contracting Officer, the CONTRACTOR shall also deliver to the Contracting Officer such bonds as the CONTRACTOR may be required to furnish in accordance with paragraph 5.2.

5.2 BONDS:

The CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount as shown on the Contract as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These bonds shall remain in effect for one year after the date of Final Acceptance and until all obligations under this Contract, except special guarantees as per 12.7, have been met. All bonds shall be furnished on forms provided by the DEPARTMENT (or copies thereof) and shall be executed by such Sureties as are authorized to do business in the State of Alaska. The Contracting Officer may at his option copy the Surety with notice of any potential default or liability.

The Contracting Officer shall determine the adequacy of bonds that are provided by individual Surety at the option of the CONTRACTOR. Any costs incurred by the CONTRACTOR or individual Surety shall be borne by the CONTRACTOR. Where individual Sureties are used, two individual Sureties must each provide the State of Alaska with security equal to the amount of each bond by one, or a combination of, the following methods:

- a. Escrow account in the name of the DEPARTMENT for the duration of the Contract. Acceptable securities would include, but not necessarily be limited to: cash; treasury notes; bearer instruments having a specific value, or; money market certificates.
- b. First *Deed of Trust* with the DEPARTMENT designated as beneficiary, against the unencumbered value of the real property located within the State of Alaska, or an agreement by any second party, including deeds of trust, mortgage, lien or judgment interests to subrogate their interests to that of the State of Alaska in the real property which has been offered by the individual Surety.

A title insurance policy with the State of Alaska as a named beneficiary and a current (within 3 months) professional appraisal or assessed valuation will be required to ascertain the true value of the property offered as collateral. If buildings or other valued improvements are involved then fire and casualty insurance with the State of Alaska as a named insured and in limits and coverage acceptable to the Contracting Officer shall be required. The appraiser shall acknowledge in writing that the appraisal is prepared for the benefit of the DEPARTMENT and the DEPARTMENT has the right to rely on its contents. This *Deed* must be recorded in the recording office where the property is located.

With respect to clauses "a" and "b" above the *Deed of Trust* or other accepted security shall not be released until 12 months after Final Acceptance of the Project and settlement of all outstanding claims.

5.3 REPLACEMENT OF BOND AND SURETY:

If the Surety on any bond furnished in connection with this Contract is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.2, or otherwise becomes unacceptable to the DEPARTMENT, or if any such Surety fails to furnish reports as to his financial condition as requested by the DEPARTMENT, the CONTRACTOR shall within five days thereafter substitute another bond and Surety, both of which must be acceptable to DEPARTMENT.

A corporate Surety may replace an individual Surety during the course of the Contract period. If the Surety desires to dispose of the collateral posted, the DEPARTMENT may, at its option, accept substitute collateral.

5.4 INSURANCE REQUIREMENTS:

- 5.4.1 The CONTRACTOR shall provide evidence of insurance with a carrier or carriers satisfactory to the DEPARTMENT covering injury to persons and/or property suffered by the State of Alaska or a third party, as a result of operations that arise both out of and during the course of this Contract by the CONTRACTOR or by any Subcontractor. This coverage will also provide protection against injuries to all employees of the CONTRACTOR and the employees of any Subcontractor engaged in Work under this Contract. The delivery to the DEPARTMENT of a written 30-day notice is required

before cancellation of any coverage or reduction in any limits of liability. Insurance carriers shall have an acceptable financial rating.

5.4.2 The CONTRACTOR shall maintain in force at all times during the performance of Work under this agreement the following policies of insurance. Failure to maintain insurance may, at the option of the Contracting Officer, be deemed Defective Work and remedied in accordance with the Contract. Where specific limits and coverage are shown, it is understood that they shall be the minimum acceptable. The requirements of this paragraph shall not limit the CONTRACTOR's responsibility to indemnify under paragraph 5.5. Additional insurance requirements specific to this Contract are contained in the Supplementary Conditions, when applicable.

a. Workers' Compensation Insurance: The CONTRACTOR shall provide and maintain, for all employees of the CONTRACTOR engaged in Work under this Contract, Workers' Compensation Insurance as required by AS 23.30.045.

The CONTRACTOR shall be responsible for Workers' Compensation Insurance for any Subcontractor who provides services under this Contract, to include:

1. Employer's Liability Protection in the amount of \$100,000 per person/\$100,000 per occurrence;
2. If the CONTRACTOR directly utilizes labor outside of the State of Alaska in the prosecution of the Work, "Other States" endorsement shall be required as a Condition of the Contract.

b. Comprehensive or Commercial General Liability Insurance: Such insurance shall cover all operations by or on behalf of the CONTRACTOR and provide insurance for bodily injury and property damage liability including coverage for: premises and operations; products and completed operations; contractual liability insuring obligations assumed under paragraph 5.5, Indemnification; broad form property damage; and personal injury liability.

The minimum limits of liability shall be:

1. If the CONTRACTOR carries a *Comprehensive General Liability* policy, the limits of liability shall not be less than a Combined Single Limit for bodily injury, property damage and Personal Injury Liability of:
\$500,000 each occurrence
\$1,000,000 aggregate
2. If the CONTRACTOR carries a Commercial General Liability policy, the limits of liability shall not be less than:
\$500,000 each occurrence (Combined Single Limit for bodily injury and property damage)
\$500,000 for Personal Injury Liability
\$1,000,000 aggregate for Products-Completed Operations
\$1,000,000 general aggregate

The State of Alaska, DEPARTMENT OF ADMINISTRATION shall be named as an "Additional Insured" under all liability coverage listed above.

c. Automobile Liability Insurance:

Such insurance shall cover all owned, hired and non-owned vehicles and provide coverage not less than that of the Business Automobile Policy in limits not less than the following:

\$1,000,000 each occurrence

(Combined Single Limit for bodily injury and property damage.)

d. Builder's Risk Insurance:

Coverage shall be on an "All Risk" completed value basis including "quake and flood" and protect the interests of the DEPARTMENT, the CONTRACTOR and his Subcontractors.

Coverage shall include all materials, supplies and equipment that are intended for specific installation in the Project while such materials, supplies and equipment are located at the Project site, in transit from port of arrival to job site and while temporarily located away from the Project site.

In addition to providing the above coverage the CONTRACTOR shall ensure that Subcontractors provide insurance coverage as noted in clauses a., b., and c. of this subparagraph. Builder's Risk insurance will only be applicable to Subcontractors if so noted in the Supplementary Conditions.

e. Other Coverage:

As specified in the Supplementary Conditions.

- 5.4.3 Evidence, consisting of a certificate of insurance or the policy declaration page with required endorsements attached thereto - all of which have been executed by the insurer's representative and issued to the DEPARTMENT - shall denote the type, amount, class of operations covered, effective (and retroactive) dates, and dates of expiration of policies.

Evidence pertaining to Worker's Compensation, General Liability, or Automobile Liability is required for Award. All other coverage shall be evidenced prior to commencement of Work. Acceptance by the DEPARTMENT of deficient evidence does not constitute a waiver of Contract requirements as provided for by the Conditions of the Contract.

If a certificate is submitted as evidence it shall contain the following statement:

"This is to certify that the policies described herein comply with all aspects of the insurance requirements of (Contract Name and Number, and Project Number)."

5.5 INDEMNIFICATION:

The CONTRACTOR shall indemnify, save harmless, and defend the DEPARTMENT, its agents and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any

person or property arising directly or indirectly from the construction or the CONTRACTOR's performance of this Contract; however, this provision has no effect if, but only if, the sole proximate cause of the injury or damage is the DEPARTMENT's negligence.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 SUPERVISION OF WORK:

The CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. All Work under this Contract shall be performed in a skillful and workmanlike manner. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

6.2 SUPERINTENDENCE BY CONTRACTOR:

The CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent. The Contracting Officer shall be advised in writing of the superintendent's name, local address, and telephone number. This written advice is to be kept current until Final Acceptance by the DEPARTMENT. The superintendent will be the CONTRACTOR's representative at the site and shall have full authority to act and sign documents on behalf of the CONTRACTOR.

All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. The CONTRACTOR shall cooperate with the Contracting Officer in every way possible.

6.3 CHARACTER OF WORKERS:

The CONTRACTOR shall provide a sufficient number of competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The CONTRACTOR shall at all times maintain good discipline and order at the site. The Contracting Officer may, in writing, require the CONTRACTOR to remove from the Work any employee the Contracting Officer deems incompetent, careless, or otherwise detrimental to the progress of the Work, but the Contracting Officer shall have no duty to exercise this right.

6.4 CONTRACTOR TO FURNISH:

Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance testing, start-up and completion of the Work.

6.5 MATERIALS AND EQUIPMENT:

All materials and equipment shall be of specified quality and new, except as otherwise provided in the Contract Documents. If required by the Contracting Officer, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to the DEPARTMENT or any of the DEPARTMENT's Consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

6.6 ANTICIPATED SCHEDULES:

- 6.6.1 Within reasonable time prior to the preconstruction conference, the CONTRACTOR shall submit to the Contracting Officer for review an anticipated progress schedule indicating the starting and completion dates of the various stages of the Work.
- 6.6.2 Within fifteen days after the date of the Notice to Proceed, the CONTRACTOR shall submit to the Contracting Officer for review:

Anticipated schedule of Shop Drawing submissions; and

Anticipated Schedule of Values for all of the Work that will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work that will be confirmed in writing by the CONTRACTOR at the time of submission.

6.7 FINALIZING SCHEDULES:

Prior to processing the first Application for Payment the Contracting Officer and the CONTRACTOR will finalize schedules required by paragraph 6.6. The finalized progress schedule will be acceptable to the DEPARTMENT as providing information related to the orderly progression of the Work to completion within the Contract Time; but such acceptance will neither impose on the DEPARTMENT nor relieve the CONTRACTOR from full responsibility for the progress or scheduling of the Work. If accepted, the finalized schedule of Shop Drawing and other required submissions will be acknowledgment by the DEPARTMENT as providing a workable arrangement for processing the submissions. If accepted, the finalized Schedule of Values will be acknowledgment by the DEPARTMENT as an approximation of anticipated value of Work accomplished over the anticipated Contract Time. Receipt and acceptance of a schedule submitted by the CONTRACTOR shall not be construed to assign responsibility for performance or contingencies to the DEPARTMENT or relieve the CONTRACTOR of his responsibility to adjust his forces, equipment, and work schedules as may be necessary to insure completion of the Work

within prescribed Contract Time. Should the prosecution of the Work be discontinued for any reason, the CONTRACTOR shall notify the Contracting Officer at least 24 hours in advance of resuming operations.

6.8 ADJUSTING SCHEDULES:

Upon substantial changes to the schedule or upon request the CONTRACTOR shall submit to the Contracting Officer for acceptance (to the extent indicated in paragraph 6.7 and the General Requirements) adjustments in the schedules to reflect the actual present and anticipated progress of the Work.

6.9 SUBSTITUTES OR "OR-EQUAL" ITEMS:

- 6.9.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that substitution is limited or not permitted, the Contracting Officer may accept materials or equipment of other Suppliers only if sufficient information is submitted by the CONTRACTOR clearly demonstrating to the Contracting Officer that the material or equipment proposed is equivalent or equal in all aspects to that named. The procedure for review by the Contracting Officer will include the following as supplemented in the General Requirements.
- 6.9.2 The CONTRACTING OFFICER will not accept requests for review of substitute items of material and equipment from anyone other than the CONTRACTOR.
- 6.9.3 If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the Contracting Officer for Approval thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as the specified. The application will state that the evaluation and Approval of the proposed substitute will not delay the CONTRACTOR's timely achievement of Substantial or Final Completion, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with the DEPARTMENT for Work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.
- 6.9.4 All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the DEPARTMENT in evaluating the proposed substitute. The DEPARTMENT may require the CONTRACTOR to furnish at the

CONTRACTOR's expense additional data about the proposed substitute. The Contracting Officer may reject any substitution request which the Contracting Officer determines is not in the best interest of the DEPARTMENT.

6.10 SUBSTITUTE MEANS AND METHODS:

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Contracting Officer, if the CONTRACTOR submits sufficient information to allow the Contracting Officer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by the Contracting Officer will be similar to that provided in paragraph 6.9 as applied by the Contracting Officer and as may be supplemented in the General Requirements.

6.11 EVALUATION OF SUBSTITUTION:

The Contracting Officer will be allowed a reasonable time within which to evaluate each proposed substitute. The Contracting Officer will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without the Contracting Officer's prior written Approval which will be evidenced by either a Change Order or a Shop Drawing Approved in accordance with Sections 6.20 and 6.21. The Contracting Officer may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other Surety with respect to any substitute.

6.12 DIVIDING THE WORK:

The divisions and sections of the Specifications and the identifications of any Drawings shall not control the CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.13 SUBCONTRACTORS:

The CONTRACTOR may utilize the services of appropriately licensed Subcontractors on those parts of the Work which, under normal contracting practices, are performed by Subcontractors, in accordance with the following conditions:

- 6.13.1 The CONTRACTOR shall not award any Work to any Subcontractor without prior written Approval of the Contracting Officer. This Approval will not be given until the CONTRACTOR submits to the Contracting Officer a written statement concerning the proposed award to the Subcontractor which shall contain required Equal Employment Opportunity documents, evidence of insurance whose limits are acceptable to the CONTRACTOR, and an executed copy of the subcontract. All subcontracts submitted for Approval must contain provisions for payment for Work done by the

Subcontractor within 7 days of receipt of payment by the CONTRACTOR. No acceptance by the Contracting Officer of any such Subcontractor shall constitute a waiver of any right of the DEPARTMENT to reject Defective Work

- 6.13.2 The CONTRACTOR shall be fully responsible to the DEPARTMENT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions.
- 6.13.3 All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate written agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the DEPARTMENT and contains waiver provisions as required by paragraph 13.17 and termination provisions as required by Article 14.
- 6.13.4 Nothing in the Contract Documents shall create any contractual relationship between the DEPARTMENT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the DEPARTMENT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Regulatory Requirements. The DEPARTMENT will not undertake to settle any differences between or among the CONTRACTOR, Subcontractors, or Suppliers.
- 6.13.5 The CONTRACTOR and Subcontractors shall coordinate their work and cooperate with other trades so to facilitate general progress of Work. Each trade shall afford other trades every reasonable opportunity for installation of their work and storage of materials. If cooperative work of one trade must be altered due to lack of proper supervision, or failure to make proper provisions in time by another trade, the CONTRACTOR shall remedy such conditions with no change in Contract Price or Contract Time.
- 6.13.6 The CONTRACTOR shall include on his own payrolls any person or persons working on this Contract who are not covered by written subcontract, and shall ensure that all Subcontractors include on their payrolls all persons performing Work under the direction of the Subcontractor.

6.14 USE OF PREMISES:

The CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project limits and approved remote storage sites and lands and areas identified in and permitted by Regulatory Requirements, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any such owner make any claim against the DEPARTMENT

or occupant because of the performance of the Work, the CONTRACTOR shall hold the DEPARTMENT harmless.

6.15 STRUCTURAL LOADING:

The CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.16 RECORD DOCUMENTS:

The CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Directives, Change Orders, Supplemental Agreements, and written interpretations and clarifications (issued pursuant to paragraph 3.6) in good order and annotated to show all changes made during construction. These record documents together with all Approved samples and a counterpart of all Approved Shop Drawings will be available to the Contracting Officer for reference and copying. Upon completion of the Work, the annotated record documents, samples and Shop Drawings will be delivered to the Contracting Officer. Record documents shall accurately record variations in the Work which vary from requirements shown or indicated in the Contract Documents.

6.17 SAFETY AND PROTECTION:

The CONTRACTOR alone shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

- 6.17.1 All employees on the Work and other persons and organizations who may be affected thereby;
- 6.17.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- 6.17.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

The CONTRACTOR shall comply with all applicable Regulatory Requirements of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property caused, directly or

indirectly, in whole or in part, by the CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR with no change in Contract Price or Contract Time except as stated in 4.6, except damage or loss attributable to unforeseeable causes beyond the control of and without the fault or negligence of the CONTRACTOR, including but not restricted to acts of God, of the public enemy or governmental authorities. The CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until Final Acceptance (except as otherwise expressly provided in connection with Substantial Completion).

6.18 SAFETY REPRESENTATIVE:

The CONTRACTOR shall designate a responsible safety representative at the site. This person shall be the CONTRACTOR's superintendent unless otherwise designated in writing by the CONTRACTOR to the Contracting Officer.

6.19 EMERGENCIES:

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the DEPARTMENT, is obligated to act to prevent threatened damage, injury or loss. The CONTRACTOR shall give the Contracting Officer prompt written notice if the CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the DEPARTMENT determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a change will be authorized by one of the methods indicated in Paragraph 9.2, as determined appropriate by the Contracting Officer.

6.20 SHOP DRAWINGS AND SAMPLES:

6.20.1 After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, the CONTRACTOR shall submit to the Contracting Officer for review and Approval in accordance with the accepted schedule of Shop Drawing submissions the required number of all Shop Drawings, which will bear a stamp or specific written indication that the CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as the Contracting Officer may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable the Contracting Officer to review the information as required.

6.20.2 The CONTRACTOR shall also submit to the Contracting Officer for review and Approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that the CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with

respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

- 6.20.3 Before submission of each Shop Drawing or sample the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.
- 6.20.4 At the time of each submission the CONTRACTOR shall give the Contracting Officer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to the Contracting Officer for review and Approval of each such variation. All variations of the proposed Shop Drawing from that specified will be identified in the submission and available maintenance, repair and replacement service will be indicated. The submittal will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such variation, including costs of redesign and claims of other Contractors affected by the resulting change, all of which shall be considered by the DEPARTMENT in evaluating the proposed variation. If the variation may result in a change of Contract Time or Price, or Contract responsibility, and is not minor in nature; the CONTRACTOR must submit a written request for Change Order with the variation to notify the DEPARTMENT of his intent. The DEPARTMENT may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed variation. The Contracting Officer may reject any variation request which the Contracting Officer determines is not in the best interest of the DEPARTMENT.

6.21 SHOP DRAWING AND SAMPLE REVIEW:

- 6.21.1 The Contracting Officer will review with reasonable promptness Shop Drawings and samples, but the Contracting Officer's review will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate acceptance of the assembly in which the item functions. The CONTRACTOR shall make corrections required by the Contracting Officer and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review. The CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by the Contracting Officer on previous submittals.
- 6.21.2 The Contracting Officer's review of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless the CONTRACTOR has in writing advised the Contracting Officer of each such variation at the time of submission as required by paragraph 6.20.4. The Contracting Officer if he so determines, may give

written Approval of each such variation by Change Order, except that, if the variation is minor and no Change Order has been requested a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample review comments shall suffice as a modification. Approval by the Contracting Officer will not relieve the CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.20.3.

6.21.3 The DEPARTMENT shall be responsible for all DEPARTMENT review costs resulting from the initial submission and for the re-submittal. The CONTRACTOR shall, at the discretion of the Contracting Agency, pay all review costs incurred by the DEPARTMENT as a result of any additional re-submittals.

6.21.4 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to the Contracting Officer's review and Approval of the pertinent submission will be the sole expense and responsibility of the CONTRACTOR.

6.22 MAINTENANCE DURING CONSTRUCTION:

The CONTRACTOR shall maintain the Work during construction and until Substantial Completion, at which time the responsibility for maintenance shall be established in accordance with paragraph 13.10.

6.23 CONTINUING THE WORK:

The CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the DEPARTMENT. No Work shall be delayed or postponed pending resolution of any disputes, disagreements, or claims except as the CONTRACTOR and the Contracting Officer may otherwise agree in writing.

6.24 CONSENT TO ASSIGNMENT:

The CONTRACTOR shall obtain the prior written consent of the Contracting Officer to any proposed assignment of any interest in, or part of this Contract. The consent to any assignment or transfer shall not operate to relieve the CONTRACTOR or his Sureties of any of his or its obligations under this Contract or the Performance Bonds. Nothing herein contained shall be construed to hinder, prevent, or affect an assignment of monies due, or to become due hereunder, made for the benefit of the CONTRACTOR's creditors pursuant to law.

6.25 USE OF EXPLOSIVES:

6.25.1 When the use of explosives is necessary for the prosecution of the Work, the CONTRACTOR shall exercise the utmost care not to endanger life or property, including new Work and shall follow all

Regulatory Requirements applicable to the use of explosives. The CONTRACTOR shall be responsible for all damage resulting from the use of explosives.

- 6.25.2 All explosives shall be stored in a secure manner in compliance with all Regulatory Requirements, and all such storage places shall be clearly marked. Where no Regulatory Requirements apply, safe storage shall be provided not closer than 1,000 feet from any building, camping area, or place of human occupancy.
- 6.25.3 The CONTRACTOR shall notify each public utility owner having structures in proximity to the site of his intention to use explosives. Such notice shall be given sufficiently in advance to enable utility owners to take such steps as they may deem necessary to protect their property from injury. However, the CONTRACTOR shall be responsible for all damage resulting from the use of the explosives, whether or not, utility owners act to protect their property.

6.26 CONTRACTOR'S RECORDS:

- 6.26.1 Records of the CONTRACTOR and Subcontractors relating to personnel, payrolls, invoices of materials, and any and all other data relevant to the performance of this Contract, must be kept on a generally recognized accounting system. Such records must be available during normal work hours to the Contracting Officer for purposes of investigation to ascertain compliance with Regulatory Requirements and provisions of the Contract Documents.
- 6.26.2 Payroll records must contain the name and address of each employee, his correct classification, rate of pay, daily and weekly number of hours of work, deductions made, and actual wages paid. The CONTRACTOR and Subcontractors shall make employment records available for inspection by the Contracting Officer and representatives of the U.S. and/or State Department of Labor and will permit such representatives to interview employees during working hours on the Project.
- 6.26.3 Records of all communications between the DEPARTMENT and the CONTRACTOR and other parties, where such communications affected performance of this Contract, must be kept by the CONTRACTOR and maintained for a period of three years from Final Acceptance. The DEPARTMENT or its assigned representative may perform an audit of these records during normal work hours after written notice to the CONTRACTOR.

ARTICLE 7 - LAWS AND REGULATIONS

7.1 LAWS TO BE OBSERVED

The CONTRACTOR shall keep fully informed of all federal and state Regulatory Requirements and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the Work, or which in any way affect the conduct of the Work. The CONTRACTOR shall at all times observe and comply with all such Regulatory Requirements, orders and decrees; and shall protect and indemnify the DEPARTMENT and its

representatives against claim or liability arising from or based on the violation of any such Regulatory Requirement, order, or decree whether by the CONTRACTOR, Subcontractor, or any employee of either. Except where otherwise expressly required by applicable Regulatory Requirements, the DEPARTMENT shall not be responsible for monitoring CONTRACTOR's compliance with any Regulatory Requirements.

7.2 PERMITS, LICENSES, AND TAXES

- 7.2.1 The CONTRACTOR shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the Work. As a condition of performance of this Contract, the CONTRACTOR shall pay all federal, state and local taxes incurred by the CONTRACTOR, in the performance of this Contract. Proof of payment of these taxes is a condition precedent to final payment by the DEPARTMENT under this Contract.
- 7.2.2 The CONTRACTOR's certification that taxes have been paid (as contained in the *Release of Contract*) will be verified with the Department of Revenue and Department of Labor, prior to final payment.
- 7.2.3 If any federal, state or local tax is imposed, charged, or repealed after the date of bid opening and is made applicable to and paid by the CONTRACTOR on the articles or supplies herein contracted for, then the Contract shall be increased or decreased accordingly by a Change Order.

7.3 PATENTED DEVICES, MATERIALS AND PROCESSES

If the CONTRACTOR employs any design, device, material, or process covered by letters of patent, trademark or copyright, the CONTRACTOR shall provide for such use by suitable legal agreement with the patentee or owner. The CONTRACTOR and the Surety shall indemnify and save harmless the DEPARTMENT, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the DEPARTMENT for any costs, expenses, and damages which it may be obliged to pay by reason of any infringement, at any time during the prosecution or after the completion of the Work.

7.4 COMPLIANCE OF SPECIFICATIONS AND DRAWINGS:

If the CONTRACTOR observes that the Specifications and Drawings supplied by the DEPARTMENT are at variance with any Regulatory Requirements, CONTRACTOR shall give the Contracting Officer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 9.2. as determined appropriate by the Contracting Officer. If the CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Regulatory Requirements, and without such notice to the Contracting Officer, the CONTRACTOR shall bear all costs arising therefrom; however, it shall not be the

CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings supplied by the DEPARTMENT are in accordance with such Regulatory Requirements.

7.5 ACCIDENT PREVENTION:

The CONTRACTOR shall comply with AS 18.60.075 and all pertinent provisions of the Construction Code Occupational Safety and Health Standards issued by the Alaska Department of Labor.

7.6 SANITARY PROVISIONS:

The CONTRACTOR shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees and DEPARTMENT representatives as may be necessary to comply with the requirements of the State and local Boards of Health, or of other bodies or tribunals having jurisdiction.

7.7 BUSINESS REGISTRATION:

Comply with AS 08.18.011, as follows: "it is unlawful for a person to submit a bid or work as a contractor until he has been issued a certificate of registration by the Department of Commerce. A partnership or joint venture shall be considered registered if one of the general partners or venturers whose name appears in the name under which the partnership or venture does business is registered."

7.8 PROFESSIONAL REGISTRATION AND CERTIFICATION:

All craft trades, architects, engineers and land surveyors, electrical administrators, and explosive handlers employed under the Contract shall specifically comply with applicable provisions of AS 08.18, 08.48, 08.40, and 08.52. Provide copies of individual licenses within seven days following a request from the Contracting Officer.

7.9 LOCAL BUILDING CODES:

The CONTRACTOR shall comply with AS 35.10.025 that requires construction in accordance with applicable local building codes and the obtaining of required permits.

7.10 AIR QUALITY CONTROL:

The CONTRACTOR shall comply with all applicable provisions of AS 46.03.04 as pertains to Air Pollution Control.

7.11 ARCHAEOLOGICAL OR PALEONTOLOGICAL DISCOVERIES:

When the CONTRACTOR's operation encounters prehistoric artifacts, burials, remains of dwelling sites, or paleontological remains, such as shell heaps, land or sea mammal bones or tusks, the CONTRACTOR shall cease operations immediately and notify the Contracting Officer. No artifacts or specimens shall be further disturbed or removed from the ground and no further operations shall be performed at the site until so directed. Should the Contracting Officer order suspension of the CONTRACTOR's operations in order to protect an archaeological or historical finding, or order the CONTRACTOR to perform extra Work, such shall be covered by an appropriate Contract change document.

7.12 APPLICABLE ALASKA PREFERENCES:

7.12.1 In determining the low bidder for State funded projects, a 5% bid preference is given to "Alaska bidders", as required under AS 36.30.170. "Alaska bidder" means a person who:

- (1) holds a current Alaska business license;
- (2) submits a bid for goods, services, or construction under the name as appearing on the person's current Alaska business license
- (3) has maintained a place of business within the state staffed by the bidder or an employee of the bidder for a period of six months immediately preceding the date of the bid;
- (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship, and the proprietor is a resident of the state or is a partnership, and all partners are residents of the state; and
- (5) if a joint venture, is composed entirely of venturers that qualify under (1) through (4), above.

7.12.2 In determining the low bidder for State funded projects, an "Alaska products" preference has been given as required under AS 36.30.326 - 36.30.332, when the bid documents designate the use of Alaska products. If the successful Bidder/CONTRACTOR proposes to use an Alaska product and does not do so, a penalty will be assessed against the successful Bidder/CONTRACTOR in an amount equal to the product preference percentage granted to the successful Bidder/CONTRACTOR plus one percent multiplied by the total declared value of the Alaska products proposed but not used.

7.12.3 Pursuant to AS 36.15.050 and AS 36.30.322, "agricultural/wood" products harvested in Alaska shall be used in State funded projects whenever they are priced no more than seven percent above agricultural/wood products harvested outside the state and are of a like quality as compared with agricultural/wood products harvested outside the state, when such products are not utilized, the CONTRACTOR shall document the efforts he made towards obtaining agricultural/wood products harvested in Alaska and include in this documentation a written statement that he contacted the manufacturers and suppliers identified on the Department of Commerce and Economic Development's list of suppliers of Alaska forest products concerning the availability of agricultural/wood products harvested in Alaska and, if available, the product prices. The

CONTRACTOR's use of agricultural/wood products that fail to meet the requirements of this section shall be subject to the provisions of paragraphs 12.6 through 12.9 relating to Defective Work.

7.12.4 The CONTRACTOR shall maintain records, in a format acceptable to the Contracting Officer, which establish the type and extent of "agricultural/wood" and "Alaska" products utilized. All record keeping and documentation associated with the requirements 7.12.2 and 7.12.3 of this paragraph, must be provided to the DEPARTMENT upon written request or as otherwise provided within the Contract Documents.

7.13 PREFERENTIAL EMPLOYMENT:

The CONTRACTOR shall comply with all applicable and valid laws and regulations regarding the hiring of Alaska residents now in effect or that might subsequently take effect during the term of this Contract. In order to ensure that CONTRACTOR's Subcontractors will comply with all applicable laws and regulations regarding the hiring of Alaska residents now in effect or that might subsequently take effect, the CONTRACTOR shall include in its contracts with Subcontractors under this Contract language that is substantially the same as the first sentence of this provision.

7.14 WAGES AND HOURS OF LABOR:

7.14.1 One certified copy of all payrolls shall be submitted weekly to the State Department of Labor and, upon request, to the Contracting Officer to assure to assure compliance with AS 36.05.040, *Filing Schedule of Employees Wages Paid and Other Information*. The CONTRACTOR shall be responsible for the submission of certified copies of payrolls of all Subcontractors. The certification shall affirm that the payrolls are current and complete, that the wage rates contained therein are not less than the applicable rates referenced in these Contract Documents, and that the classification set forth for each laborer or mechanic conforms with the Work he performed. The CONTRACTOR and his Subcontractors shall attend all hearings and conferences and produce such books, papers, and documents all as requested by the Department of Labor. Should federal funds be involved, the appropriate federal agency shall also receive a copy of the CONTRACTOR'S certified payrolls.

7.14.2 The following labor provisions shall also apply to this Contract:

- a. The CONTRACTOR and his Subcontractors shall pay all employees unconditionally and not less than once a week;
- b. wages may not be less than those stated under AS 36.05.010, regardless of the contractual relationship between the CONTRACTOR or Subcontractors and laborers, mechanics, or field surveyors;
- c. the scale of wages to be paid shall be posted by the CONTRACTOR in a prominent and easily accessible place at the site of the Work;

- d. the DEPARTMENT shall withhold so much of the accrued payments as is necessary to pay to laborers, mechanics, or field surveyors employed by the CONTRACTOR or Subcontractors the difference between
 1. the rates of wages required by the Contract to be paid laborers, mechanics, or field surveyors on the Work, and
 2. the rates of wages in fact received by laborers, mechanics or field surveyors.

7.15 OVERTIME WORK HOURS AND COMPENSATION:

Pursuant to 40 U.S.C. 327-330 and AS 23.10.060 -.110, the CONTRACTOR shall not require nor permit any laborer or mechanic in any workweek in which he is employed on any Work under this Contract to work in excess of eight hours in any Calendar Day or in excess of forty hours in such workweek on Work subject to the provisions of the *Contract Work Hours and Safety Standards Act* unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all such hours worked in excess of eight hours in any Calendar Day or in excess of forty hours in such workweek whichever is the greater number of overtime hours. In the event of any violation of this provision, the CONTRACTOR shall be liable to any affected employee for any amounts due and penalties and to the DEPARTMENT for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of this provision in the sum of \$10.00 for each Calendar Day on which such employee was required or permitted to be employed on such Work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by this paragraph.

7.16 COVENANTS AGAINST CONTINGENT FEES:

The CONTRACTOR warrants that no person or selling agent has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the CONTRACTOR for the purpose of securing business. For breach or violation of this warrant, the DEPARTMENT shall have the right to annul this Contract without liability or, in its discretion, to deduct price of consideration from the Contract or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

7.17 OFFICIALS NOT TO BENEFIT:

No member of or delegate to the U.S. Congress, the Alaska State Legislature or other state official shall be admitted to any share or part of this Contract, nor to any benefit that may arise there from. However, this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

7.18 PERSONAL LIABILITY OF PUBLIC OFFICIALS:

In carrying out any of the provisions thereof, or in exercising any power or authority granted to the Contracting Officer by the Contract, there will be no liability upon the Contracting Officer nor upon state employees authorized as his representatives, either personally or as officials of the State of Alaska, it being always understood that in such matters they act as agents and representatives of the DEPARTMENT.

ARTICLE 8 - OTHER WORK

8.1 RELATED WORK AT SITE:

- 8.1.1 The DEPARTMENT reserves the right at any time to contract for and perform other or additional work on or near the Work covered by the Contract.
- 8.1.2 When separate contracts are let within the limits of the Project, the CONTRACTOR shall conduct his Work so as not to interfere with or hinder the work being performed by other contractors. The CONTRACTOR when working on the same Project with other contractors shall cooperate with such other contractors. The CONTRACTOR shall join his Work with that of the others in an acceptable manner and shall perform it in proper sequence to that of others.
- 8.1.3 If the fact that other such work is to be performed is identified or shown in the Contract Documents the CONTRACTOR shall assume all liability, financial or otherwise, in connection with this Contract and indemnify and save harmless the DEPARTMENT from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by the CONTRACTOR because of the presence and operations of other contractors.
- 8.1.4 If the fact that such other work is to be performed was not identified or shown in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work. If the CONTRACTOR believes that such performance will require an increase in Contract Price or Contract Time, the CONTRACTOR shall notify the Contracting Officer of such required increase within fifteen (15) calendar days following receipt of the Contracting Officer's notice. Should the Contracting Officer find such increase(s) to be justified, a Change Order will be executed.

8.2 ACCESS, CUTTING, AND PATCHING:

The CONTRACTOR shall afford each utility owner and any other contractor who is a party to such a direct contract with the DEPARTMENT (or the DEPARTMENT, if the DEPARTMENT is performing the additional work with the DEPARTMENT's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with the work of others. The CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to

make its several parts come together properly and integrate with such other work, the CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter such other work with the written consent of the Contracting Officer. The duties and responsibilities of the CONTRACTOR under this paragraph are for the benefit of other contractors to the extent that there are comparable provisions for the benefit of the CONTRACTOR in said direct contracts between the DEPARTMENT and other contractors.

8.3 DEFECTIVE WORK BY OTHERS:

If any part of the CONTRACTOR's Work depends for proper execution or results upon the work of any such other contractor, utility owner, or the DEPARTMENT, the CONTRACTOR shall inspect and promptly report to the Contracting Officer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR's failure to so report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work except for latent or nonapparent defects and deficiencies in the other work.

8.4 COORDINATION:

If the DEPARTMENT contracts with others for the performance of other work at the site, Contracting Officer will have authority and responsibility for coordination of the activities among the various prime contractors.

ARTICLE 9 – CHANGES

9.1 DEPARTMENT'S RIGHT TO CHANGE

Without invalidating the Contract and without notice to any Surety, the DEPARTMENT may, at any time or from time to time, order additions, deletions or revisions in the Work within the general scope of the Contract, including but not limited to changes:

- 9.1.1 In the Contract Documents;
- 9.1.2 In the method or manner of performance of the Work;
- 9.1.3 In State-furnished facilities, equipment, materials, services, or site;
- 9.1.4 Directing acceleration in the performance of the Work.

9.2 AUTHORIZATION OF CHANGES WITHIN THE GENERAL SCOPE.

One or more of following means shall be used to authorize additions, deletions, or revisions in the Work within the general scope of the Contract as specified in 9.1:

9.2.1 Directive (pursuant to paragraph 9.3)

9.2.2 A Change Order (pursuant to paragraph 9.4)

9.2.3 DEPARTMENT's acceptance of Shop Drawing variations from the Contract Documents as specifically identified by the CONTRACTOR as required by paragraph 6.20.4.

9.3 DIRECTIVE

9.3.1 The Contracting Officer shall provide written clarification or interpretation of the Contract Documents (pursuant to paragraph 3.6).

9.3.2 The Contracting Officer may authorize minor variations in the Work from the requirements of the Contract Documents that do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents.

9.3.3 The Contracting Officer may order the Contractor to correct Defective Work or methods that are not in conformance with the Contract Documents.

9.3.4 The Contracting Officer may direct the commencement or suspension of Work or emergency related Work (as provided in paragraph 6.19).

9.3.5 Upon the issuance of a Directive to the CONTRACTOR by the Contracting Officer, the CONTRACTOR shall proceed with the performance of the Work as prescribed by such Directive.

9.3.6 If the CONTRACTOR believes that the changes noted in a Directive may cause an increase in the Contract Price or an extension of Contract Time, the CONTRACTOR shall immediately provide written notice to the Contracting Officer depicting such increases before proceeding with the Directive, except in the case of an emergency. If the Contracting Officer finds the increase in Contract Price or the extension of Contract Time justified, a Change Order will be issued. If however, the Contracting Officer does not find that a Change Order is justified, the Contracting Officer may direct the CONTRACTOR to proceed with the Work. The CONTRACTOR shall cooperate with the Contracting Officer in keeping complete daily records of the cost of such Work. If a Change Order is ultimately determined to be justified, in the absence of agreed prices and unit prices, payment for such Work will be made on a "cost of the work basis" as provided in 10.4

9.4 CHANGE ORDER

For changes within the scope of the Work, a change in Contract Time, Contract Price, or responsibility may be made only by Change Order. Upon receipt of an executed Change Order, the CONTRACTOR shall promptly proceed with the Work involved that will be performed under the

applicable conditions of the Contract Documents except as otherwise specifically provided. Changes in Contract Price and Contract Time shall be made in accordance with Articles 10 and 11.

9.5 SHOP DRAWING VARIATIONS

Variations by shop drawings and a request for a Change Order submitted as per 6.20.4 shall only be eligible for consideration under 9.4 when the CONTRACTOR identifies in writing conditions that affect the price, time, or responsibility

9.6 CHANGES OUTSIDE THE GENERAL SCOPE; SUPPLEMENTAL AGREEMENT

When the Contracting Officer determines that a change is outside the general scope of the Contract, it must be authorized by a Supplemental Agreement signed by the appropriate representatives of the DEPARTMENT and the CONTRACTOR.

9.7 UNAUTHORIZED WORK:

The CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in this Article 9, except in the case of an emergency as provided in paragraph 6.19 and except in the case of uncovering Work as provided in paragraph 12.4.2.

9.8 NOTIFICATION OF SURETY:

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any bond to be given to a Surety, the giving of any such notice will be the CONTRACTOR's responsibility, and the amount of each applicable bond will be adjusted accordingly.

9.9 DIFFERING SITE CONDITIONS:

- 9.9.1 The CONTRACTOR shall promptly, and before such conditions are disturbed (except in an emergency as permitted by paragraph 6.19), notify the Contracting Officer in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in the Contract, and which could not have been discovered by a careful examination of the site, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract. The Contracting Officer shall promptly investigate the conditions, and if the Contracting Officer finds that such conditions do materially so differ and cause an increase or

decrease in the CONTRACTOR's cost of, or time required for, performance of this Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly.

- 9.9.2 Any claim for additional compensation by the CONTRACTOR under this clause shall be made in accordance with Article 15. In the event that the Contracting Officer and the CONTRACTOR are unable to reach an agreement concerning an alleged differing site condition, the CONTRACTOR will be required to keep an accurate and detailed record which will indicate the actual "cost of the work" done under the alleged differing site condition. Failure to keep such a record shall be a bar to any recovery by reason of such alleged differing site conditions. The Contracting Officer shall be given the opportunity to supervise and check the keeping of such records.

ARTICLE 10 - CONTRACT PRICE; COMPUTATION AND CHANGE

10.1 CONTRACT PRICE:

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to the CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the CONTRACTOR shall be at his expense without change in the Contract Price. The Contract Price may only be changed by a Change Order or Supplemental Agreement.

10.2 CLAIM FOR PRICE CHANGE:

Any claim for an increase or decrease in the Contract Price shall be submitted in accordance with the terms of Article 15, and shall not be allowed unless notice requirements of this Contract have been met.

10.3 CHANGE ORDER PRICE DETERMINATION:

The value of any Work covered by a Change Order for an increase or decrease in the Contract Price shall be determined in one of the following ways:

- 10.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of subparagraphs 10.9.1 through 10.9.3, inclusive).
- 10.3.2 By mutual acceptance of a lump sum price which includes overhead and profit.
- 10.3.3 When 10.3.1 and 10.3.2 are inapplicable, on the basis of the "cost of the work" (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 10.6).
- 10.3.4 Before a Change Order or Supplemental Agreement is approved; the CONTRACTOR shall submit cost or pricing data regarding the changed or extra Work. The CONTRACTOR shall certify that the data submitted is, to his best knowledge and belief, accurate, complete and current as of a mutually

determined specified date and that such data will continue to be accurate and complete during the performance of the changed or extra Work.

10.4 COST OF THE WORK:

The term "cost of the work" means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by the DEPARTMENT, such costs shall be in amount no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in subparagraph 10.5:

- 10.4.1 Payroll costs for employees in the direct employ of the CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by the DEPARTMENT and the CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by the DEPARTMENT.
- 10.4.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to the CONTRACTOR unless the DEPARTMENT deposits funds with the CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to the DEPARTMENT. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the DEPARTMENT, and the CONTRACTOR shall make provisions so that they may be obtained.
- 10.4.3 Payments made by the CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by the DEPARTMENT, CONTRACTOR shall obtain competitive quotes from Subcontractors or Suppliers acceptable to the CONTRACTOR and shall deliver such quotes to the DEPARTMENT who will then determine which quotes will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of "cost of the work" plus a fee, the Subcontractor's "cost of the work" shall be determined in the same manner as the CONTRACTOR's "cost of work" as described in paragraphs 10.4 through 10.5; and the Subcontractor's fee shall be established as provided for under subparagraph 10.6.2 clause b. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.
- 10.4.4 Costs of special consultants (including but not limited to engineers, architects, testing laboratories, and surveyors) employed for services necessary for the completion of the Work.

10.4.5 Supplemental costs including the following:

- a. The proportion of necessary transportation, travel and subsistence expenses of the CONTRACTOR's employees incurred in discharge of duties connected with the Work.
- b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of the CONTRACTOR.
- c. Rentals of all construction equipment and machinery and the parts thereof whether rented from the CONTRACTOR or others in accordance with rental agreements Approved by the DEPARTMENT and the costs of transportation, loading, unloading, installation, dismantling and removal thereof - all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.
- d. Sales, consumer, use or similar taxes related to the Work, and for which the CONTRACTOR is liable, imposed by Regulatory Requirements.
- e. Deposits lost for causes other than negligence of the CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by the CONTRACTOR in connection with the performance and furnishing of the Work provided they have resulted from causes other than the negligence of the CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and Approval of the DEPARTMENT. No such losses, damages and expenses shall be included in the "cost of the work" for the purpose of determining the CONTRACTOR's fee. If, however, any such loss or damage requires reconstruction and the CONTRACTOR is placed in charge thereof, the CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraphs 10.6.2.a and 10.6.2.b.
- g. The cost of utilities, fuel and sanitary facilities at the site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.
- i. Cost of premiums for additional bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by the DEPARTMENT in accordance with Article 5.

10.5 EXCLUDED COSTS:

The term "cost of the work" shall not include any of the following:

- 10.5.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agency, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 all of which are to be considered administrative costs covered by the CONTRACTOR's fee.
- 10.5.2 Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.
- 10.5.3 Any part of CONTRACTOR's capital expenses including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.
- 10.5.4 Cost of premiums for all bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.i above).
- 10.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- 10.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 CONTRACTOR'S FEE:

The CONTRACTOR's fee allowed to CONTRACTOR for overhead and profit shall be determined as follows.

- 10.6.1 A mutually acceptable fixed fee; or if none can be agreed upon.
- 10.6.2 A fee based on the following percentages of the various portions of the "cost of the work":

- a. For costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR's fee shall be twenty percent;
- b. For costs incurred under paragraph 10.4.3, the CONTRACTOR's fee shall be ten percent; and if a subcontract is on the basis of "cost of the work" plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors and multiple tiers thereof shall be fifteen percent;
- c. No fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;
- d. The amount of credit to be allowed by the CONTRACTOR to the DEPARTMENT for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR's fee by an amount equal to ten percent of the net decrease; and
- e. When both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.a through 10.6.2.d, inclusive.

10.7 COST BREAKDOWN:

Whenever the cost of any Work is to be determined pursuant to paragraphs 10.4 and 10.5, the CONTRACTOR will submit in a form acceptable to the DEPARTMENT an itemized cost breakdown together with supporting data.

10.8 CASH ALLOWANCES:

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to the Contracting Officer. CONTRACTOR agrees that:

- 10.8.1 The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and
- 10.8.2 CONTRACTOR's cost for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change Order will be issued to reflect actual amounts due the CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

10.9 UNIT PRICE WORK:

- 10.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Contract. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR will be made by the DEPARTMENT in accordance with paragraph 10.10.
- 10.9.2 Each unit price will be deemed to include an amount considered by the CONTRACTOR to be adequate to cover the CONTRACTOR's overhead and profit for each separately identified item. If the "Basis of Payment" clause in the Contract Documents relating to any unit price in the bid schedule requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Contract Documents.
- 10.9.3 Payment to the CONTRACTOR shall be made only for the actual quantities of Work performed and accepted or materials furnished, in conformance with the Contract Documents. When the accepted quantities of Work or materials vary from the quantities stated in the bid schedule, or change documents, the CONTRACTOR shall accept as payment in full, payment at the stated unit prices for the accepted quantities of Work and materials furnished, completed and accepted; except as provided below:
- a. When the quantity of Work to be done or material to be furnished under any item, for which the total cost of the item exceeds 10% of the total Contract Price, is increased by more than 25 percent of the quantity stated in the bid schedule, or change documents, either party to the Contract, upon demand, shall be entitled to an equitable unit price adjustment on that portion of the Work above 125 percent of the quantity stated in the bid schedule.
 - b. When the quantity of Work to be done or material to be furnished under any major item, for which the total cost of the item exceeds 10% of the total Contract Price, is decreased by more than 25 percent of the quantity stated in the bid schedule, or change documents either party to the Contract, upon demand, shall be entitled to an equitable price adjustment for the quantity of Work performed or material furnished, limited to a total payment of not more than 75 percent of the amount originally bid for the item.

10.10 DETERMINATIONS FOR UNIT PRICES:

The Contracting Officer will determine the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR. The Contracting Officer will review with the CONTRACTOR preliminary determinations on such matters before finalizing the costs and quantities on the Schedule

of Values. The Contracting Officer's acknowledgment thereof will be final and binding on the CONTRACTOR, unless, within 10 days after the date of any such decisions, the CONTRACTOR delivers to the Contracting Officer written notice of intention to appeal from such a decision.

10.11 DISADVANTAGED AND WOMEN BUSINESS ENTERPRISES (DBE & WBE) PROGRAM:

The Contract Price shall be adjusted by such means as provided in the section entitled "Phase III - Determination of Liquidated Damages and Bonuses", DISADVANTAGED AND WOMEN BUSINESS ENTERPRISE (DBE & WBE) PROGRAM, Form 25A300.

ARTICLE 11 - CONTRACT TIME; COMPUTATION AND CHANGE

11.1 COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED:

The Contract Time will commence to run on the day indicated in the Notice to Proceed.

11.2 STARTING THE WORK:

No Work on Contract items shall be performed before the effective date of the Notice to Proceed. The CONTRACTOR shall notify the Contracting Officer at least 24 hours in advance of the time actual construction operations will begin. The CONTRACTOR may request a limited Notice to Proceed after Award has been made, to permit him to order long lead materials which could cause delays in Project completion. However, granting is within the sole discretion of the Contracting Officer, and refusal or failure to grant a limited Notice to Proceed shall not be a basis for claiming for delay, extension of time, or alteration of price.

11.3 COMPUTATION OF CONTRACT TIME:

- 11.3.1 When the Contract Time is specified on a Calendar Day basis, all Work under the Contract shall be completed within the number of Calendar Days specified. The count of Contract Time begins on the day following receipt of the Notice to Proceed by the CONTRACTOR, if no starting day is stipulated therein.

Calendar Days shall continue to be counted against Contract Time until and including the date of Final Completion of the Work.

- 11.3.2 When the Contract completion time is specified as a fixed calendar date, it shall be the date of Final Completion.

11.4 TIME CHANGE:

The Contract Time may only be changed by a Change Order or Supplemental Agreement.

11.5 EXTENSION DUE TO DELAYS:

The right of the CONTRACTOR to proceed shall not be terminated nor the CONTRACTOR charged with liquidated or actual damages because of delays to the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including, but not restricted to the following: acts of God or of the public enemy, acts of the DEPARTMENT in its contractual capacity, acts of another contractor in the performance of a contract with the DEPARTMENT, floods, fires, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and delays of Subcontractors or Suppliers due to such causes. Any delay in receipt of materials on the site, caused by other than one of the specifically mentioned occurrences above, does not of itself justify a time extension, provided that the CONTRACTOR shall within twenty four (24) hours from the beginning of any such delay (unless the Contracting Officer shall grant a further period of the time prior to the date of final settlement of the Contract), notify the Contracting Officer in writing of the cause of delay. The Contracting Officer shall ascertain the facts and the extent of the delay and extend the time for completing the Work when the findings of fact justify such an extension.

11.6 ESSENCE OF CONTRACT:

All time limits stated in the Contract Documents are of the essence of the Contract.

11.7 REASONABLE COMPLETION TIME:

It is expressly understood and agreed by and between the CONTRACTOR and the DEPARTMENT that the date of beginning and the time for Final Completion of the Work described herein are reasonable times for the completion of the Work.

11.8 DELAY DAMAGES:

Whether or not the CONTRACTOR's right to proceed with the Work is terminated, he and his Sureties shall be liable for damages resulting from his refusal or failure to complete the Work within the specified time.

Liquidated and actual damages for delay shall be paid by the CONTRACTOR or his Surety to the DEPARTMENT in the amount as specified in the Supplementary Conditions for each Calendar Day the completion of the Work or any part thereof is delayed beyond the time required by the Contract, or any extension thereof. If a listing of incidents resulting from a delay and expected to give rise to actual or liquidated damages is not established by the Contract Documents, then the CONTRACTOR and his Surety shall be liable to the DEPARTMENT for any actual damages occasioned by such delay. The CONTRACTOR acknowledges that the liquidated damages established herein are not a penalty but rather constitute an estimate of damages that the DEPARTMENT will sustain by reason of delayed completion. These liquidated and actual damages

are intended as compensation for losses anticipated to arise, and include those items enumerated in the Supplementary Conditions.

These damages will continue to run both before and after termination in the event of default termination. These liquidated damages do not cover excess costs of completion or DEPARTMENT costs, fees, and charges related to re-procurement. If a default termination occurs, the CONTRACTOR or his Surety shall pay, all excess costs and expenses related to completion as provided by Article 14.2.5 in addition to these damages.

ARTICLE 12 - QUALITY ASSURANCE

12.1 WARRANTY AND GUARANTY:

The CONTRACTOR warrants and guarantees to the DEPARTMENT that all Work will be in accordance with the Contract Documents and will not be Defective. Prompt notice of all defects shall be given to the CONTRACTOR. All Defective Work, whether or not in place, may be rejected, corrected or accepted as provided for in this article.

12.2 ACCESS TO WORK:

The DEPARTMENT and the DEPARTMENT's representatives, testing agencies and governmental agencies with jurisdiction interests will have access to the Work at reasonable times for their observation, inspecting and testing. The CONTRACTOR shall provide proper and safe conditions for such access.

12.3 TESTS AND INSPECTIONS:

12.3.1 The CONTRACTOR shall give the Contracting Officer timely notice of readiness of the Work for all required inspections, tests or Approvals.

12.3.2 If Regulatory Requirements of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, the CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish the Contracting Officer the required certificates of inspection, testing or approval. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with DEPARTMENT's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for Approval prior to the CONTRACTOR's purchase thereof for incorporation in the Work.

The CONTRACTOR shall pay the cost of all inspections, tests and approvals that are required by the Contract Documents in addition to those above.. The DEPARTMENT may perform additional tests and inspections that it deems necessary to insure quality control. All such failed tests or inspections shall be at the CONTRACTOR's expense.

12.3.4 If any Work (including the work of others) that is to be inspected, tested or Approved is covered without written concurrence of the Contracting Officer, it must, if requested by the Contracting Officer, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR has given the Contracting Officer timely notice of CONTRACTOR's intention to cover the same and the Contracting Officer has not acted with reasonable promptness in response to such notice.

12.3.5 Neither observations nor inspections, tests or Approvals by the DEPARTMENT or others shall relieve the CONTRACTOR from the CONTRACTOR's obligations to perform the Work in accordance with the Contract Documents.

12.4 UNCOVERING WORK:

12.4.1 If any Work is covered contrary to the written request of the Contracting Officer, it must, if requested by the Contracting Officer, be uncovered for the Contracting Officer's observation and replaced at the CONTRACTOR's expense.

12.4.2 If the Contracting Officer considers it necessary or advisable that covered Work be observed inspected or tested, the CONTRACTOR, at the Contracting Officer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Contracting Officer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is Defective, the CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) and the DEPARTMENT shall be entitled to an appropriate decrease in the Contract Price. If, however, such Work is not found to be Defective, the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

12.5 DEPARTMENT MAY STOP THE WORK:

If the Work is Defective, or the CONTRACTOR fails to supply suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the Contracting Officer may order the CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Contracting Officer to stop the Work shall not give rise to any duty on the part of the Contracting Officer to exercise this right for the benefit of the CONTRACTOR or any other party.

12.6 CORRECTION OR REMOVAL OF DEFECTIVE WORK:

If required by the Contracting Officer, the CONTRACTOR shall promptly, as directed, either correct all Defective Work, whether or not fabricated, installed or completed, or, if the Work has been

rejected by the Contracting Officer, remove it from the site and replace it with Work which conforms to the requirements of the Contract Documents. The CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.7 TWO YEAR CORRECTION PERIOD:

If within two years after the date of Final Completion or such longer period of time as may be prescribed by Regulatory Requirements or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be Defective, the CONTRACTOR shall promptly, without cost to the DEPARTMENT and in accordance with the Contracting Officer's written instructions, either correct such Defective Work, or, if it has been rejected by the Contracting Officer, remove it from the site and replace it with conforming Work. If the CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the DEPARTMENT may have the Defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by the CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service for the benefit of the DEPARTMENT before Substantial Completion of all the Work, the correction period for that item may begin on an earlier date if so provided in the Specifications or by Change Order. Provisions of this paragraph are not intended to shorten the statute of limitations for bringing an action.

12.8 ACCEPTANCE OF DEFECTIVE WORK:

Instead of requiring correction or removal and replacement of Defective Work, the Contracting Officer may accept Defective Work; the CONTRACTOR shall bear all direct, indirect and consequential costs attributable to the Contracting Officer's evaluation of and determination to accept such Defective Work (costs to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the DEPARTMENT shall be entitled to an appropriate decrease in the Contract Price. If the DEPARTMENT has already made final payment to the CONTRACTOR, the CONTRACTOR or his Surety shall pay an appropriate amount to the DEPARTMENT.

12.9 DEPARTMENT MAY CORRECT DEFECTIVE WORK:

If the CONTRACTOR fails within a reasonable time after written notice from the Contracting Officer to proceed to correct Defective Work or to remove and replace rejected Work as required by the Contracting Officer in accordance with paragraph 12.6, or if the CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if the CONTRACTOR fails to comply with any other provision of the Contract Documents, the DEPARTMENT may, after 7 days'

written notice to the CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph the DEPARTMENT shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the Contracting Officer may exclude the CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend the CONTRACTOR's services related thereto, take possession of the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or approved remote storage sites or for which the DEPARTMENT has paid the CONTRACTOR but which are stored elsewhere. The CONTRACTOR shall allow the Contracting Officer and his authorized representatives such access to the site as may be necessary to enable the Contracting Officer to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of the DEPARTMENT in exercising such rights and remedies will be charged against the CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the DEPARTMENT shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the CONTRACTOR's Defective Work. The CONTRACTOR shall not be allowed an extension of time because of any delay in performance of the work attributable to the exercise, by the Contracting Officer, of the DEPARTMENT's rights and remedies hereunder.

ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 SCHEDULE OF VALUES:

The Schedule of Values established as provided in paragraph 6.6 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the Contracting Officer. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2 PRELIMINARY PAYMENTS:

Upon approval of the Schedule of Values the CONTRACTOR may be paid for direct costs substantiated by paid invoices and other prerequisite documents required by the General Requirements. Direct costs shall include the cost of bonds, insurance, approved materials stored on the site or at approved remote storage sites, deposits required by a Supplier prior to fabricating materials, and other approved direct mobilization costs substantiated as indicated above. These payments shall be included as a part of the total Contract Price as stated in the Contract.

13.3 APPLICATION FOR PROGRESS PAYMENT:

The CONTRACTOR shall submit to the Contracting Officer for review an Application for Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the

Application for Payment and accompanied by such supporting documentation as is required by the Contract Documents. Progress payments will be made as the Work progresses on a monthly basis or twice a month when requested by the CONTRACTOR, but only when the approved invoice exceeds \$10,000.00.

13.4 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT:

Contracting Officer will either indicate in writing a recommendation of payment or return the Application for Payment to the CONTRACTOR indicating in writing the Contracting Officer's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the Application for Payment.

13.5 STORED MATERIALS AND EQUIPMENT:

If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, paid invoice or other documentation warranting that the DEPARTMENT has received the materials and equipment free and clear of all charges, security interests and encumbrances and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the DEPARTMENT's interest therein, all of which will be satisfactory to the Contracting Officer. No payment will be made for perishable materials that could be rendered useless because of long storage periods. No progress payment will be made for living plant materials until planted.

13.6 CONTRACTOR'S WARRANTY OF TITLE:

The CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to the DEPARTMENT no later than the time of payment free and clear of any claims, liens, security interests and further obligations.

13.7 WITHHOLDING OF PAYMENTS:

The DEPARTMENT may withhold or refuse payment for any of the reasons listed below provided it gives written notice of its intent to withhold and of the basis for withholding:

13.7.1 The Work is Defective, or completed Work has been damaged requiring correction or replacement, or has been installed without Approval of Shop Drawings, or by an unapproved Subcontractor, or for unsuitable storage of materials and equipment.

13.7.2 A Change Order has reduced the Contract Price,

- 13.7.3 The DEPARTMENT has been required to correct Defective Work or complete Work in accordance with paragraph 12.9.
- 13.7.4 The DEPARTMENT's actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1.a through 14.2.1.k inclusive.
- 13.7.5 Claims have been made against the DEPARTMENT or against the funds held by the DEPARTMENT on account of the CONTRACTOR's actions or inactions in performing this Contract, or there are other items entitling the DEPARTMENT to a set off.
- 13.7.6 Subsequently discovered evidence or the results of subsequent inspections or test; nullify any previous payments for reasons stated in subparagraphs 13.7.1 through 13.7.5.
- 13.7.7 The CONTRACTOR has failed to fulfill or is in violation of any of his obligations under any provision of this Contract.

13.8 RETAINAGE:

At any time the DEPARTMENT finds that satisfactory progress is not being made it may in addition to the amounts withheld under 13.7 retain a maximum amount equal to 10% of the total amount earned on all subsequent progress payments. This retainage may be released at such time as the Contracting Officer finds that satisfactory progress is being made.

13.9 REQUEST FOR RELEASE OF FUNDS:

If the CONTRACTOR believes the basis for withholding is invalid or no longer exists, immediate written notice of the facts and Contract provisions on which the CONTRACTOR relies, shall be given to the DEPARTMENT, together with a request for release of funds and adequate documentary evidence proving that the problem has been cured. In the case of withholding which has occurred at the request of the Department of Labor, the CONTRACTOR shall provide a letter from the Department of Labor stating that withholding is no longer requested. Following such a submittal by the CONTRACTOR, the DEPARTMENT shall have a reasonable time to investigate and verify the facts and seek additional assurances before determining whether release of withheld payments is justified.

13.10 SUBSTANTIAL COMPLETION:

When the CONTRACTOR considers the Work ready for its intended use the CONTRACTOR shall notify the Contracting Officer in writing that the Work or a portion of Work which has been specifically identified in the Contract Documents is substantially complete (except for items specifically listed by the CONTRACTOR as incomplete) and request that the DEPARTMENT issue a certificate of Substantial Completion. Within a reasonable time thereafter, the Contracting Officer, the CONTRACTOR and appropriate Consultant(s) shall make an inspection of the Work to

determine the status of completion. If the Contracting Officer does not consider the Work substantially complete, the Contracting Officer will notify the CONTRACTOR in writing giving the reasons therefore. If the Contracting Officer considers the Work substantially complete, the Contracting Officer will within fourteen days execute and deliver to the CONTRACTOR a certificate of Substantial Completion with tentative list of items to be completed or corrected. At the time of delivery of the certificate of Substantial Completion the Contracting Officer will deliver to the CONTRACTOR a written division of responsibilities pending Final Completion with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties which shall be consistent with the terms of the Contract Documents.

The DEPARTMENT shall be responsible for all DEPARTMENT costs resulting from the initial inspection and the first re-inspection; the CONTRACTOR shall pay all costs incurred by the DEPARTMENT resulting from re-inspections, thereafter.

13.11 ACCESS FOLLOWING SUBSTANTIAL COMPLETION:

The DEPARTMENT shall have the right to exclude the CONTRACTOR from the Work after the date of Substantial Completion, but the DEPARTMENT shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

13.12 FINAL INSPECTION:

Upon written notice from the CONTRACTOR that the entire Work or an agreed portion thereof is complete, the Contracting Officer will make a final inspection with the CONTRACTOR and appropriate Consultant(s) and will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or Defective. The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies. The CONTRACTOR shall pay for all costs incurred by the DEPARTMENT resulting from re-inspections.

13.13 FINAL COMPLETION AND APPLICATION FOR PAYMENT:

After the CONTRACTOR has completed all such corrections to the satisfaction of the Contracting Officer and delivered all maintenance and operating instructions, schedules, guarantees, bonds, certificates of payment to all laborers, Subcontractors and Suppliers, certificates of inspection, marked-up record documents and other documents - all as required by the Contract Documents; and after the Contracting Officer has indicated in writing that the Work has met the requirements for Final Completion, and subject to the provisions of paragraph 13.18, the CONTRACTOR may make application for final payment following the procedure for progress payments. All remaining certificates, warranties, guarantees, releases, affidavits shall accompany the final Application for Payment, and other documentation required by the Contract Documents.

13.14 FINAL PAYMENT:

- 13.14.1 If on the basis of the Contracting Officer's observation of the Work during construction and final inspection, and the Contracting Officer's review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents; and the Contracting Officer is satisfied that the Work has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the DEPARTMENT will process final Application for Payment. Otherwise, the Contracting Officer will return the Application for Payment to the CONTRACTOR, indicating in writing the reasons for refusing to process final payment, in which case the CONTRACTOR shall make the necessary corrections and resubmit the final Application for Payment.
- 13.14.2 If, through no fault of the CONTRACTOR, Final Completion of the Work is significantly delayed, the Contracting Officer shall, upon receipt of the CONTRACTOR's final Application for Payment, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by the DEPARTMENT for Work not fully completed or corrected is less than the retainage provided for in paragraph 13.9, and if bonds have been furnished as required in paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the CONTRACTOR to the DEPARTMENT with the application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.15 FINAL ACCEPTANCE:

Following certification of payment of payroll and revenue taxes, and final payment to the CONTRACTOR, the DEPARTMENT will issue a letter of Final Acceptance, releasing the CONTRACTOR from further obligations under the Contract, except as provided in paragraph 13.17.

13.16 CONTRACTOR'S CONTINUING OBLIGATION:

The CONTRACTOR's obligation to perform and complete the Work and pay all laborers, Subcontractors, and materialmen in accordance with the Contract Documents shall be absolute. Neither any progress or final payment by the DEPARTMENT, nor the issuance of a certificate of Substantial Completion, nor any use or occupancy of the Work or any part thereof by the DEPARTMENT or Using Agency, nor any act of acceptance by the DEPARTMENT nor any failure to do so, nor any review and Approval of a Shop Drawing or sample submission, nor any correction of Defective Work by the DEPARTMENT will constitute an acceptance of Work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

13.17 WAIVER OF CLAIMS BY CONTRACTOR:

The making and acceptance of final payment will constitute a waiver of all claims by the CONTRACTOR against the DEPARTMENT other than those previously made in writing and still unsettled.

13.18 NO WAIVER OF LEGAL RIGHTS:

The DEPARTMENT shall not be precluded or be estopped by any payment, measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefore, from showing the true amount and character of the Work performed and materials furnished by the CONTRACTOR, nor from showing that any payment, measurement, estimate or certificate is untrue or is incorrectly made, or that the Work or materials are Defective. The DEPARTMENT shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the CONTRACTOR or his Sureties, or both, such damages as it may sustain by reason of his failure to comply with requirements of the Contract Documents. Neither the acceptance by the DEPARTMENT, or any representative of the DEPARTMENT, nor any payment for or acceptance of the whole or any part of the Work, nor any extension of the Contract Time, nor any possession taken by the DEPARTMENT, shall operate as a waiver of any portion of the Contract or of any power herein reserved, or of any right to damages. A waiver by the DEPARTMENT of any breach of the Contract shall not be held to be a waiver of any other subsequent breach.

ARTICLE 14 - SUSPENSION OF WORK, DEFAULT AND TERMINATION

14.1 DEPARTMENT MAY SUSPEND WORK:

- 14.1.1 The DEPARTMENT may, at any time, suspend the Work or any portion thereof by notice in writing to the CONTRACTOR. If the Work is suspended without cause the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if the CONTRACTOR makes an Approved claim therefrom as provided in Article 15. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that suspension is due to the fault or negligence of the CONTRACTOR, or that suspension is necessary for Contract compliance, or that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the CONTRACTOR.
- 14.1.2 In case of suspension of Work, the CONTRACTOR shall be responsible for preventing damage to or loss of any of the Work already performed and of all materials whether stored on or off the site or Approved remote storage sites.

14.2 DEFAULT OF CONTRACT:

14.2.1 If the CONTRACTOR:

- a. Fails to begin the Work under the Contract within the time specified in the Proposal, or
- b. Fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficiently skilled workmen, suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 6.6 as revised from time to time), or
- c. Performs the Work unsuitably or neglects or refuses to remove materials or to correct Defective Work, or
- d. Discontinues the prosecution of the Work, or
- e. Fails to resume Work which has been discontinued within a reasonable time after notice to do so, or
- f. becomes insolvent, except that if the CONTRACTOR declares bankruptcy termination in accordance with all *U.S.C. 362* and/or *11 U.S.C. 365*. In the event the CONTRACTOR declares bankruptcy the CONTRACTOR agrees that the Contract will be assumed or rejected in a timely manner so that the Contract will be completed by the date specified in the Contract Documents, or
- g. Allows any final judgment to stand against him unsatisfied for period of 60 days, or
- h. Makes an assignment for the benefit of creditors without the consent of the Contracting Officer, or
- i. Disregards Regulatory Requirements of any public body having jurisdiction, or
- j. Otherwise violates in any substantial way any provisions of the Contract Documents, or
- k. For any cause whatsoever, fails to carry on the Work in an acceptable manner, the Contracting Officer may give notice in writing to the CONTRACTOR and his Surety of such delay, neglect, or default.

14.2.2 If the CONTRACTOR or Surety, within the time specified in the above notice of default, shall not proceed in accordance therewith, then the DEPARTMENT may, upon written notification from the Contracting Officer of the fact of such delay, neglect or default and the CONTRACTOR's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the Work out of the hands of the CONTRACTOR. The DEPARTMENT may

terminate the services of the CONTRACTOR, exclude the CONTRACTOR from the site and take possession of the Work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the DEPARTMENT has paid the CONTRACTOR but which are stored elsewhere, and finish the Work as the DEPARTMENT may deem expedient. The DEPARTMENT may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods that in the opinion of the Contracting Officer are required for the completion of said Contract in an acceptable manner.

- 14.2.3 The Contracting Officer may, by written notice to the CONTRACTOR and his Surety or his representative, transfer the employment of the Work from the CONTRACTOR to the Surety, or if the CONTRACTOR abandons the Work undertaken under the Contract, the Contracting Officer may, at his option with written notice to the Surety and without any written notice to the CONTRACTOR, transfer the employment for said Work directly to the Surety. The Surety shall submit its plan for completion of the Work, including any contracts or agreements with third parties for such completion, to the DEPARTMENT for Approval prior to beginning completion of the Work. Approval of such contracts shall be in accordance with all applicable requirements and procedures for Approval of subcontracts as stated in the Contract Documents.
- 14.2.4 Upon receipt of the notice terminating the services of the CONTRACTOR, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under the Contract and employ by contract or otherwise any person or persons to finish the Work and provide the materials therefore, without termination of the continuing full force and effect of this Contract. In case of such transfer of employment to the Surety, the Surety shall be paid in its own name on estimates covering Work subsequently performed under the terms of the Contract and according to the terms thereof without any right of the CONTRACTOR to make any claim for the same or any part thereof.
- 14.2.5 If the Contract is terminated for default, the CONTRACTOR and the Surety shall be jointly and severally liable for damages for delay as provided by paragraph 11.8, and for the excess cost of completion, and all costs and expenses incurred by the DEPARTMENT in completing the Work or arranging for completion of the Work, including but not limited to costs of assessing the Work to be done, costs associated with advertising, soliciting or negotiating for bids or proposals for completion, and other re-procurement costs. Following termination the CONTRACTOR shall not be entitled to receive any further balance of the amount to be paid under the Contract until the Work is fully finished and accepted, at which time if the unpaid balance exceeds the amount due the DEPARTMENT and any amounts due to persons for whose benefit the DEPARTMENT has withheld funds, such excess shall be paid by the DEPARTMENT to the CONTRACTOR. If the damages, costs, and expenses due the DEPARTMENT exceed the unpaid balance, the CONTRACTOR and his Surety shall pay the difference.

14.2.6 If, after notice of termination of the CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that the CONTRACTOR was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, or that termination was wrongful, the rights and obligations of the parties shall be determined in accordance with the clause providing for convenience termination.

14.3 RIGHTS OR REMEDIES:

Where the CONTRACTOR's services have been so terminated by the DEPARTMENT, the termination will not affect any rights or remedies of the DEPARTMENT against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due the CONTRACTOR by the DEPARTMENT will not release the CONTRACTOR from liability.

14.4 CONVENIENCE TERMINATION:

14.4.1 The performance of the Work may be terminated by the DEPARTMENT in accordance with this section in whole or in part, whenever, for any reason the Contracting Officer shall determine that such termination is in the best interest of the DEPARTMENT. Any such termination shall be effected by delivery to the CONTRACTOR of a *Notice of Termination*, specifying termination is for the convenience of the DEPARTMENT the extent to which performance of Work is terminated, and the date upon which such termination becomes effective.

Immediately upon receipt of a *Notice of Termination* and except as otherwise directed by the Contracting Officer, the CONTRACTOR shall:

- a. Stop Work on the date and to the extent specified in the *Notice of Termination*;
- b. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the Work as is not terminated;
- c. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the *Notice of Termination*;
- d. With the written Approval of the Contracting Officer, to the extent he may require, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable, in whole, or in part, in accordance with the provisions of the Contract;
- e. Submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of termination inventory exclusive of items the disposition of which had been directed or authorized by the Contracting Officer;

- f. Transfer to the Contracting Officer the completed or partially completed record drawings, Shop Drawings, information, and other property that, if the Contract had been completed, would be required to be furnished to the DEPARTMENT;
- g. Take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to the Contract, which is in the possession of the CONTRACTOR, and in which the DEPARTMENT has or may acquire any interest.

The CONTRACTOR shall proceed immediately with the performance of the above obligations.

14.4.2 When the DEPARTMENT orders termination of the Work effective on a certain date, all Work in place as of that date will be paid for in accordance with Article 13 of the Contract. Materials required for completion and on hand but not incorporated in the Work will be paid for at invoice cost plus 15 % with materials becoming the property of the DEPARTMENT - or the CONTRACTOR may retain title to the materials and be paid an agreed upon lump sum. Materials on order shall be cancelled, and the DEPARTMENT shall pay reasonable factory cancellation charges with the option of taking delivery of the materials in lieu of payment of cancellation charges. The CONTRACTOR shall be paid 10% of the cost, freight not included, of materials cancelled, and direct expenses only for CONTRACTOR chartered freight transport which cannot be cancelled without charges, to the extent that the CONTRACTOR can establish them. The DEPARTMENT shall pay the extra costs due to cancellation of bonds and insurance and that part of job start-up and phase-out costs not amortized by the amount of Work accomplished. Charges for loss of profit or consequential damages shall not be recoverable except as provided above.

14.4.3 The termination claim shall be submitted promptly, but in no event later than 90 days from the effective date of termination, unless extensions in writing are granted by the Contracting Officer upon written request of the CONTRACTOR made within the 90 day period. Upon failure of the CONTRACTOR to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall thereupon pay to the CONTRACTOR the amount so determined.

14.4.4 The CONTRACTOR and the Contracting Officer may agree upon whole or any part of the amount or amounts to be paid to the CONTRACTOR by reason of the total or partial termination of Work pursuant to this section. The Contract shall be amended accordingly, and the CONTRACTOR shall be paid the agreed amount.

In the event of the failure of the CONTRACTOR and the Contracting Officer to agree in whole or in part, as provided heretofore, as to the amounts with respect to costs to be paid to the CONTRACTOR in connection with the termination of the Work the Contracting Officer shall determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall pay to the CONTRACTOR the amount determined as follows:

- a. All costs and expenses reimbursable in accordance with the Contract not previously paid to the CONTRACTOR for the performance of the Work prior to the effective date of the *Notice of Termination*;
- b. So far as not included under "a" above, the cost of settling and paying claims arising out of the termination of the Work under subcontracts or orders which are properly chargeable to the terminated portions of the Contract;
- c. The reasonable costs of settlement with respect to the terminated portion of the Contract heretofore, to the extent that these costs have not been covered under the payment provisions of the Contract.

14.4.5 The CONTRACTOR shall have the right of appeal under the DEPARTMENT's claim procedures, as defined in Article 15, for any determination made by the Contracting Officer, except if the CONTRACTOR has failed to submit his claim within the time provided and has failed to request extension of such time, CONTRACTOR shall have no such right of appeal.

In arriving at the amount due the CONTRACTOR under this section, there shall be deducted:

- a. All previous payments made to the CONTRACTOR for the performance of Work under the Contract prior to termination;
- b. Any claim for which the DEPARTMENT may have against the CONTRACTOR;
- c. The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the CONTRACTOR or sold pursuant to the provisions of this section and not otherwise recovered by or credited to the DEPARTMENT; and,
- d. All progress payments made to the CONTRACTOR under the provisions of this section.

14.4.6 Where the Work has been terminated by the DEPARTMENT said termination shall not affect or terminate any of the rights of the DEPARTMENT against the CONTRACTOR or his Surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the DEPARTMENT due to the CONTRACTOR under the terms of the Contract shall not release the CONTRACTOR or his Surety from liability.

Unless otherwise provided for in the Contract Documents, or by applicable statute, the CONTRACTOR, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the DEPARTMENT at all reasonable times at the office of the CONTRACTOR, all its books, records, documents, and other evidence bearing on the cost and expenses of the CONTRACTOR under his Contract and relating to the Work terminated hereunder.

ARTICLE 15 - CLAIMS AND DISPUTES

15.1 NOTIFICATION:

The CONTRACTOR shall notify the Contracting Officer as soon as the CONTRACTOR becomes aware of any act or occurrence that may form the basis of a claim for additional compensation or an extension of Contract time or of any dispute regarding a question of fact or interpretation of the Contract. The Contracting Officer has no obligation to investigate any fact or occurrence that might form the basis of a claim or to provide any additional compensation or extension of Contract time unless the CONTRACTOR notifies the Contracting Officer in a timely manner of all facts the CONTRACTOR believes form the basis for the claim. If the CONTRACTOR believes that he is entitled to an extension of Contract time, the CONTRACTOR must state the contract section on which the extension request is based, provide the Contracting Officer with sufficient information to demonstrate that the CONTRACTOR has suffered excusable delay, and show the specific amount of time to which the CONTRACTOR is claiming entitlement. The Department will not grant and extension Contract time if the CONTRACTOR does not timely submit revised schedules in accordance with Section 6.8.

If the basis of claim or dispute is not resolved by agreement within seven days of the date the Contracting Officer is notified by the CONTRACTOR, the CONTRACTOR shall within the next fourteen days submit a Contractor Intent to Claim (Form 25D-18) to the Contracting Officer. Failure to submit a Contractor Intent to Claim as required under this section constitutes a waiver of any future claim arising from or relating to the alleged act or occurrence.

If the CONTRACTOR believes additional compensation or time is warranted, the CONTRACTOR shall immediately begin keeping complete, accurate, and specific daily records concerning every detail of the potential claim including actual costs incurred, and shall give the Contracting Officer access to any such records and furnish the Contracting Officer copies, if requested. Equipment costs must be based on the CONTRACTOR's internal rates for ownership, depreciation, and operating expenses and not on published rental rates. In computing damages, or costs claimed for a change order, or for any other claim against the Department for additional time, compensation or both, the contractor must establish actual damages based on internal costs for equipment, labor or efficiencies. Total cost, modified total cost or jury verdict forms of presentation of damage claims are not permitted. Labor inefficiencies must be shown to actually have occurred and can be proven solely based on job records. Theoretical studies are not a permissible means of showing labor inefficiencies. Home office overhead will not be allowed as a component of any claim against the Department.

The CONTRACTOR shall submit a written claim to the Contracting Officer within 90 days after the date the CONTRACTOR became aware of the basis of the claim or should have known of the basis of the claim, whichever is earlier. The Contracting Officer will issue written acknowledgement of the receipt of the claim. The CONTRACTOR waives any right to claim if the Contracting Officer

was not notified properly or afforded the opportunity to inspect conditions or monitor actual costs or if the Claim is not filed on the date required.

15.2 PRESENTING CLAIM:

The claim shall specifically include the following:

- 15.2.1 The act, event or condition giving rise to the claim;
- 15.2.2 the Contract provisions that apply to the claim and under which relief is provided;
- 15.2.3 the item or items of Contract Work affected and how they are affected;
- 15.2.4 the specific relief requested, including Contract Time if applicable, and the basis upon which it was calculated.
- 15.2.5 a revised progress schedule under Section 6.8; and
- 15.2.6 a certification signed by the CONTRACTOR that to the best of the CONTRACTOR's knowledge and belief, the data submitted is accurate, complete, and current and is the actual cost to the contractor or additional time for performing the additional work or supplying the additional materials.

15.3 CLAIM VALIDITY, ADDITIONAL INFORMATION, AND CONTRACTING OFFICER'S ACTIONS:

The claim, in order to be valid, must not only show that the CONTRACTOR suffered damages or delay but that those conditions were actually a result of the act, event or condition complained of and that the Contract provides entitlement to relief to the CONTRACTOR for such act, event, or condition.

The Contracting Officer reserves the right to make written request to the CONTRACTOR at any time before issuing a decision for additional information which the CONTRACTOR may possess relative to the claim. The CONTRACTOR agrees to provide the Contracting Officer such additional information within 30 days of receipt of such a request. Failure to furnish such additional information may be regarded as a waiver of the claim. The Claim, if not resolved by agreement within 60 days of its receipt, will automatically be forwarded to the Contracting Officer for formal written decision.

15.4 CONTRACTING OFFICER'S DECISION:

The Contracting Officer will issue a decision within 90 days of receipt of all information relating to the claim. The time for the Contracting Officer to issue a decision may be extended in accordance with AS 36.30.620. The Contracting Officer's decision is final and conclusive unless the Contractor

delivers a notice of appeal to the Commissioner within 14 days of receipt of the decision. The Contractor shall also serve a copy of the notice of appeal on the Contracting Officer.

Appeals from a Contracting Officer's decision shall be decided in accordance with the State Procurement Code's appeal procedures, including AS 36.30.625, AS 36.30.627, AS 36.30.630, and AS 36.30.631.

Criminal and civil penalties authorized under AS 36.30.687 (including, but not limited to, forfeiture of all claimed amounts) may be imposed on the Contractor if the Contractor makes or uses a misrepresentation in support of a claim, or defrauds or attempts to defraud the Department at any stage of prosecuting a claim under this Contract.

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SUPPLEMENTARY CONDITIONS MODIFICATIONS TO THE GENERAL CONDITIONS STATE FUNDED CONTRACTS

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

The following supplements modify, change, delete from, add to the "General Conditions of the Construction Contract for Buildings", revised December, 1987 (c) 4/96. Where any article of the General Conditions is modified, or and Paragraph, Subparagraph, or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph, of Clause shall remain in effect.

SC-1 – DEFINITIONS

At General Conditions Article 1, add the following definitions:

APPROVED. ‘Approved’ or ‘Approval’ as used in this contract document shall mean that the Department has received a document, form or submittal from the contractor and that the Department has taken “No exceptions” to the item submitted. Unless the context clearly indicates otherwise, approved or approval shall not mean that the Department approves of the methods or means, or that the item or form submitted meets the requirements of the contract or constitutes acceptance of the Contractor’s work. Where approved or approval means acceptance, then such approval must be set forth in writing and signed by the contracting officer or his designee.

ARCHITECT. Where used in the contract documents, “ARCHITECT” shall mean the DEPARTMENT’S ENGINEER.

ARCHITECT/ENGINEER. Where used in the contract documents, “ARCHITECT/ENGINEER” shall mean the DEPARTMENT’S ENGINEER.

ENGINEER. The DEPARTMENT’S authorized representative of the Contracting Officer, as defined in the DEPARTMENT’S *delegation of authority letter* to be issued after notice-to-proceed, who is responsible for administration of the contract.

EQUIPMENT. All machinery together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

FURNISH. To procure, transport, and deliver to the project site materials, labor, or equipment, for installation or use on the project.

INSPECTOR. The Engineer's authorized representative assigned to make detailed observations relating to contract performance.

INTERIM WORK AUTHORIZATION. A written order by the Engineer initiating changes to the Contract, within its general scope, until a subsequent Change Order is executed.

LABORATORY. The official testing laboratories of the DEPARTMENT or such other laboratories as may be designated by the Engineer or identified in the contract documents.

MATERIALS. Any substances specified for use in the construction of the project.

PRECONSTRUCTION CONFERENCE. A meeting between the CONTRACTOR and the Engineer, and other parties affected by the construction, to discuss the project before the CONTRACTOR begins work.

QUALITY ASSURANCE (QA). Where referred to in the technical specifications (Divisions 2 through 16), Quality Assurance refers to measures to be provided by the CONTRACTOR as specified.

QUALITY CONTROL (QC). Tests and inspections by the CONTRACTOR to insure the acceptability of materials incorporated into the work. QC test reports are used as a basis upon which to determine whether the Work conforms to the requirements of the Contract Documents and to determine its acceptability for payment.

TRAFFIC CONTROL PLAN (TCP). A drawing of one or more specific plans that detail the routing of pedestrian, and/or vehicular traffic through or around a construction area.

UTILITY. The privately, publicly or cooperatively owned lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway or street drainage, and other similar commodities, including publicly owned fire and police signal systems, street lighting systems, and railroads which directly or indirectly serve the public or any part thereof. The term "utility" shall also mean the utility company, inclusive of any wholly owned or controlled subsidiary."

At General Conditions **Article 1**, definition of **Contract Time**, last sentence, Replace "...Final Completion..." with:
"...Substantial Completion..."

At General Conditions **Article 1**, definition of **Controlling Item**: Delete the text of this definition and replace with the following:

"Any feature of the Work on the critical path of a network schedule."

At General Conditions **Article 1**, definition of **Defective**: Delete the text of this definition and replace with the following:

"Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents."

At General Conditions **Article 1**, definition of **Effective Date of the Contract**: Delete the text of this definition in its entirety.

At General Conditions **Article 1**, definition **Shop Drawings**: Add the following text:

"Where used in the Contract Documents, "Shop Drawings" shall also mean "Submittals"."

At General Conditions **Article 1**, second paragraph: Delete this paragraph in its entirety and replace with the following:

"The titles and headings of the articles, sections, and subsections herein are intended for convenience of reference."

At General Conditions **Article 1**, third paragraph starting with "Whenever used in the Specifications...", Delete this paragraph in its entirety.

At General Conditions **Article 1**, fourth paragraph, last sentence: Revise it to read as follows:

"Words defined in **Article 1** are to be interpreted as defined."

SC-2.1 - AUTHORITIES AND LIMITATIONS

At General Conditions **Article 2.1.1**, delete this paragraph in its entirety and replace with the following:

“The Contracting Officer alone, shall have the power to bind the DEPARTMENT and to exercise the rights, responsibilities, authorities and functions vested in the Contracting Officer by the Contract Documents. The Contracting Officer shall have the right to designate in writing authorized representatives to act for him. Wherever any provision of the Contract Documents specifies an individual or organization, whether governmental or private, to perform any act on behalf of or in the interest of the DEPARTMENT that individual or organization shall be deemed to be the Contracting Officer’s authorized representative under this Contract but only to the extent so specified. “

At General Conditions **Article 2.1.4** starting with “The term of “Contracting Officer” when used...”, delete this article in its entirety.

SC-2.4 - VISITS TO SITE/PLACE OF BUSINESS

At General Conditions **Article 2.4**, delete this article in its entirety.

SC-4.1 - AVAILABILITY OF LANDS

At General Conditions **Article 4.1**, add the following:

“The CONTRACTOR shall provide all waste and disposal areas, including disposal areas for hazardous or contaminated materials, at no additional cost to the DEPARTMENT.”

SC-4.3 - EXPLORATIONS AND REPORTS

At General Conditions **Article 4.3**, add the following text:

“No reports or explorations concerning subsurface soils or other latent conditions at the Project site are included within these Contract Documents.”

SC-4.7 - SURVEY CONTROL

At General Conditions **Article 4.7**, delete the third sentence and substitute the following text:

"Copies of all survey notes shall be provided to the DEPARTMENT at an interval determined by the Project Manager. The Project Manager may request submission on a weekly or longer period at his discretion. Any variations between the Contract Documents and actual field conditions shall be identified in the survey notes."

SC-5 BONDS, INSURANCE, AND INDEMNIFICATION

At General Conditions Articles 5.2 and 5.3, delete these articles in their entirety and replace with the following:

“The successful bidder shall furnish all required Performance and Payment Bonds on forms provided by the Department for the sums specified in the Contract. If no sum is specified, the successful bidder shall comply with AS 36.25.010. The Surety on each bond may be any corporation or partnership authorized to do business in the state as an insurer under AS 21.09 or two responsible individual sureties approved by the Contracting Officer.

If individual sureties are used, two individual sureties must each provide the Department with security assets located in Alaska equal to the specified amount of each bond. The net worth and the total value of the security assets of each individual surety shall not be less than then penal amount of the bond. In addition, each individual Surety, upon the Department’s request, shall execute an affidavit of individual surety on a form provided by the Department. Each individual surety affidavit contains a Certificate of Sufficiency that must be signed by an official of an institution having full knowledge of assets and responsibilities of the Surety. Any costs incurred by the Contractor and the individual

Surety are subsidiary and shall be borne by the Contractor or the individual Surety. In no event will the Department be liable for these costs. Individual sureties shall provide security by one, or a combination of the following methods:

- (a) Escrow Account. An escrow account with a federally insured financial institution, in the name of the Department. Acceptable securities include, but are not limited to, cash, treasury notes, bearer instruments having a specific value, or money market certificates.
- (b) First Deed of Trust. A first deed of trust with the Department named as beneficiary, against the unencumbered value of real property or an agreement by a second party, including deeds of trust, mortgage, lien, or judgment interests to subrogate their interests to the Department in the real property offered by the individual Surety. A title insurance policy, with the Department as a named beneficiary, and a current (within three months) professional appraisal or assessed valuation is required to ascertain the true value of the property offered as collateral. Fire and casualty insurance, with the Department as a named insured, and in limits and coverages acceptable to the Contracting Officer, are required if buildings or other valuable improvements are involved. The appraiser must acknowledge in writing that the appraisal is prepared for the benefit of the Department and the Department has the right to rely on its contents. The deed of trust must be recorded in the recording office where the property is located.

These bonds and security assets, as applicable, shall remain in effect for 12 months after the date of final payment, or, if longer, until all obligations and liens under this Contract are satisfied.

The Department may, in its discretion, notify the bonding company or Surety of any potential default or liability.

The Contractor shall substitute, within five working days, another bond or surety acceptable to the Department if an individual Surety or the Surety on any bond furnished in connection with the Contract:

- a. Becomes insolvent or is declared bankrupt;
- b. Loses its right to do business in any state affecting the work;
- c. Ceases to meet Contract requirements
- d. Fails to furnish reports of financial condition upon request; or
- e. Otherwise becomes unacceptable to the Department.

When approved by the Contracting Officer, the Contractor may replace:

- a. An individual surety with a corporate surety; or
- b. Posted collateral with substitute collateral.

Failure to maintain the specified bonds or to provide substitute bonds when required under this section may be grounds for withholding contract payments until substitute bonding is obtained, and may, in the Department's discretion, be grounds for declaring the Contractor in default."

SC-5.4 - INSURANCE REQUIREMENTS

At General Condition **Article 5.4**, delete this article in its entirety and replace with the following:

"INSURANCE REQUIREMENTS. The Contractor shall provide evidence of insurance with an insurance carrier or carriers satisfactory to the Department covering injury to persons and property suffered by the State of Alaska or by a third party as a result of operations under this contract by the Contractor or by any subcontractor. The Contractor's insurance shall provide protection against injuries to all employees of the Contractor and the employees of any subcontractor engaged in work under this Contract. All insurance policies shall be issued by insurers that

- (i) are permitted to transact the business of insurance in the State of Alaska under AS 21, and
- (ii) have a financial rating acceptable to the Department.

The Contractor shall notify the Contracting Officer, in writing, at least 30 days before cancellation of any coverage or reduction in any limits of liability. Where specific limits and coverages are shown, it is understood that they shall be the

minimum acceptable. The requirements of this subsection shall not limit the Contractor's indemnity responsibility under Article 5.5. Additional insurance requirements specific to this contract are contained in the Supplementary Conditions, when applicable.

The Contractor shall maintain the following policies of insurance with the specified minimum coverages and limits in force at all times during the performance of the Contract:

- a. Worker's Compensation:** as required by AS 23.30.045 for all employees of the Contractor engaged in work under this Contract. The Contractor shall be responsible for Workers' Compensation Insurance for any subcontractor who performs work under this Contract. The coverage shall include:
 - (1) Waiver of subrogation against the state;
 - (2) Employer's Liability Protection at \$500,000 each accident/each employee and \$500,000 policy limit;
 - (3) "Other States" endorsement if the Contractor directly utilizes labor outside of the State of Alaska;
 - (4) United States Longshore and Harbor Workers' Act Endorsement, whenever the work involves activity over or about navigable water; and
 - (5) Maritime Employer's Liability (Jones Act) Endorsement with a minimum limit of \$1,000,000, whenever the work involves activity from or on a vessel or navigable water.
- b. Commercial General Liability:** on an occurrence policy form covering all operations with combined single limits not less than:
 - (1) \$1,000,000 Each Occurrence;
 - (2) \$1,000,000 Personal Injury;
 - (3) \$2,000,000 General Aggregate; and
 - (4) \$2,000,000 Products-Completed Operations Aggregate
- c. Automobile Liability:** covering all vehicles used in Contract work, with combined single limits not less than \$1,000,000 each occurrence.
- d. Umbrella Coverage:** for Contract amounts over \$5,000,000 not less than \$5,000,000 umbrella or excess liability. Umbrella or excess policy shall include products liability completed operations coverage and may be subject to \$5,000,000 aggregate limits. Further, the umbrella or excess policy shall include a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

The State of Alaska shall be named as an additional insured on policies required by paragraphs b through d above. All of the above insurance coverages shall be considered to be primary and non-contributory to any other insurance carried by the State of Alaska, whether through self-insurance or otherwise.

In any contract or agreement with subcontractors performing work, the Contractor shall require that all indemnities and waivers of subrogation it obtains, and any stipulation to be named as an additional insured it obtains, shall also be extended to waive rights of subrogation against the State of Alaska and to add the State of Alaska as an additional named indemnitee and as an additional insured.

The apparent low bidder shall furnish evidence of insurance to the Department before award of the Contract. The evidence shall be issued to the Department and shall be either a certificate of insurance or the policy declaration page with all required endorsements attached and must:

- a.** Denote the type, amount, and class of operations covered;
- b.** Show the effective (and retroactive) dates of the policy;
- c.** Show the expiration date of the policy;
- d.** Include all required endorsements;
- e.** Coverage must not exclude asbestos related claims;
- f.** Be executed by the carrier's representative; and,

g. If a certificate of insurance, include the following statement:

*"This is to certify that the policies described herein comply with all aspects of the insurance requirements of , JSOB Front Stair Replacement, project 2019-0222-3961
. The insurance carrier agrees that it shall notify the Contracting Officer, in writing, at least 30 days before cancellation of any coverage or reduction in any limits of liability."*

The Department's acceptance of deficient evidence of insurance does not constitute a waiver of Contract requirements.

Failure to maintain the specified insurance or to provide substitute insurance if an insurance carrier becomes insolvent, is placed in receivership, declares bankruptcy, or cancels a policy may be grounds for withholding Contract payments until substitute insurance is obtained, and may, in the Department's discretion, be sufficient grounds for declaring the Contractor in default."

SC-5.5 - INDEMNIFICATION

At General Conditions, Article 5.5, delete this article in its entirety and replace with the following:

"The Contractor shall indemnify, hold harmless, and defend the State of Alaska and its agents and employees from any and all claims or actions for injuries or damages whatsoever sustained by any person or property that arise from or relate to, directly or indirectly, the Contractor's performance of the Contract; however, this provision has no effect if, but only if, the sole proximate cause of the injury or damage is the Department's negligence.

This Contract does not create a third party benefit to the public or any member of the public, nor does it authorize any person or entity not a party to this Contract to maintain a suit based on this Contract or any term or provision of the Contract, whether for personal injuries, property damage, or any other claim or cause of action."

SC-6.6.2 - SCHEDULE OF SHOP DRAWINGS AND SCHEDULE OF VALUES

At General Condition **Article 6.6.2**, change the phrase "Within fifteen days after the date of the Notice To Proceed,..." to read:

" Prior to submitting the CONTRACTOR's first Application for Payment..."

SC-6.9 - SUBSTITUTES "OR EQUAL" ITEMS

Add the following article:

"6.9.5 - Substitutions shall be permitted during or after the bid period as allowed and in accordance with Document 00020 - Invitation for Bids, Document 00700 – General Conditions, and Document 01631 - Product Substitutions."

SC-6.13.1 - SUBCONTRACT PROVISIONS

At General Condition **Article 6.13.1**, delete the third sentence and add the following text:

"All subcontracts shall contain provisions for prompt payment, release of retainage, and interest on late payment amounts and retainage as specified in A.S. 36.90.210. Contracts between subcontractors, regardless of tier, must also contain these provisions."

SC-6.27 - LOAD RESTRICTIONS

Add new General Conditions Article 6.27 as follows:

"6.27 Load Restrictions

The CONTRACTOR shall comply with all load restrictions as set forth in the "Administrative Permit Manual", and Title 17, Chapter 25, of the Alaska Administrative Code in the hauling of materials on public roads, beyond the limits of the project, and on all public roads within the project limits that are scheduled to remain in use upon completion of the project.

Overload permits may, at the discretion of the State, be issued for travel beyond the project limits for purposes of mobilization and/or demobilization. Issuance of such a permit will not relieve the CONTRACTOR of liability for damage which may result from the moving of equipment.

The operation of equipment of such weight or so loaded as to cause damage to any type of construction will not be permitted. No overloads will be permitted on the base course or surface course under construction. No loads will be permitted on a concrete pavement, base or structure before the expiration of the curing period. The CONTRACTOR shall be responsible for all damage done by his equipment."

[SC-7.2 - PERMITS, LICENSES, AND TAXES]

At General Condition, Article 7.2.1, add the following text:

"CONTRACTOR shall obtain and pay for the plan review and building permit. The CONTRACTOR shall draw discipline permits relating to the building permit.

SC-7.12 - APPLICABLE ALASKA PREFERENCES

At General Condition **Article 7.12.2**, delete the last portion of the first sentence commencing at the words, "...when the bid documents designate..." and replace with the words:

"...when the bidder designates the use of Alaska products. The Bidder shall complete the Alaska Products Preference Worksheet per its instructions and submit it with the Bid Proposal." Continue with existing second sentence.

Add **Article 7.12.5** to the General Conditions

- (a) Notwithstanding a provision in AS 36.30.170 to the contrary, if a bidder qualifies under AS 36.30.170(b) as an Alaska bidder and is a qualifying entity, a five percent bid preference shall be applied to the bid price. The preference may not exceed \$5,000. In this subsection, "qualifying entity" means a
 - (1) sole proprietorship owned by an Alaska veteran;
 - (2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska veterans;
 - (3) limited liability company organized under AS 10.50 if a majority of the members are Alaska veterans; or
 - (4) corporation that is wholly owned by individuals and a majority of the individuals are Alaska veterans.
- (b) A preference under this section is in addition to any other preference for which the bidder qualifies.
- (c) To qualify for a preference under this section, a bidder must add value by the bidder itself actually performing, controlling, managing and supervising a significant part of the services provided, or the bidder must have sold supplies of the general nature solicited to other state agencies, governments, or the general public.
- (d) In this section, "Alaska veteran" means an individual who is a
 - (1) resident of this state; and
 - (2) veteran; in this paragraph, "veteran" means an individual who
 - (A) served in the
 - (i) armed forces of the United States, including a reserve unit of the United States armed forces; or
 - (ii) Alaska Territorial Guard, the Alaska Army National Guard, the Alaska Air National Guard, or the Alaska Naval

- Militia; and
- (B) was separated from service under a condition that was not dishonorable.
- (e) It is requested that the contractor certify their veteran status with the submission of either a DD Form 214 or a NGB Form 22 discharge certificate along with their other required documents after Notice of Intent to Award is received.

SC-7.13 - PREFERENTIAL EMPLOYMENT

At General Condition **Article 7.13**, delete the text of this article in its entirety.

SC-7.14.1 - CERTIFIED PAYROLLS

At General Condition **Article 7.14.1**, add the following text:

"Regardless of project funding source, copies of all certified payrolls supplied to the State DEPARTMENT of Labor by the CONTRACTOR shall be supplied also to the Project Manager upon request, including submittals made by, or on behalf of, subcontractors."

Add General Condition **Article 7.14.3**, as follows:

"Within three calendar days of award of a construction contract, the CONTRACTOR shall file a "Notice of Work" with the Department of Labor and shall pay all related fees. The Contracting Officer will not issue Notice to Proceed to the CONTRACTOR until such notice and fees have been paid to the Department of Labor. Failure of the CONTRACTOR to file the Notice of Work and pay fees within this timeframe shall not constitute grounds for an extension of contract time or adjustment of contract price."

SC-7.17 - OFFICIALS NOT TO BENEFIT

At General Conditions **Article 7.17**, delete the text of this article in its entirety.

SC-8.1 - RELATED WORK AT SITE

At General Condition Article 8.1, add the following text:

"CONTRACTOR is hereby notified that one or more other construction contracts may be underway on the site during the term of this contract.

Other projects may either be or become active during the term of this contract. Contact the Contracting Officer, for a current list of improvement projects.

CONTRACTOR shall have familiarized himself with the nature and conditions of all other noted contracts (to the extent necessary for him to comply with the terms of this Article 8.1) prior to bidding this contract. (Copies of the Contract Documents and Drawings relevant to those contracts are available for review at DOA Division of General Services.)"

SC-9.4 - CHANGE ORDER

At General Conditions **Article 9.4**, add the following sentence:

"A Change Order shall be considered executed when it is signed by the DEPARTMENT."

SC-9.10 - INTERIM WORK AUTHORIZATION

At General Conditions **Article 9.10**, add the following new paragraph:

“9.10 Interim Work Authorization

An Interim Work Authorization may be used to establish a change within the scope of the Work; however, only a Change Order shall establish associated changes in Contract Time and Price. Work authorized by Interim Work Authorization shall be converted to a Change Order. The basis of payment shall be as stated in the Interim Work Authorization, unless it states that the basis of payment has not been established and is to be negotiated, in which case the Cost of the Work shall be documented pursuant to Article 10.4, to establish a basis for negotiating a lump sum price for the Change Order.”

SC-10.3.2 - CHANGE ORDER PRICE DETERMINATION FOR LUMP SUM CHANGE ORDERS

At General Conditions **Article 10.3.2**, Delete this paragraph in its entirety and replace it with the following.

“10.3.2

By mutual acceptance of a lump sum price which includes overhead and profit. The following maximum rates of cost markup (to cover both overhead and profit of the CONTRACTOR) shall be used in the negotiation of a Lump Sum Change Order:

- a. 15% - where a cost is borne directly by prime contractor (first tier contractor).
- b. 10% - where a cost is borne by a subcontractor (lower tier contractor).

Where the cost is borne by a subcontractor acting as a first tier contractor, the allowable overhead and profit markup for lump sum change orders shall not exceed 15%. Any lower tier subcontractors, including the CONTRACTOR in this case, for whom the first tier subcontractor performs the work, shall be allowed an overhead and profit markup that does not exceed 10%.

SC-10.4 - COST OF THE WORK

At General Conditions **Article 10.4.1**, replace the second sentence from the end of the paragraph with the following:

“Such employees shall include manual workers up through the level of foreman but shall not include general foremen, superintendents, and non-manual employees.”

At General Conditions **Article 10.4.2**, replace the first sentence with the following:

“Cost of all materials and equipment furnished and incorporated or consumed in the Work, including costs of transportation and storage thereof, and Suppliers’ field services required in connection therewith.”

SC-10.4.5.c - COST OF THE WORK (SUPPLEMENTAL COSTS)

At General Condition **Article 10.4.5.c**, add the following:

"For any machinery or special equipment (other than small tools) which has been authorized by the Project Manager, the CONTRACTOR shall receive the rental rates in the current edition and appropriate volume of the "Rental Rate Blue Book for Construction Equipment", published by Dataquest, Inc., 1290 Ridder Park Drive, San Jose, CA 95131. Hourly rental rates shall be determined as follows:

The established hourly rental rate shall be equal to the adjusted monthly rate for the basic equipment plus the adjusted monthly rate for applicable attachments, both divided by 176, and multiplied by the area adjustment factor, plus the estimated hourly operating cost.

The adjusted monthly rate is that resulting from application of the rate adjustment formula in order to eliminate replacement cost allowances in machine depreciation and contingency cost allowances.

Attachments shall not be included unless required for the time and materials work.

For equipment not listed in The Blue Book, the CONTRACTOR shall receive a rental rate as agreed upon before such work is begun. If agreement cannot be reached, the DEPARTMENT reserves the right to establish a rate based on similar equipment in the Blue Book or prevailing commercial rates in the area.

These rates shall apply for equipment used during the CONTRACTOR's regular shift of 10 hours per day. Where the equipment is used more than 10 hours per day, either on the CONTRACTOR's normal work or on time and materials, and either on single or multiple shifts, an overtime rate, computed as follows, shall apply:

The hourly overtime rate shall be equal to the adjusted monthly rate for the basic equipment plus the adjusted monthly rate for applicable attachments, both divided by 352, and multiplied by the area adjustment factor, plus the estimated hourly operating cost.

Equipment which must be rented or leased specifically for work required under this section shall be authorized in writing by the Project Manager. The CONTRACTOR shall be paid invoice price plus 15%.

When it is necessary to obtain equipment from sources beyond the project limits exclusively for time and materials, work, the actual cost of transferring the equipment to the site of the work and return will be allowed as an additional item of expense. Where the move is made by common carrier, the move-in allowance will be limited to the amount of the freight bill or invoice. If the CONTRACTOR hauls the equipment with his own forces, the allowance will be limited to the rental rate for the hauling unit plus operator wages. In the event that the equipment is transferred under its own power, the moving allowance will be limited to one-half of the normal hourly rental rate plus operator's wages. In the event that the move-out is to a different location, payment will in no instance exceed the amount of the move-in. Move-in allowance shall not be made for equipment brought to the project for time and materials work which is subsequently retained on the project and utilized for completion of contract items, camp maintenance, or related work.

Equipment ordered to be on a stand-by basis shall be paid for at the stand-by rental rate for the number of hours in the CONTRACTOR'S normal work shift, but not to exceed 8 hours per day. The stand-by rental rate shall be computed as follows:

The hourly stand-by rate shall be equal to the adjusted monthly rate for the basic equipment plus the adjusted monthly rate for applicable attachments, both divided by 352, all multiplied by the area adjustment factor.

Time will be recorded to the nearest one-quarter hour for purposes of computing compensation to the CONTRACTOR for equipment utilized under these rates.

The equipment rates as determined above shall be full compensation, including overhead and profit, for providing the required equipment and no additional compensation will be made for other costs such as, but not limited to, fuels, lubricants, replacement parts or maintenance costs. Cost of repairs, both major and minor, as well as charges for mechanic's time utilized in servicing equipment to ready it for use prior to moving to the project and similar charges will not be allowed."

SC-10.11 - DISADVANTAGED BUSINESSS ENTERPRISE PROGRAM

SC-11.3 - COMPUTATION OF CONTRACT TIME

At General Condition Article 11.1, add the following:

“...or if no starting day is stipulated therein, the day following receipt of the Notice to Proceed by the CONTRACTOR.”

At General Condition **Article 11.3.1**, third sentence, change “...the date of Final Completion...” to:

“...the date of Substantial Completion ...”

At General Condition **Article 11.3.2**, first sentence, change “...the date of Final Completion...” to:

“...the date of Substantial Completion .”

SC-11.8 - DELAY DAMAGES

At General Condition **Article 11.8**, add the following:

“For each calendar day that the work remains incomplete after the expiration of the Contract Time, liquidated damages in the amount of \$ 250.00 per calendar day shall be assessed to the CONTRACTOR. If no money is due the CONTRACTOR, the DEPARTMENT shall have the right to recover said sum from the CONTRACTOR, the surety or both. The amount of these deductions is to compensate the DEPARTMENT for estimated damages anticipated to arise or to be incurred as a result of the CONTRACTOR's failure to complete the work within the time specified. As liquidated damages, such deductions are not to be considered as penalties.

Permitting the CONTRACTOR to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the DEPARTMENT of any of its rights under the Contract.

The anticipated loss and damage anticipated to arise as a result of the Contractor's failure to complete the work within the time specified includes, without limitation, damages resulting from lost production time and additional contract administration time by DEPARTMENT staff.

SC 12 - ONE YEAR CORRECTION PERIOD

At General Condition **Article 12.7**, in the first sentence, change the phrase “ Final Completion” to:

“Substantial Completion of the relevant portion of the Work...”

SC 13.3 - APPLICATION FOR PROGRESS PAYMENT

At General Conditions **Article 13.3**, revise the last sentence to read as follows:

“Progress payments will be made as the Work progresses on a monthly basis.”

SC 13.13 - FINAL COMPLETION AND APPLICATION FOR PAYMENT

At General Conditions **Article 13.13**, first sentence, delete the following items:

“maintenance and operating instructions
certificates of inspection
marked up record documents”

The preceding items are some of the requirements for Substantial Completion, as addressed in Section 017800.

SC 13.16 - CONTRACTOR'S CONTINUING OBLIGATION

At General Condition **Article 13.16**, add the following paragraph:

“When it is anticipated that restarting, testing, adjusting, or balancing of systems will be required following Final Acceptance and said requirements are noted in Section(s) 017500, such Work shall constitute a continuing obligation under the Contract.”

SC 14.2 - DEFAULT OF CONTRACT

At General Conditions **Article 4.2**, delete this section in its entirety and replace with the following:

“14.2.1

The Contracting Officer may give the contractor and his surety a written Notice to Cure Default if the contractor:

- a. fails to begin work in the time specified,
- b. fails to use sufficient resources to assure prompt completion of the work,
- c. performs the work unsuitably or neglect or refuse to remove and replace rejected materials or work,
- d. stops work,
- e. fails to resume stopped work after receiving notice to do so,
- f. becomes insolvent (except that if you declare bankruptcy, termination will be under Title 11 US Code 362 and/or 365. Your bankruptcy does not relieve the surety of any obligations to assume the Contract and complete the work in a timely manner.
- g. Allows any final judgment to stand against him unsatisfied for period of 60 days, or
- h. Makes an assignment for the benefit of creditors without the consent of the Contracting Officer, or
- i. Disregards Regulatory Requirements of any public body having jurisdiction, or
- j. Otherwise violates in any substantial way any provisions of the Contract Documents, or
- k. fails to comply with Contract minimum wage payments or civil rights requirements, or
- l. are party to fraud, deception, misrepresentation , or
- m. for any cause whatsoever, fails to carry on the Work in an acceptable manner.

14.2.2

The Notice to Cure Default will detail the conditions determined to be in default, the time within which to cure the default and may, in the Contracting Officer's discretion, specify the actions necessary to cure the default. Failure to cure the delay, neglect or default within the time specified in the Contracting Officer's written notice to cure authorizes the Department to terminate the contract. The Contracting Officer may allow more time to cure than originally stated in the Notice to Cure Default if he deems it to be in the best interests of the Department. The Department will provide you and your surety with a written Notice of Default Termination that details the default and the failure to cure it.

14.2.3 If the CONTRACTOR or Surety, within the time specified in the above notice of default, shall not proceed in accordance therewith, then the DEPARTMENT may, upon written notification from the Contracting Officer of the fact of such delay, neglect or default and the CONTRACTOR's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the Work out of the hands of the CONTRACTOR. The DEPARTMENT may terminate the services of the CONTRACTOR, exclude the CONTRACTOR from the site and take possession of the Work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the DEPARTMENT has paid the CONTRACTOR but which are stored elsewhere, and finish the Work as the DEPARTMENT may deem expedient. The DEPARTMENT may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods that in the opinion of the Contracting Officer are required for the completion of said Contract in an acceptable manner.

14.2.4 The Contracting Officer may, by written notice to the CONTRACTOR and his Surety or his representative, transfer the employment of the Work from the CONTRACTOR to the Surety, or if the CONTRACTOR abandons the Work undertaken under the Contract, the Contracting Officer may, at his option with written notice to the Surety and without any written notice to the CONTRACTOR, transfer the employment for said Work directly to the Surety. The Surety shall submit its plan for completion of the Work, including any contracts or agreements with third parties for such completion, to the DEPARTMENT for Approval prior to beginning completion of the Work. Approval of such contracts shall be in accordance with all applicable requirements and procedures for Approval of subcontracts as stated in the Contract Documents.

14.2.5 After the notice of termination is issued, the Department may take over the work and complete it by contract or otherwise and may take possession of and use materials, appliances, equipment or plant on the work site necessary for completing the work.

14.2.6 Rather than taking over the work itself, the Department may transfer the obligation to perform the work from the contractor to your surety. The surety must submit its plan for completion of the work, including any contracts or agreements with third parties for completion, to the Department for approval prior to beginning work. The surety must follow the Contract requirements for approval of subcontracts, except that the limitation on percent of work subcontracted will not apply.

14.2.7 On receipt of the transfer notice, the surety must take possession of all materials, tools, and appliances at the work site, employ an appropriate work force, and complete the Contract work, as specified. The Contract specifications and requirements shall remain in effect. However the Department will make subsequent Contract payments directly to the Surety for work performed under the terms of the Contract. You forfeit any right to claim for the same work or any part thereof. You are not entitled to receive any further balance of the amount to be paid under the Contract.

14.2.8 Upon receipt of the notice terminating the services of the CONTRACTOR, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under the Contract and employ by contract or otherwise any person or persons to finish the Work and provide the materials therefore, without termination of the continuing full force and effect of this Contract. In case of such transfer of employment to the Surety, the Surety shall be paid in its own name on estimates covering Work subsequently performed under the terms of the Contract and according to the terms thereof without any right of the CONTRACTOR to make any claim for the same or any part thereof.

14.2.9 If the Contract is terminated for default, the CONTRACTOR and the Surety shall be jointly and severally liable for damages for delay as provided by paragraph 11.8, and for the excess cost of completion, and all costs and expenses incurred by the DEPARTMENT in completing the Work or arranging for completion of the Work, including but not limited to costs of assessing the Work to be done, costs associated with advertising, soliciting or negotiating for bids or proposals for completion, and other re-procurement costs. Following termination the CONTRACTOR shall not be entitled to receive any further balance of the amount to be paid under the Contract until the Work is fully finished and accepted, at which time if the unpaid balance exceeds the amount due the DEPARTMENT and any amounts due to persons for whose benefit the DEPARTMENT has withheld funds, such excess shall be paid by the DEPARTMENT to the CONTRACTOR. If the damages, costs, and expenses due the DEPARTMENT exceed the unpaid balance, the CONTRACTOR and his Surety shall pay the difference.

14.2.10 If, after notice of termination of the CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that the CONTRACTOR was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, or that termination was wrongful, the rights and obligations of the parties shall be determined in accordance with the clause providing for convenience termination.

14.3 Rights or Remedies:

Where the CONTRACTOR's services have been so terminated by the DEPARTMENT, the termination will not affect any rights or remedies of the DEPARTMENT against the CONTRACTOR then existing or which may thereafter accrue.

Any retention or payment of moneys due the CONTRACTOR by the DEPARTMENT will not release the CONTRACTOR from liability.

14.4 Convenience Termination:

14.4.1 The performance of the Work may be terminated by the DEPARTMENT in accordance with this section in whole or in part, whenever, for any reason the Contracting Officer shall determine that such termination is in the best interest of the DEPARTMENT. Any such termination shall be effected by delivery to the CONTRACTOR of a Notice of Termination, specifying termination is for the convenience of the DEPARTMENT the extent to which performance of Work is terminated, and the date upon which such termination becomes effective.

14.4.2 Immediately upon receipt of a Notice of Termination and except as otherwise directed by the Contracting Officer, the CONTRACTOR shall:

- a. Stop Work on the date and to the extent specified in the Notice of Termination;
- b. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the Work as is not terminated;
- c. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;
- d. With the written Approval of the Contracting Officer, to the extent he may require, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable, in whole, or in part, in accordance with the provisions of the Contract;
- e. Submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of termination inventory exclusive of items the disposition of which had been directed or authorized by the Contracting Officer;
- f. Transfer to the Contracting Officer the completed or partially completed record drawings, Shop Drawings, information, and other property which, if the Contract had been completed, would be required to be furnished to the DEPARTMENT;
- g. Take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to the Contract which is in the possession of the CONTRACTOR and in which the DEPARTMENT has or may acquire any interest.

The CONTRACTOR shall proceed immediately with the performance of the above obligations.

14.4.3 When the DEPARTMENT orders termination of the Work effective on a certain date, all Work in place as of that date will be paid for in accordance with Article 13 of the Contract. Materials required for completion and on hand but not incorporated in the Work will be paid for at invoice cost plus 15 % with materials becoming the property of the DEPARTMENT - or the CONTRACTOR may retain title to the materials and be paid an agreed upon lump sum. Materials on order shall be cancelled, and the DEPARTMENT shall pay reasonable factory cancellation charges with the option of taking delivery of the materials in lieu of payment of cancellation charges. The CONTRACTOR shall be paid 10% of the cost, freight not included, of materials cancelled, and direct expenses only for CONTRACTOR chartered freight transport which cannot be cancelled without charges, to the extent that the CONTRACTOR can establish them. The extra costs due to cancellation of bonds and insurance and that part of job start-up and phase-out costs not amortized by the amount of Work accomplished shall be paid by the DEPARTMENT. Charges for loss of profit or consequential damages shall not be recoverable except as provided above.

- a. The following costs are not payable under a termination settlement agreement or Contracting Officer's determination of the termination claim:
 1. Loss of anticipated profits or consequential or compensatory damages
 2. Unabsorbed home office overhead (also termed "General & Administrative Expense") related to ongoing business operations
 3. Bidding and project investigative costs
 4. Direct costs of repairing equipment to render it operable for use on the terminated work

14.4.4 The termination claim shall be submitted promptly, but in no event later than 90 days from the effective date of termination, unless extensions in writing are granted by the Contracting Officer upon written request of the CONTRACTOR made within the 90 day period. Upon failure of the CONTRACTOR to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall thereupon pay to the CONTRACTOR the amount so determined.

14.4.5 The CONTRACTOR and the Contracting Officer may agree upon whole or any part of the amount or amounts to be paid to the CONTRACTOR by reason of the total or partial termination of Work pursuant to this section. The Contract shall be amended accordingly, and the CONTRACTOR shall be paid the agreed amount.

14.4.6 In the event of the failure of the CONTRACTOR and the Contracting Officer to agree in whole or in part, as provided heretofore, as to the amounts with respect to costs to be paid to the CONTRACTOR in connection with the termination of the Work the Contracting Officer shall determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall pay to the CONTRACTOR the amount determined as follows:

- a. All costs and expenses reimbursable in accordance with the Contract not previously paid to the CONTRACTOR for the performance of the Work prior to the effective date of the Notice of Termination;
- b. So far as not included under "a" above, the cost of settling and paying claims arising out of the termination of the Work under subcontracts or orders which are properly chargeable to the terminated portions of the Contract;
- c. So far as practicable, claims by the contractor for idled or stand-by equipment shall be made as follows:
Equipment claims will be reimbursed as follows:
 1. Contractor-owned equipment usage, based on the contractor's ownership and operating costs for each piece of equipment as determined from the contractor's accounting records. Under no circumstance, may the contractor base equipment claims on published rental rates.
 2. Idle or stand-by time for Contractor-owned equipment, based on your internal ownership and depreciation costs. Idle or stand-by equipment time is limited to the actual period of time equipment is idle or on stand-by as a direct result of the termination, not to exceed 30 days. Operating expenses will not be included for payment of idle or stand-by equipment time.
 3. Rented equipment, based on reasonable, actual rental costs. Equipment leased under "capital leases" as defined in Financial Accounting Standard No. 13 will be considered Contractor-owned equipment. Equipment leased from an affiliate, division, subsidiary or other organization under common control with you will be considered Contractor-owned equipment, unless the lessor has an established record of leasing to unaffiliated lessees at competitive rates consistent with the rates you have agreed to pay and no more than forty percent of the lessor's leasing business, measured in dollars, is with organizations affiliated with the lessor.

14.4.7 The CONTRACTOR shall have the right of appeal under the DEPARTMENT's claim procedures, as defined in Article 15, for any determination made by the Contracting Officer, except if the CONTRACTOR has failed to submit his claim within the time provided and has failed to request extension of such time, CONTRACTOR shall have no such right of appeal. In arriving at the amount due the CONTRACTOR under this section, there shall be deducted:

- a. All previous payments made to the CONTRACTOR for the performance of Work under the Contract prior to termination;
- b. Any claim for which the DEPARTMENT may have against the CONTRACTOR;
- c. The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the CONTRACTOR or sold pursuant to the provisions of this section and not otherwise recovered by or credited to the DEPARTMENT; and,
- d. All progress payments made to the CONTRACTOR under the provisions of this section.

14.4.8 Where the Work has been terminated by the DEPARTMENT said termination shall not affect or terminate any of the rights of the DEPARTMENT against the CONTRACTOR or his Surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the DEPARTMENT due to the CONTRACTOR under the terms of the Contract shall not release the CONTRACTOR or his Surety from liability.

14.4.9 The contractor's termination claim may not include claims that pre dated the notice for termination for convenience. Those claims shall be prosecuted by the contractor under Article 15.

14.4.10 The contractor's termination claim may not exceed the total dollar value of the contract as awarded plus agreed upon change orders less the amounts that have been paid for work completed.

- a. Unless otherwise provided for in the Contract Documents, or by applicable statute, the CONTRACTOR, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the DEPARTMENT at all reasonable times at the office of the CONTRACTOR, all its books, records, documents, and other evidence bearing on the cost and expenses of the CONTRACTOR under his Contract and relating to the Work terminated hereunder.
- b. Definitions. In this Subsection 108-1.09, the term "cost" and the term "expense" mean a monetary amount in U.S. Dollars actually incurred by you, actually reflected in your contemporaneously maintained accounting or other financial records and supported by original source documentation.
- c. Cost Principles. The Department may use the federal cost principles at 48 CFR §§ 31.201-1 to 31.205-52 (or succeeding cost principles for fixed price contracts) as guidelines in determining allowable costs under this Subsection to the extent they are applicable to construction contracts and consistent with the specifications of this Contract. The provisions of this contract control where they are more restrictive than, or inconsistent with, these federal cost principles."

SC-15-CLAIMS AND DISPUTES

At General Conditions Article 15 – Claims and Disputes, delete this section in its entirety and substitute the following text:

"ARTICLE 15 - CLAIMS FOR ADJUSTMENT AND DISPUTES

15.1 Notification

15.1.1 The CONTRACTOR shall notify the DEPARTMENT in writing as soon as the CONTRACTOR becomes aware of any act or occurrence which may form the basis of a claim for additional compensation or an extension of Contract Time or of any dispute regarding a question of fact or interpretation of the Contract. The DEPARTMENT has no obligation to investigate any fact or occurrence that might form the basis of a claim or to provide any additional compensation or extension of Contract Time unless the CONTRACTOR has notified the DEPARTMENT in writing in a timely manner of all facts the CONTRACTOR believes form the basis for the claim.

15.1.2 If the CONTRACTOR believes that he is entitled to an extension of Contract Time, then the CONTRACTOR must state the contract section on which he basis his extension request, provide the DEPARTMENT with sufficient information to demonstrate that the CONTRACTOR has suffered excusable delay, and show the specific amount of time to which the CONTRACTOR is entitled. The DEPARTMENT will not grant an extension of Contract Time if the CONTRACTOR does not timely submit revised schedules under **Section 013213**.

15.1.3 If the matter is not resolved by agreement within 7 days, the CONTRACTOR shall submit an Intent to Claim, in writing, to the DEPARTMENT within the next 14 days.

15.1.4 If the CONTRACTOR believes additional compensation or time is warranted, then he must immediately begin keeping complete, accurate, and specific daily records concerning every detail of the potential claim including actual costs incurred. The CONTRACTOR shall provide the DEPARTMENT access to any such records and furnish the DEPARTMENT copies, if

requested. Equipment costs must be based on the CONTRACTOR's internal rates for ownership, depreciation, and operating expenses and not on published rental rates. In computing damages, or costs claimed for a change order, or for any other claim against the Department for additional time, compensation or both, the contractor must prove actual damages based on internal costs for equipment, labor or efficiencies. Total cost, modified total cost or jury verdict forms of presentation of damage claims are not permissible to show damages. Labor inefficiencies must be shown to actually have occurred and can be proven solely based on job records. Theoretical studies are not a permissible means of showing labor inefficiencies. Home office overhead will not be allowed as a component of any claim against the Department.

15.1.5 If the claim or dispute is not resolved by the DEPARTMENT, within 21 days of notification pursuant to Article

15.1.1, then the CONTRACTOR shall submit a written Claim to the Contracting Officer within 90 days after the CONTRACTOR became aware of the basis of the claim or should have known the basis of the claim, whichever is earlier. The Contracting Officer will issue written acknowledgement of the receipt of the Claim.

15.1.6 The CONTRACTOR waives any right to claim if the DEPARTMENT was not notified properly or afforded the opportunity to inspect conditions or monitor actual costs or if the Claim is not filed on the date required.

15.2 Presenting the Claim

15.2.1 The Claim must include all of the following:

- a. The act, event, or condition the claim is based on
- b. The Contract provisions which apply to the claim and provide relief
- c. The item or items of Contract work affected and how they are affected
- d. The specific relief requested, including an extension to the Contract Time if applicable, and the basis upon which it was calculated
- e. A statement certifying that the claim is made in good faith, that the supporting cost and pricing data are accurate and complete to the best of your knowledge and belief, and that the amount requested accurately reflects the Contract adjustment which the CONTRACTOR believes is due.

15.3 Claim Validity, Additional Information, and DEPARTMENT's Action

15.3.1 The Claim, in order to be valid, must not only show that the CONTRACTOR suffered damages or delay but that it was caused by the act, event, or condition complained of and that the Contract provides entitlement to relief for such act, event, or condition.

15.3.2 The DEPARTMENT can make written request to the CONTRACTOR at any time for additional information relative to the Claim. The CONTRACTOR shall provide the DEPARTMENT the additional information within 30 days of receipt of such a request. Failure to furnish the additional information may be regarded as a waiver of the Claim.

15.4 Contracting Officer's Decision

The Contracting Officer shall issue a written decision within 90 days of receipt of all necessary information from the CONTRACTOR unless the Contracting Officer gives the CONTRACTOR notice that the time for issuing a decision is being extended for a specified period under AS 36.30.620. If the CONTRACTOR fails to furnish necessary information requested by the Contracting Officer, the Contracting Officer shall proceed to decide the claim and may, in the Contracting Officer's discretion, deny all or part of the claim because of the failure to furnish necessary information. The Contracting Officer's decision is final and conclusive unless, within 14 days of receipt of the decision, the CONTRACTOR delivers a Notice of Appeal to the Appeals Officer. Procedures for appeals are covered under AS 36.30.625 and AS 36.30.630.

15.5 Fraud and Misrepresentation in Making Claims

Criminal and Civil penalties authorized under AS 36.30.687 (including, but not limited to, forfeiture of all claimed amounts) may be imposed on the CONTRACTOR if the CONTRACTOR makes or uses a misrepresentation in support of a claim or defraud or attempt to defraud the DEPARTMENT at any stage of prosecuting a claim under this Contract.”

END OF SECTION



FACILITIES SECTION

FINAL COST REPORT

*Contractor Instruction: Submit this completed form with final payment. Information provided must include all costs in their entirety for projects with a total value over \$5,000.

Project #:
2019-0222-3961

Project Name:
JSOB Front Stair Replacement

Contractor: _____

Start Date: September 28, 2018
Completion Date: December 31, 2018

Scope	Material	Labor	TOTAL Material & Labor
01 - SITE WORK			
011 - Site Preparation	\$	\$	\$
012 - Site Improvements	\$	\$	\$
013 - Site Mechanical Utilities	\$	\$	\$
014 - Site Electrical Utilities	\$	\$	\$
02 - SUBSTRUCTURE			
021 - Standard Foundation	\$	\$	\$
022 - Slab on Grade	\$	\$	\$
023 - Basement	\$	\$	\$
03 - SUPERSTRUCTURE			
031 - Floor and Roof Structure	\$	\$	\$
032 - Stair Construction	\$	\$	\$
04 - EXTERIOR CLOSURE			
041 - Exterior Walls	\$	\$	\$
042 - Doors and Windows	\$	\$	\$
05 - ROOF SYSTEMS			
051 - Roof Finish	\$	\$	\$
052 - Skylights	\$	\$	\$
06 - INTERIOR CONSTRUCTION			
061 - Partitions and Doors	\$	\$	\$
062 - Floor Finishes	\$	\$	\$
063 - Ceiling Finishes	\$	\$	\$
064 - Wall Finishes	\$	\$	\$
07 - CONVEYING SYSTEMS			
071 - Elevators	\$	\$	\$
071 - Other Conveying	\$	\$	\$

STATE OF ALASKA
DEPARTMENT OF ADMINISTRATION
DIVISION OF SHARED SERVICES



FACILITIES SECTION

Scope	Material	Labor	TOTAL Material & Labor
08 - MECHANICAL			
081 - Plumbing	\$	\$	\$
082 - HVAC	\$	\$	\$
083 - Fire Protection	\$	\$	\$
084 - Special Mechanical Systems	\$	\$	\$
09 - ELECTRICAL			
091 - Service and Distribution	\$	\$	\$
092 - Lighting and Power	\$	\$	\$
093 - Special Electrical Systems	\$	\$	\$
10 - EQUIPMENT AND FURNISHINGS			
101 - Specialties	\$	\$	\$
102 - Equipment	\$	\$	\$
103 - Furnishings	\$	\$	\$
11 - SPECIAL CONSTRUCTION			
112 - Elevated Walkway	\$	\$	\$
12 - GENERAL REQUIREMENTS			
121 - Mobilization	\$	\$	\$
122 - Operation Costs	\$	\$	\$
123 - Profit	\$	\$	\$
13 - OTHER (provide detail)			
_____	\$	\$	\$
_____	\$	\$	\$
_____	\$	\$	\$
TOTAL	\$	\$	\$



SPECIAL NOTICE TO BIDDERS

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

1. New Veterans Preference. Please see reference below and further information in Section 007300 and 001200 of the Contract Documents.

Add **Article 7.12.5** to the General Conditions

- (a) Notwithstanding a provision in AS 36.30.170 to the contrary, if a bidder qualifies under AS 36.30.170(b) as an Alaska bidder and is a qualifying entity, a five percent bid preference shall be applied to the bid price. The preference may not exceed \$5,000. In this subsection, "qualifying entity" means a
- (1) sole proprietorship owned by an Alaska veteran;
 - (2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska veterans;
 - (3) limited liability company organized under AS 10.50 if a majority of the members are Alaska veterans; or
 - (4) corporation that is wholly owned by individuals and a majority of the individuals are Alaska veterans.
- (b) A preference under this section is in addition to any other preference for which the bidder qualifies.
- (c) To qualify for a preference under this section, a bidder must add value by the bidder itself actually performing, controlling, managing and supervising a significant part of the services provided, or the bidder must have sold supplies of the general nature solicited to other state agencies, governments, or the general public.
- (d) In this section, "Alaska veteran" means an individual who is a
- (1) resident of this state; and
 - (2) veteran; in this paragraph, "veteran" means an individual who

(A) served in the

- (i) armed forces of the United States, including a reserve unit of the United States armed forces;
or
- (ii) Alaska Territorial Guard, the Alaska Army National Guard, the Alaska Air National Guard,
or the Alaska Naval Militia; and

(B) was separated from service under a condition that was not dishonorable.

(e) It is requested that the contractor certify their veteran status with the submission of either a DD Form 214 or a NGB Form 22 discharge certificate along with their other required documents after Notice of Intent to Award is received.

2. **New Tax Clearance Form to be filled out and submitted to the Contracting Officer with project closeout paper work. See page 3 of this Section 007343.**
3. **New “Little Davis Bacon Act” Changes Filing Process and Assesses Special Fees on Public Works Construction Projects. See page 4 of this Section 007343.**

**ALASKA DEPARTMENT OF REVENUE
TAX CLEARANCE REQUEST FORM**

Contractor's Name:	
Project Name and Number:	JSOB Front Stair Replacement 2019-0222-3961
EIN/SSN:	
Mailing Address:	
City/State/Zip Code:	

I hereby authorize the Alaska Department of Revenue to release to

Department of Administration, Division of Shared Services, Facilities Section,
(Name of Department or Agency)

Who's facsimile number and/or email address is 907-465-2189 justin.papenbrock@alaska.gov
confirmation that all taxes, penalties and interest due the Department of Revenue have been paid and that
there are no outstanding amounts due.

Signed:	
Printed Name:	
Title*:	

*If tax clearance is being requested on behalf of a corporation/LLC/partnership, must be signed by an
officer/member/partner.

**Department of Administration will send completed form by facsimile or email to the Department of
Revenue at (907) 465-2375**

<i>DEPARTMENT USE ONLY</i>	
<input type="checkbox"/> <i>The above applicant is current on all taxes, penalties and interest due and is in good standing with the Alaska Department of Revenue.</i>	
<input type="checkbox"/> <i>The above applicant is not current on all taxes, penalties and interest due and is not in good standing with the Alaska Department of Revenue.</i>	
<hr/> <i>Department of Revenue Representative</i>	<hr/> <i>Date</i>

NEW “LITTLE DAVIS BACON ACT” CHANGES FILING PROCESS AND ASSESSES SPECIAL FEES ON PUBLIC WORKS CONSTRUCTION PROJECTS

The news release concerning these changes is at: <http://labor.state.ak.us/news/2003/news03-23.htm>

Governor Murkowski signed CSHB 155 into law on June 16, 2003. This new law allows contractors working on certain public construction projects to file bi-weekly versus weekly-certified payrolls to the Alaska Department of Labor and Workforce Development (DOLWD), **and** it levies filing fees.

- **What does this change accomplish?**

State Funded Projects - Instead of submitting certified payrolls weekly, prime Contractors working on State funded public construction projects are now allowed to file certified payrolls every other week - bi-weekly payroll reports on State funded project shall not contain Social Security Numbers. In conjunction with this statutory change, the DOLWD is revising the certified payroll form. The revised certified payroll form is available at: <http://www.labor.state.ak.us/lss/lssforms.htm>

Federally Funded Projects - Federal weekly payroll filing requirements under 29 CFR 5.5 (a) (3) are not changed by this new law. But, the assessment of a one percent fee based on the estimated value of work performed and of the value of each subcontractor's price now applies (see below). And, Federal Statue and form 25D-55 still require Social Security Numbers for the certified weekly payroll reports submitted on Federally funded projects.

- **Are there special forms to file and fees to pay?**

The prime Contractor working on any public construction project of **\$25,000 or more** must file a “**Notice of Work**” and a “**Notice of Completion**” form with the DOLWD.

A one percent filing fee will be assessed on contracts greater than \$25,000. The fee will be based on the estimated value of work to be performed by the prime contractor, and one percent of the value of each subcontractor's price. The maximum fee is \$5,000.00.

Amounts paid to owner/operators who do not use employees are exempt from the filing fee.

The Contractor must provide to the Contracting Agency a copy of the “Notice of Work” form that has been date stamped as received by the DOL along with confirmation of fee payment before work on the project may commence.

And, the Contractor must file a “Notice of Completion” with the DOLWD when work is completed. The Contracting Agency will not perform the “close-out for final project completion” until notice from the DOLWD that they have processed the Contractors “Notice of Completion” form. The “Notice of Work” and “Notice of Completion” forms are available at: <http://www.labor.state.ak.us/lss/lssforms.htm>

- **What about emergency work and projects bid opened before July 1, 2003?**

There are special provisions for filing the “Notice of Work” and the payment of fees for an emergency response project. Contractors have 14 days after starting work in which to file the “Notice of Work” and pay the fees on an emergency response project.

A prime Contractor under a contract that had a final bid date before July 1, 2003 will not be required to pay a filing fee, regardless of when the work starts.

- **How can I find out more about this new law?**

Contact the Dept. of Labor Workforce and Development, Wage and Hour Administration at:

Juneau	907.465.4842
Anchorage	907.269.4900
Fairbanks	907.451.2886

SPECIAL NOTICE TO BIDDERS

Change in Prevailing Wage Requirements

Notice: The Department of Labor and Workforce Development (DOLWD) proposed a revised regulatory definition of “on-site” in 8 AAC 30.910 to clarify the scope of activities covered by Alaska’s Little Davis Bacon Act (AS 36.05.010 – AS 36.05.110). For a copy of the revised definition of 8 AAC 30.910, go to: <http://labor.alaska.gov/commish/12-2010-OT-language.pdf>

DOLWD will enforce the revised provisions on all projects with a bid opening date on or after February 15, 2011. Prospective bidders on projects with a bid opening date on or after February 15, 2011, must consider the impact of the revised regulation and bid accordingly. DOLWD will not enforce the new “on-site” definition on projects with a bid opening date prior to February 15, 2011



INTENT OF DOCUMENTS

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Explanation of intent and terminology of the Construction Documents.

1.02 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions: Article 1 Definitions relating to 'Drawings' and 'Specifications'.
- B. Section 007200 - General Conditions: Article 3 Contract Documents relating to Intent, Amending, and Reuse.

1.03 SPECIFICATION FORMAT AND COMPOSITION

- A. Specifications are divided into Divisions and Sections for the convenience of writing and using. Titles are not intended to imply a particular trade jurisdiction. DEPARTMENT is not bound to define the limits of any subcontract, and will not enter into disputes between the CONTRACTOR and his employees, including Subcontractors.
- B. Pages are numbered independently for each Section, and recorded in the Table of Contents. Section number is shown with the page number at the bottom of each page. The end of each Section of the specifications is ended by "End of Section". It is CONTRACTOR'S responsibility to verify that Contract Documents received for bidding and/or construction are complete in accordance with Table of Contents.
- C. The language employed in the Contract Documents is addressed directly to the CONTRACTOR. Imperative or indicative language is generally employed throughout and requirements expressed are the mandatory responsibility of the CONTRACTOR, even though the work specified may be accomplished by specialty subcontractors engaged by the CONTRACTOR. References to third parties in this regard shall not be interpreted in any way as to relieve the CONTRACTOR of his or her responsibility under this Contract.

- D. These Specifications are of the abbreviated, or "streamlined" type, and may include incomplete sentences.
- E. Omissions of words or phrases such as "the CONTRACTOR shall," "in conformity therewith," "shall be," "as noted on the Drawings," "according to the Drawings," "a," "an," "the" and "all" are intentional.
- F. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

1.04 DRAWINGS: CONTENT EXPLANATION

A. Drawings, Dimensions and Measurements.

1. **Contract Documents do not purport to describe in detail, absolute and complete construction information.** In some instances drawings are diagrammatic. CONTRACTOR shall provide verification of actual site conditions and shall provide complete and operational systems as specified when drawings do not provide full detail.
2. Where on any of the Drawings a portion of the work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other portions of the Work.
3. Wherever a detail is referenced and developed for a specific condition, same or similar detail shall apply to identical or similar conditions elsewhere on Project even though not specifically referenced.
4. Where the word "similar" occurs on the Drawings, it shall be interpreted in its general sense and not as meaning identical, all details shall be worked out in relation to their location and their connection with other parts of the work.
5. The figured dimensions on the Drawings or notes indicating dimensions shall be used instead of measurements of the Drawings by scale.
6. No scale measurements shall be used as a dimension to work with unless specific permission to do so is granted in advance in writing by the Department.

1.05 COMMON TERMINOLOGY

A. Certain items used generally throughout the Specifications and Drawings are used as follows:

1. **Indicated:** The term "indicated" is a cross reference to details, notes or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar means of recording requirements in the Contract Documents. Where terms such as "shown",

"noted", "schedules", and "specified" are used in lieu of "indicate", it is for the purpose of helping the reader accomplish the cross reference, and no limitation of location is intended except as specifically noted.

2. **Installer:** The person or entity engaged by CONTRACTOR, his Subcontractor or sub-subcontractor for the performance of a particular unit of Work at the Project site, including installation, erection, application and similar required operations. It is a general requirement that installers be recognized experts in the work they are engaged to perform.
3. **Furnish:** Except as otherwise defined in greater detail, the term "furnish" is used to mean "...supply and deliver to the Project site, ready for unpacking, assembly and installation..."
4. **Provide:** Except to the extent further defined, the term "provide" means to furnish and install, complete and ready for the intended use.
5. **Guarantee and Warranty:** "Warranty" is generally used in conjunction with products manufactured or fabricated away from the Project site, and "guarantee" is generally used in conjunction with units of work which require both products and substantial amounts of labor at the Project site. The resulting difference is that warranties are frequently issued by manufacturers, and guarantees are generally issued by CONTRACTOR and frequently supported (partially) by product warranties from manufacturers.

1.06 CONFLICTS

- A. In accordance with Article 3 of the General Conditions,** report any conflicts to Contracting Officer for clarification.

PART 2 – PRODUCTS

[Not Used]

PART 3 – EXECUTION

[Not Used]

END OF SECTION



SUMMARY OF WORK

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Work Covered by the Contract Documents (1.3)
 2. Project Alternates Summary (1.4)
 3. Type of the Contract (1.5)
 4. Work Phases (1.6)
 5. Work under other Contracts (1.7)
 6. Use of Premises (1.8)
 7. Owner's Occupancy Requirements (1.9)
 8. Work Restrictions (1.10)
 9. Miscellaneous Provisions(1.11)
 10. Contract Closeout Procedures (1.12)
 11. Background Check Requirements (1.13)
 12. Access Procedures (1.14)
 13. Technology Requirements (1.15)

- B. Related Sections include the following:

DIVISION 01 - GENERAL REQUIREMENTS

1. Section 011000 - Summary of Work

DIVISION 02 – EXISTING CONDITIONS

1. Section 024119 Selective Demolition

DIVISION 03 - CONCRETE

1. Section 033000 Cast in Place Concrete
2. Section 039320 Concrete Repair

DIVISION 05 - METALS

1. Section 057310 Stainless Steel Handrail

DIVISION 26 - ELECTRICAL

1. Section 260519 Low Voltage Power Conductors and Cable
2. Section 260526 Grounding and Bonding for Electrical Systems
3. Section 260259 Hanger and Supports for Electrical Systems
4. Section 260533 Raceways and Boxes for Electrical Systems
5. Section 260923 Lighting and Control Devices
6. Section 265119 L.E.D. Interior Lighting
7. Section 268313 Radiant Heat Snow Melt System

DIVISION 31 - EARTHWORK

1. Section 311900 Erosion Control
2. Section 312001 Excavation and Embankment
3. Section 312003 Base Course
4. Section 312318 Temporary Environmental Controls
5. Section 316000 Construction Surveying
6. Section 321313 Site Concrete
7. Section 321315 Sidewalk, Curb and Gutter
8. Section
9. Section 321316 Remove Existing Sidewalk, Concrete, Curb and Gutter
10. Section 321317 Concrete Wall Repair
11. Section 321117 Pipe Insulation

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: JSOB (Juneau State Office Building) Front Stair Replacement Project #2019-0222-3961
 1. Project Location: JSOB 333 Willoughby Avenue, Juneau, Alaska 99801
- B. Owner: State of Alaska, Department of Administration, Division of Shared Services
 1. Owner's Representative: Justin Papenbrock, Construction Contracting Officer, Project Manager (907) 465-5331
 2. Project Manager: The Construction Contracting Officer, identified as the Owner's Representative above in sub-Paragraph 1, is the Project Manager overseeing this contract for the Owner.
- C. Architect: North Wind Architects, LLC
 1. Sean Boily, AIA-Principal-In-Charge.
 2. 126 Seward Street, Juneau Alaska, 99801.
 3. Ph: 907-586-6150 Fx: 907-586-6181
 4. email: sean@northwindarch.com

- D. Construction Manager: The Construction Manager is the General Contractor awarded this Contract.
1. In Divisions 1 through 48 Sections, the terms "Construction Manager" and "Contractor" are synonymous
- E. Delegated Authority: The Contracting Officer is the only party with delegated authority to make changes to the terms and conditions of this contract. All additions or deletions to the scope of work shall be approved by the Contracting Officer and documented via an executed change order or executed Design Clarification Request Form signed by both parties. Third Parties hired by the Owner do not have the authority to make changes to the contract and all recommendations by Third Parties are subject to approval and acceptance by the Contracting Officer.
- F. Additive Alternate: If funding is available, the State may elect to award additional work identified herein as an additive alternate(s) which is separate from the base scope of work identified herein.

1.4 PROJECT ALTERNATES SUMMARY

00 BASE BID:

Demolition of existing concrete stairs, repair of concrete stair foundation, and demolition of upper 8th floor plaza patterned plaza topping concrete banding and decorative stamped concrete. Base to include stainless steel handrails.

01 BASE BID: Currently Includes Stainless steel handrail as shown on sheet. A2.

ALTERNATE 01: To include Stainless steel handrail (With) **Integrated LED Lighting**, Reference Electrical.

02 BASE BID: Cast-in-place concrete stairs with cast-in-place concrete landings at both upper and lower plaza.

ALTERNATE 02:

Cast-in-place concrete stairs with cast-in-place concrete landings at both upper and lower plaza. To include **Radiant Heat Snow Melt System**, Reference Electrical.

03 BASE BID: Shows **No** work on existing adjacent concrete sidewalk and curb located at the lower stair landing at Calhoun Street.

ALTERNATE 03:

Replace Existing adjacent concrete sidewalk and curb located at the lower stair landing at Calhoun Street, Reference Civil.

1.5 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

1.6 WORK PHASES

- A. The Work shall be conducted in a single phase.
 - 1. Work shall be substantially complete and ready for utilization after 11:59pm December 31, 2018.
- B. The Contractor shall complete the scope of work based on an approved work schedule tendered to the Contracting Officer. Upon notice to proceed from the Contracting Officer, the Contractor shall complete the work in one phase working continuously until the work is substantially complete and accepted by the Contracting Officer.

1.7 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.
- B. Preceding Work: Owner may award separate contract(s) for the following construction operations at Project site. Those operations will be conducted simultaneously with work under this contract.
 - 1. Transformer and electrical room renovation/replacement for the State Office Building: A separate contract has been awarded to Ever Electric to complete this work.
 - 2. Alaska State Building Roof replacement/repair.

1.8 USE OF PREMISES

- A. General: The Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated. Contractor shall coordinate all sidewalk and street closures with the City and Borough of Juneau.
 - 1. Construction Operations: Limited to area noted on the Drawings.

- a) Limits: coordinate and designate with temporary construction fencing. Access to adjacent properties and easements.
 - b) Preserve site surfaces not identified for improvement or replacement. Repair as required to preconstruction state
- 2. The contractor will be expected to keep their work area clean and to prevent trip hazards. Contractor shall protect adjacent equipment and building structure from damage during the removal disposal and installation work.
- 3. Contractor shall clean the Project site daily to control the accumulation of waste materials and rubbish. Maintain adjacent areas in a clean and safe manner. Debris and waste escaping the limits of the Work areas (including routes to and from) shall be cleaned up immediately. Damages resulting from the escape of such debris shall be the responsibility of the Contractor. All waste shall be disposed of off-site at Contractor's expense. Owner's existing refuse service shall not be used for disposal of construction materials.
- 4. If the Contractor fails to maintain an acceptable level of cleanliness at the project site, the State will clean the site or hire a contractor to clean the project site. The cost to clean the site will be deducted from contract before final payment is made. Determination of the level of cleanliness required at the project site shall rest solely with the Contracting Officer/ Project Manager.
- 5. Driveways and Entrances: Keep driveways, parking garages, designated parking spots, loading areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- 6. Equipment and materials will only be allowed to be stored within the designated work area. No equipment will be visible to the public outside of the contractors specified working hours unless previously approved by the Contracting Officer.
- C. Use of Existing Building: Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.
- D. Contractor shall not park on-site. The contractor should plan to apply for on-street parking from the City and Borough of Juneau.

1.9 OWNER'S OCCUPANCY REQUIREMENTS

- A. Owner will occupy the premises during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Before Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving the building.

1.10 WORK RESTRICTIONS

- A. On-Site Work Hours: Disruptive work shall not be performed outside the existing building during normal business working hours of 8:00am to 5:00pm, Monday through Friday, except otherwise indicated.
 - 1. Weekend Hours: Saturdays and Sundays
 - 2. State Recognized Holidays:
 - 3. Hours for demolition or other noisy activity must be cleared by the Contracting Officer one week ahead of time in order to properly notify building occupants.
- B. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes.
- C. The Contractor must get the Contracting Officers approval on any schedule revision.
- D. Any site visits outside of the designated work hours need to be approved by the Contracting Officer.

1.11 MISCELLANEOUS PROVISIONS

- A. Project Meetings
 - 1. Prior to the commencement of Work at the site, a Pre-Construction Conference will be held at a mutually agreed time and place which shall be attended by the CONTRACTORS' Project Manager, its superintendent, and its Subcontractors as the CONTRACTOR deems appropriate. Other attendants will be:

- a. The Contracting Officer.
 - b. Others as requested by CONTRACTOR, or the Contracting Officer.
2. The CONTRACTOR shall bring to the Pre-Construction Conference four copies each of the following:
 - a. Plan of Operation.
 - b. Project Schedule.
 - c. Procurement schedule of major equipment/materials or items requiring long lead time.
 - d. Shop Drawing/Sample/Substitute or "Or Equal" submittal schedule.
 - e. Name and telephone number of CONTRACTORS' Project Supervisor.
 - f. Cutting and patching submittal covering items of selective demolition.
 - g. 24 hour contact information for the general contractors superintendent in charge of this project as well as all associated subcontractors that will be working onsite.
 - h. Material Safety Data Sheets of any chemical product to be used on site.
 - i. Provide submittals for all materials that will be used onsite.
3. The purpose of the Pre-Construction Conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established.
4. The CONTRACTOR should be prepared to discuss all of the items listed below:
 - a. Status of CONTRACTORS' insurance and bonds.
 - b. CONTRACTORS' tentative schedules.
 - c. Transmittal, review, and distribution of CONTRACTORS' submittals.
 - d. Processing applications for payment upon substantial completion to the Contracting Officer.
 - e. Maintaining record documents.
 - f. Critical Work sequencing.
 - g. Field decisions and Change Orders.
 - h. Use of Project site, storage areas, security, housekeeping, and Using Agency's needs.
 - i. Major equipment deliveries and priorities.
 - j. CONTRACTORS' assignments for safety and first aid.
5. The Contracting Officer will preside at the Pre-Construction Conference and will arrange for keeping and distributing the minutes to the General Contractor in attendance.

B. Progress Meetings

1. The Contracting Officer may schedule and hold regular progress meetings weekly and at other times as requested by the Contracting Officer, or as required by progress of the Work. CONTRACTOR, Contracting Officer, Using Agency and all Subcontractors active on the site must attend each meeting.

2. The Contracting Officer shall preside over the meetings and will arrange for keeping and distributing the minutes. Purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop. During each meeting, the CONTRACTOR is required to present any issues which may impact the Work, with a view toward resolving these issues expeditiously.
3. The Contracting Officer may elect to record the meeting. A copy of the recording will be maintained in the project file which is a matter of public record.

1.12 CONTRACT CLOSEOUT PROCEDURES

- A. When Contractor considers the Work to be complete, submit a written request certifying that the Work is complete and in accordance with the Contract Documents. In advance of the request, Contractor shall:
 1. Assemble two full sets of all product documents. Include the following data on each product: Product Name, Manufacturer, Distributor Name if applicable, address and telephone number of installer (whether Contractor or subcontractor), manufacturer's recommended maintenance practices, replacement parts listing and associated shop drawings (if applicable).
- B. Provide the Contracting Officer with duplicate copies of all product warranties.
- C. Provide copies of all inspection reports and occupancy permits issued by the governing authorities.
- D. In a format approved by the Project Manager, provide two copies of a final statement accounting for all Project costs, including items of Work done on a "cost of the Work" basis, if any. Where required, provide support documentation. Indicate total adjusted contract price, amount(s) of previous payments, and sum remaining due. Include an executed Contract Release form, as provided.
- E. Contractor Warranty: Contractor shall provide a written workmanship warranty on all installation and applications for a period of (2) years after final payment has been made by the State.

1.13 BACKGROUND CHECK REQUIREMENTS

- A. Background Check Procedure:
 1. Each person performing work on site under this contract (including Contractors project managers and/or job foreman) are required to obtain a background check through the

Department of Public Safety by the Contractor requesting for Criminal Justice Information from the record subject name check (presently the fee for processing is \$20 for a single copy).

2. The Contractor shall pay all associated processing fees which may be in the form of a personal check, cashiers' check or money order made payable to the Department of Public Safety.
3. The Contractor shall tender to the Contracting Officer/Project Manager listed on the solicitation document a copy of the Background Check reports for each individual for acceptance or denial at the sole discretion of the Division of General Services Facility Manager prior to commencement of any work at the site. The background checks shall remain confidential in a file located in the Facility Manager's office.
4. The Contractor may request the background checks in person on the first floor of the Diamond Courthouse located at, 123 Fourth Street Juneau, Alaska. For more information contact the Department of Public Safety: 907-465-4343.
5. The Contractor shall be advised that the background checks may take longer than a week to obtain from the Department of Public Safety.
6. The Contracting Officer will advise the Contractor of acceptance or denial for each individual to work on this project within 48 hours of submittal.
7. Background checks are good for a period of one year from the date of acceptance. The Contractor is responsible for obtaining replacement background checks for each person performing work on site under this contract annually at the Contractor's expense.

1.14 ACCESS PROCEDURES

A. Access Requirements

1. Once an individual background check is approved to work on this project in accordance with paragraph 1.13, the Contracting Officer will make arrangements for key cards/keys to be processed and delivered to the State Office Building, 333 Willoughby Avenue, and 8th floor Calhoun entrance Security Guard desk for distribution. Each individual is required to complete the attached proximity card form to process their key card. The key card/keys will be available for pick up and return each work day at the State Office Building Guard Desk. Each individual is required to pick up their own key card/key and show identification when pickup up and returning the key card/keys at the close of each work shift. Individuals without approved background checks will not be given access.
2. The State Office Building guard desk is manned 24/7 365 days a year. Contact number 907-465-2100.

3. Contractor is advised that if the key cards are lost, not returned, defaced or destroyed, the Contractor is responsible for reimbursing the State \$100/per card.
4. Any cost related to the loss of the proximity or hard keys shall be borne by the contractor. This includes lock replacement if deemed necessary by the using agency. Hard key charges may vary depending on the sensitivity of the key that is lost. If the lost key is deemed to be a security risk, the cost of replacing lock cylinders in all of the affected areas shall be borne by the Contractor.
5. It should be noted that some of the keys used on this project are used in the locksets at multiple State owned buildings. If one or more of the hard keys is lost that are from multiple lock sets/building and becomes a security risk, all of the cylinders that use that key shall be replaced. The total cost for this work shall be borne by the Contractor.
6. The State may contract from a third party the lock replacement and forward the invoice to the Contractor for payment directly. If the Contractor refuses to pay the invoice for the locksmith within 30 days of the invoice date, the cost for the locksmiths work shall be deducted from this contract. Due to security reasons, the State does not permit the Contractor to contract directly for the locksmith work.

1.15 TECHNOLOGY REQUIREMENTS

- A. Administration: The Contractor is required to have the following technology for administrating the contract:
 1. Personal computer with email and scanning capabilities.
 2. Facsimile
 3. Land line telephone
 4. Mobile Phone
- B. Operational: The Contractor is required to provide the following technology for field on-site operations to the Contracting Officer:
 1. 24/7 cellular phone access for the General Contractors job foreman during the life of the contract.
 2. 24/7 cellular phone access for the General Contractors Project Manager during the life of the contract.
 3. 24/7 cellular phone access for the sub-contractors if they are working unsupervised by the General when they are working on site.

PART 2 – PRODUCTS
(Not Used)

PART 3 – EXECUTION

END OF SECTION

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Stainless steel handrail with integrated LED lighting.
 - 1. Base Bid: Shall include all patching, preparation and installation of anchor system for new stainless steel handrail system.
 - 2. Alternate: Shall include substituting the base bid stainless steel handrail for a stainless steel handrail with integrated LED lighting.
- B. Alternate No. 2: Electric Heat Trace at concrete slab and concrete stair.
- C. Alternate No. 3: Sidewalk/curb replacement at base of stair.

END OF SECTION 012300



PRODUCT SUBSTITUTIONS

Project Name: JSOB Front Stair Replacement
Project Number: 2019 -0222-3961

1.1 GENERAL

- A. Requests for changes in products, materials, equipment, and methods of construction required by the CONTRACTOR after Award of the Contract are considered requests for “substitutions.” The following are not considered substitutions:
1. Revisions to the Contract Documents requested by the Contracting Officer, or Using Agency’s Project Representative.
 2. Specified options of products and construction methods included in Contract Documents.
 3. Compliance with governing regulations and orders issued by governing authorities.
- B. Requests for substitution will be considered if received within 10 days after issuance of the Notice to Proceed with Work. Requests received more than 10 days after issuance of the Notice to Proceed with the Work may be considered or rejected at the discretion of the Contracting Officer.
- C. The CONTRACTOR’s substitution request when received, will be considered by the Contracting Officer when one or more of the following conditions are satisfied, as determined by the Contracting Officer. Otherwise, requests will be returned without action except to record non-compliance with these requirements.
1. The request is timely, fully documented, and properly submitted.
 2. Proposed changes are in keeping with the general intent of the Contract Documents.
 3. Extensive revisions to the Contract Documents are not required.
 4. Request is directly related to an “or equal” clause or similar language in the Contract Documents.
 5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a

result of the CONTRACTOR's failure to pursue the Work promptly, or to coordinate activities properly.

6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered to the DEPARTMENT, in terms of cost, time, energy conservation, or other considerations of merit, after deducting off-setting responsibilities the DEPARTMENT may be required to bear. Additional responsibilities for the DEPARTMENT may include additional compensation to the Architect of Record for redesign and evaluation services, increased cost of other construction by the DEPARTMENT, or separate contractors, and similar considerations.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the CONTRACTOR certifies that the substitution will overcome the incompatibility.
 9. The specified product or method of construction cannot be coordinated with other materials, and where the CONTRACTOR certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the CONTRACTOR certifies that the proposed substitution can provide the required warranty.
 11. The evaluation and acceptance of the proposed substitute will not prejudice the CONTRACTOR's achievement of Substantial Completion within the Contract Time.
 12. Available maintenance, repair, and replacement service and its estimated cost are indicated.
 13. License and/or royalty fees, which may or may not be subject to payment, for incorporation or use of the substitute product(s) in connection with the Work are indicated.
 14. Itemized estimate of all costs resulting directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change are indicated.
- D. The CONTRACTOR's submittal and Contracting Officer's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

1.2 EVALUATION PROCESS

A. Evaluation by the Contracting Officer is subject to the following requirements:

1. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
2. The Contracting Officer will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the Contracting Officer's decision shall be final.
3. The Contracting Officer may require the CONTRACTOR, to furnish at the CONTRACTOR's expense, additional data about the proposed substitute.
4. The DEPARTMENT may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
5. Acceptance by the Contracting Officer of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
6. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR's Work, the Work of its subcontractors and of other contractors, and shall effect such changes without cost to the DEPARTMENT. This shall include the cost for redesign and claims of other contractor(s) affected by the resulting change.

B. CONTRACTOR shall submit a request for product substitution in the following manner:

1. CONTRACTOR shall make written application to the Contracting Officer on the Product Substitutions Submittal Form for review and consideration of a substitute item of material or equipment. Submit 4 copies of each request for substitution on the form noted and in accordance with procedures for Change Order proposals.
2. Product Substitutions Submittal Form shall be submitted in the time period established under 1.1 B. above, unless otherwise provided by law or authorized in writing by the Contracting Officer.
3. The CONTRACTOR shall certify that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified, and be suited to the same use as that specified.
4. The CONTRACTOR's application using the Product Substitutions Submittal Form shall contain the following statements and/or information, which shall be considered by the Contracting Officer in evaluating the proposed substitution. Otherwise, requests will be returned without action except to record non-compliance with these requirements. Identify

the product, or installation method to be replaced in each request. Include related specification section and drawing numbers. Document compliance with requirements for substitutions, and the following information, as appropriate:

- a. Product data, including drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. Comparison of significant qualities of the proposed substitution with those specified.
 - d. A list of changes or modifications needed to other parts of the Work and to construction performed by the DEPARTMENT and separate contractors, which will be necessary to accommodate the proposed substitution.
 - e. A statement indicating the effect the substitution will have on the construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall contract time.
 - f. Cost information, including a proposal of the net change, if any, in the contract sum.
 - g. Certification that the substitution is equal-to or better than in every respect to that required by the Contract Documents and that it will perform adequately in the application indicated. Include the CONTRACTOR's waiver of rights to additional payment or time that may be necessary because of the substitution's failure to perform adequately.
- C. If required, within one week of receipt of the request for substitution, the Contracting Officer may request additional information necessary for evaluation. Within two weeks of receipt of the request, or one week of receipt of any additional information, whichever is later, the Contracting Officer will notify the CONTRACTOR of acceptance or rejection. If a decision on use of a substitute cannot be made within the time allocated, the specified product will be used. Acceptance will be acknowledged in the form of a Change Order.
- D. Wherever a proposed substitute material or equipment has not been submitted within said 14 day period, or wherever the submission of a proposed substitute material or equipment has been judged to be unacceptable by the Contracting Officer, the CONTRACTOR shall provide material or equipment named in the Contract Documents.
- E. As applicable, no shop drawing submittals will be made for a substitute item nor will any substitute item be ordered, installed, or utilized without the Contracting Officer's prior written acceptance of the CONTRACTOR's *Substitution Request Form* which will be evidenced by a Change Order.

PART 2 - PRODUCTS
(Not Used)

PART 3 - EXECUTION
(Not Used)

END OF SECTION



PRODUCT SUBSTITUTION REQUEST FORM

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

Contractor: _____

Specified item for which substitution is requested: (reference the specification section and paragraph)

The following product is submitted for substitution: (describe proposed substitution and attach applicable catalog cuts)

I certify the following:

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	The substitute will perform adequately and achieve the results called for by the general design.
<input type="checkbox"/>	<input type="checkbox"/>	The substitute is similar, of equal substance, suited to the same use, and will provide the same warranty as the product specified.
<input type="checkbox"/>	<input type="checkbox"/>	The evaluation and approval of the proposed substitute will not delay the Substantial or Final Completion of the project.
<input type="checkbox"/>	<input type="checkbox"/>	Any change in the design necessitated by the proposed substitution will not delay the Substantial or Final Completion of the project.
<input type="checkbox"/>	<input type="checkbox"/>	The cost of any change in the design necessitated by the proposed substitution will be paid by the contractor at no cost to the State.
<input type="checkbox"/>	<input type="checkbox"/>	The cost of any license fee or royalty necessitated by the proposed substitution will be paid by the contractor at no cost to the State.

Signed:

Authorized Contractor Signature

Date:

Architect/Engineer Recommendation:

<input type="checkbox"/> Accepted	<input type="checkbox"/> Accepted as Noted	<input type="checkbox"/> Not Accepted	<input type="checkbox"/> Received Too Late
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Remarks:

Architect/Engineer Signature

Date:☐ Recommend Acceptance☐ Recommend Rejection

Date:

Resident Engineer☐ Accepted☐ Rejected

Date:

Contracting Officer/Project Manager



CHANGE ORDER PROCEDURES

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Procedures for processing Change Orders.

1.02 RELATED REQUIREMENTS

- A. Section 004310 - Bid Schedule: Total amount bid for lump sum items
- B. Section 005100 - Contract Form: Total amount of Contract Price, as awarded
- C. Section 007200 - General Conditions: Governing requirements for changes in the Work, in Contract Price, and Contract Time.
- D. Section 007300 - Supplementary Conditions: Modifications to Document 007200 - General Conditions.
- E. Section 012977 - Applications for Payment.
- F. Section 013219 – Submittals.

1.03 SUBMITTALS

- A. Submit name of the individual authorized to accept changes, and to be responsible for informing others in CONTRACTOR's employ of changes in the Work.
- B. Change Order Forms will be prepared by the DEPARTMENT.

1.04 DOCUMENTATION OF CHANGE IN CONTRACT PRICE AND CONTRACT TIME

- A. Maintain detailed records of work done on a Cost of the Work plus a Fee basis (if applicable). Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work for both fixed price and cost plus changes. Incomplete or unsubstantiated costs will be disallowed.
- B. CONTRACTOR shall submit a complete, detailed, itemized cost breakdown addressing impact on Contract Time and Contract Price with each proposal.
- C. On request, provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for work done on a cost of the Work plus a Fee basis, with additional information:
 - 1. Origin and date of claim.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time records and wage rates paid.
 - 4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.05 PRELIMINARY PROCEDURES

- A. DEPARTMENT may submit a Proposal Request which includes: Detailed description of change with supplementary or revised Drawings and Specifications, the projected time for executing the change, with a stipulation of any overtime work required, and the period of time during which the requested price will be considered valid.
- B. CONTRACTOR may initiate a change by submittal of a request to DEPARTMENT describing the proposed change with a statement of the reason for the change, and the effect on Contract Price and Contract Time with full documentation.

1.06 CONSTRUCTION CHANGE AUTHORIZATION

- A. Shall be in accordance with Article 9 - Changes: in Document 007200 - General Conditions as modified by the Special Conditions.

1.07 FIXED PRICE CHANGE ORDER

- A. CONTRACTOR shall submit an itemized price proposal in sufficient detail to fully explain the basis for the proposal. Attach invoices and receipts for products, equipment, subcontracts, and as requested by the DEPARTMENT. CONTRACTOR and the DEPARTMENT shall then negotiate an equitable price (and time adjustment if appropriate) in good faith. The Change Order will reflect the results of those negotiations. If negotiations break down CONTRACTOR may be directed to perform the work under COST OF THE WORK CHANGE ORDER.
- B. The following maximum rates of cost markup (to cover both overhead and profit of the CONTRACTOR) shall be used in the negotiation of a "Fixed -Price" Change Order:
 - 1. 15% - where a cost is borne directly by prime contractor.
 - 2. 10% - where a cost is borne by a subordinate contractor
- C. These terms shall also apply to the proposal of subcontractors and allowances.
- D. Will be based on proposal request and CONTRACTOR's lump sum quotation or CONTRACTOR's request for Change Order as approved by the DEPARTMENT.

1.08 UNIT PRICE CHANGE ORDER

- A. For pre-determined Unit Prices and quantities, Change Order will be executed on a lump sum basis.
- B. For unit costs or quantities of units of Work which are not predetermined, execute Work under a Directive. Changes in Contract Price or Contract Time will be computed as specified for cost of the Work plus fee via Change Order.

1.09 COST OF THE WORK CHANGE ORDER

- A. CONTRACTOR shall submit documentation required in 1.04 on a daily basis for certification by the Project Manager. Project Manager will indicate by signature that the submitted documentation is acceptable.
- B. After completion of the change and within 10 Calendar Days, unless extended by the Project Manager, the CONTRACTOR shall submit in final form an itemized account with support data

of all costs. Support data shall have been certified by the Project Manager, as required above in paragraph A.

1.10 EXECUTION OF CHANGE ORDERS

- A. DEPARTMENT will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

1.11 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price as shown on Change Order.
- B. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of Work affected by the change, and resubmit.
- C. Promptly enter changes in project record documents.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION



SCHEDULE OF VALUES

Project Name: JSOB Front Stair Replacement
Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 REQUIREMENTS

This Section defines the process whereby the Schedule of Values (lump sum price breakdown) shall be developed and ultimately coordinated with the construction Progress Schedule. Monthly progress payment amounts shall be determined by comparing the Schedule of Values against the monthly progress updates to the Progress Schedules.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 011000 Summary of Work
- B. Section 013219 CONTRACTOR Submittals

1.3 PRELIMINARY SCHEDULE OF VALUES

- A. The Schedule of Values shall be developed in three steps independent but parallel with the development of the construction Progress Schedule activities and logic. The steps shall be as follows:
 - 1. Identifying the major WORK components and general values
 - 2. Establishing detailed values for the items of Work within the components
 - 3. Correlating the detailed values of work to the construction Progress Schedule.
- B. The CONTRACTOR shall submit a preliminary Schedule of Values for the major components of the WORK prior to the Pre-Construction Conference as specified and referenced in Section 013219, "CONTRACTOR Submittals." The listing shall include, at a minimum, the proposed value for the major WORK components such as:

- 1. General Contract Requirements

2. Mobilization
 3. Selective Demolition
 4. Foundation Work
 5. Concrete Slab
 6. Record Documents
 7. Project Close-out
- C. The CONTRACTOR, Architect of Record and Contracting Officer shall meet and jointly review the preliminary Schedule of Values and make any adjustments in value allocations necessary, if in the opinion of the Contracting Officer, allocation adjustments are necessary to establish fair and reasonable allocation of values for the major Work Components. Front end loading will not be permitted. The Contracting Officer may require inclusion of the major Work components not included in the above listing if, in the opinion of the Contracting Officer, such additional components are appropriate. This review and any necessary revision shall be completed within 10 days following the Pre-Construction Conference.

1.4 DETAILED SCHEDULE OF VALUES

- A. The CONTRACTOR shall prepare and submit a detailed Schedule of Values to the Contracting Officer within 10 days from the date of Notice to Proceed. The detailed Schedule of Values shall be based on the accepted, preliminary Schedule of Values for major Work components. The Contracting Officer shall be the sole judge of acceptable numbers, details and description of values established. If, in the opinion of the Contracting Officer, a greater number of Schedule of Values items than proposed by the CONTRACTOR are deemed necessary, the CONTRACTOR shall add the additional items so identified by the Contracting Officer.
1. Minimum level of detail for major WORK components shall include cost breakdowns of materials, labor and other (equipment, etc.) costs for each individual specification line item included within the major Work Components based on the index of this manual. Greater detail shall be provided as directed by the Contracting Officer.
 2. Each additive alternate and any subsequent Change Order Work shall be detailed in a similar manner, as above.
- B. The CONTRACTOR and Contracting Officer shall meet and jointly review the detailed Schedule of Values within 14 days from the Notice to Proceed. The value allocations and extent of detail shall be reviewed to determine any necessary adjustments to the values and to determine if sufficient detail has been proposed to allocate cost based on the construction

Progress Schedule activities. Any adjustments deemed necessary to the value allocation or level of detail by the Contracting Officer shall be made by the CONTRACTOR and a revised Schedule of Values shall be submitted within 3 days from the date of notification.

- C. Following acceptance of the detailed Schedule of Values, the CONTRACTOR shall incorporate the values into the cost loading portion of the Progress Schedule. The Progress Schedule activities and logic shall have been developed concurrent to the development of the Detailed Schedule of Values; however, it may be necessary to adjust the detailed Schedule of Values to correlate to individual schedule activities. It is anticipated that instances will occur, due to the independent but parallel development of the Schedule of Values and the Progress Schedule activities, where interfacing these two documents will require changes to each document. Schedule activities may need to be added to accommodate the detail of the Schedule of Values. Schedule of Value items may need to be added to accommodate the detail of the Progress Schedule activities. Where such instances arise, the CONTRACTOR shall propose to the Contracting Officer changes to the Schedule of Values and to the construction Progress Schedule to satisfy the coordination of schedule and cost requirements.

1.5 CROSS REFERENCE LISTING

- A. To assist in the correlation of the Schedule of Values and the construction Progress Schedule, the CONTRACTOR shall provide a Cross Reference Listing which shall be furnished in two parts. The first part shall list each scheduled activity with the breakdown of the respective valued items making up the total cost of the activity. The second part shall list the valued items with respective scheduled activity or activities that make up the total cost for a valued item (shown in the Schedule of Values). The total cost for each scheduled item shall be indicated
- B. These listing shall be updated and submitted in conjunction with periodic submittals as stated in Section 013213, Progress Schedules, subsection 1.06.

1.6 CHANGES TO SCHEDULE OF VALUES

- A. Changes to the construction Progress Schedule which add activities not included in the original schedule but included in the original WORK (schedule omissions) shall have values assigned as approved by the Contracting Officer. Other activity values shall be reduced to provide equal value adjustment increases for added activities as approved by the Contracting Officer.
- B. In the event that the CONTRACTOR and Contracting Officer agree to make adjustments to the original Schedule of Values because of inequities discovered in the original accepted detailed Schedule of Values, increases and equal decreases to values for activities may be made.
- C. Approved change orders reflected in the Progress Schedule shall be incorporated into the Schedule of Values as a single unit identified by the change order number.

1.7 LIQUIDATED DAMAGES

- A. If any submittal required by this Section is determined by the Contracting Officer to be incomplete or is submitted later than required, the DEPARTMENT could suffer financial loss and accordingly liquidated damages may be assessed against the CONTRACTOR in accordance with Article 4 of the Agreement (Section 005100).

END OF SECTION



APPLICATION FOR PAYMENT

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Procedures for preparation and submittal of Applications for Payment.

1.2 RELATED DOCUMENTS

- A. Section 005100 – Contract Form: Contract Price & Liquidated Damages.

Section 007200 – General Conditions: “Progress Payments” and “Final Payment”.

Section 013219 – Submittals: Schedule of Values, “Progress Schedules”, and submittal procedures.

1.3 FORMAT

- A. Submit Application for Payment in a format Approved by the DEPARTMENT.

1.4 PREPARATION OF APPLICATIONS

- A. Type required information on Application for Payment form Approved by the DEPARTMENT.
- B. Execute certification by original signature of authorized officer upon each copy of the Application for Payment.
- C. Submit names of individuals authorized to be responsible for information submitted on Application for Payment.
- D. Indicate breakdown of costs for each item of the Work on accepted Schedule of Values. Provide dollar value in each column for each line item corresponding to a portion of Work performed and for stored materials.

- E. List each authorized Change Order as an extension on “Continuation Sheet”, listing Change Order number and dollar amount as for an original item of Work.

1.5 SUBMITTAL PROCESS.

- A. Submit one copy of each Application for Payment at times stipulated in Contract.
- B. Submit under transmittal letter.

1.6 SUBSTANTIATING DATA

- A. If the DEPARTMENT requires substantiating information, submit data justifying line item amounts in question.
- B. Substantiating data required under General Conditions paragraphs 7.12.3 and 7.12.4 shall be submitted (or updated) when the Application for Payment includes a current request for payment on an item of Work required to include Alaska “agricultural/wood” products.
- C. Provide one copy of data with cover letter for each copy of Application for Payment. Show Application for Payment number and date, and line item by number and description.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION



CONTRACTOR SUBMITTALS

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 GENERAL

- A. Wherever submittals are required hereunder, all such submittals by the CONTRACTOR shall be submitted to the Contracting Officer. Submittals provided to someone other than the Contracting Officer or their designee shall be deemed non-responsive and rejected.
- B. Prior to the Pre-Construction Conference, the CONTRACTOR shall submit the following items to the Contracting Officer for review:
 - 1. A submittal schedule for Shop Drawings, Samples, Product Data, and proposed Substitutes or "Or-Equal" items.
 - 2. A Schedule of Values.
 - 3. A complete progress schedule for all phases of the Project.
 - 4. A list of all permits and licenses the CONTRACTOR shall obtain indicating the agency required to grant the permit and the expected date of submittal for the permit and required date for receipt of the permit.
 - 5. All required Material Safety Data Sheets.
 - 6. A traffic maintenance plan, as required.
 - 7. A letter designating the CONTRACTOR's Superintendent, defining that person's responsibility and authority.
 - 8. A letter designating the CONTRACTOR's safety representative and the EEO Officer and the person's responsibility and authority.
- C. No payments shall be made to the CONTRACTOR until the above-listed items are submitted in their entirety, as determined by the Contracting Officer.

- D. CONTRACTOR shall coordinate submittal preparation with performance of construction activities, and with purchasing or fabrication, delivery, other submittals and related activities. Transmit in advance of performance of related activities to avoid delay. Coordinate transmittal of different submittals for related elements so processing will not be delayed by the need to review concurrently for coordination. The Contracting Officer reserves the right to withhold action on a submittal requiring coordination until related submittals are received. No extension of time will be authorized because of failure to transmit submittals sufficiently in advance of the Work to permit processing.
- E. The CONTRACTOR shall distribute copies of the Construction Schedule, Schedule of Values, and the Submittal Schedule to the Contracting Officer, Subcontractors, and other parties required to comply with scheduled dates. Post copies in the temporary field office. When revisions are made, distribute to the same parties and post in the same locations. Revise and update each Schedule after each meeting or activity, where revisions have been made. Issue the updated Schedules concurrently with report of each meeting to all meeting participants and other appropriate entities.

1.2 SUBMITTAL PROCESS

- A. Wherever called for in the Contract Documents, or when required by the Contracting Officer, the CONTRACTOR shall furnish to the Contracting Officer, for review, copies of each submittal in a number equal to four copies plus the number of copies required by the CONTRACTOR for use in performing the Work.
- B. All submittals shall be accompanied by an Approved, CONTRACTOR's standard submittal transmittal form. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal.
- C. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the Contracting Officer.
- D. Except as may otherwise be provided herein, the Contracting Officer will return copies of each submittal to the CONTRACTOR with its comments noted thereon, within 14 calendar days following their receipt by the Contracting Officer. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the Contracting Officer by the second submission of a submittal item. The Contracting Officer reserves the right to withhold monies due the CONTRACTOR to cover additional costs of the Contracting Officer to review beyond the second submittal. The Contracting Officer's reasonable review period for each submittal including all re-submittals will be 14 days per submission.

- E. If copies of a submittal are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will not be required.
- F. If copies of a submittal are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal revision shall be made, and resubmission of said submittal will not be required.
- G. If one copy of the submittal is returned to the CONTRACTOR marked "AMEND-RESUBMIT," the CONTRACTOR shall revise said submittal and resubmit the required number of copies of said revised submittal to the Contracting Officer.
- H. If one copy of the submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT" the CONTRACTOR shall revise said submittal and resubmit the required number of copies of said revised submittal to the Contracting Officer.
- I. Fabrication of an item may be commenced only after the Contracting Officer has reviewed the pertinent submittal and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on submittal shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the Contract requirements. Only a Change Order can alter the Contract Price, Time, or requirements.
- J. All CONTRACTOR submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the Contracting Officer. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with the Contract Documents. No consideration for review by the Contracting Officer of any CONTRACTOR submittal will be made for any items which have not been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the Contracting Officer, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.
- K. The Contracting Officer's review of CONTRACTOR submittals shall not relieve the CONTRACTOR of the entire responsibility for the correctness of details and dimensions. The CONTRACTOR shall assume all responsibility and risk for any misfits due to any errors in CONTRACTOR submittals. The CONTRACTOR shall be responsible for dimensions and design of adequate connections and details.

1.3 SUBMITTAL SCHEDULE

- A. The CONTRACTOR shall coordinate the Submittal Schedule with the list of subcontracts, Schedule of Values and list of products as well as the Construction Schedule. Prepare the Submittal Schedule in chronological order. Identify all submittals required for the completion of the Work. Provide the following information in the Submittal Schedule:
 - 1. Scheduled date for the first submittal.

2. Related Section number.
3. Name of Subcontractor, when appropriate.
4. Description of the construction element covered.
5. Anticipated date of the Contracting Officer's final release or Approval.

1.4 SHOP DRAWING SUBMITTALS

- A. The CONTRACTOR shall submit Shop Drawings as required with new information, drawn to accurate scale. Indicate deviations from Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings.
- B. The Shop Drawings shall include the following information:
 1. Dimensions.
 2. Identification of products and materials included.
 3. Notation of coordination requirements.
 4. Notation of dimensions established by field measurement.
 5. Sheet Size: Except for templates, patterns and similar full- size drawings, submit shop drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48".
- C. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, Shop Drawings, fabrication, and installation drawings, section drawings, lists, graphs, operating instructions, catalog sheets, data sheets, and similar items.
- D. Do not use Shop Drawings without a final stamp indicating action taken in connection with construction.

1.5 SAMPLE SUBMITTALS

- A. Whenever in the Specifications samples are required, the CONTRACTOR shall submit not less than four samples of each such item or material to the Contracting Officer for acceptance at no additional cost to the DEPARTMENT.
- B. Samples, as required herein, shall be submitted for acceptance a minimum of 14 days prior to ordering such material for delivery to the job site, and shall be submitted in an orderly sequence

so that dependent materials or equipment can be assembled and reviewed without causing delays in Work.

- C. The CONTRACTOR shall submit full-size samples, cured and finished as specified, and identical to the product proposed. Mount, display, or package samples to facilitate review. Include the following:
1. Generic description.
 2. Source.
 3. Product name or name of manufacturer.
 4. Compliance with recognized standards.
 5. Availability and delivery time.
 6. Submit samples for review of kind, color, pattern, and texture, for a final check of these characteristics, and a comparison of these characteristics between the final submittal and the component as delivered and installed. Where variations are inherent in the product, submit multiple units that show limits of the variations.
 7. Preliminary Submittals. Where samples are for selection of characteristics from a range of choices, submit a full set of choices for the product. Preliminary submittals will be reviewed and returned indicating selection and other action.
 8. Submittals. Except for samples illustrating assembly details, quality of Work, fabrication techniques, connections, operation and similar characteristics, submit 4 sets; one will be returned marked with the action taken. Maintain a sample set at the Project site, for quality comparisons. Sample sets may be used to obtain Final Acceptance of the construction associated with each set.
 9. Prepare additional sets for Subcontractors, manufacturers, fabricators, installers, and others as required for performance. Show distribution on transmittal forms.
- D. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Supplier's names for identification and submitted to the Contracting Officer for acceptance. Upon receiving acceptance of the Contracting Officer, one set of the samples will be stamped and dated by the Contracting Officer and returned to the CONTRACTOR, and two sets of samples will be retained by the Contracting Officer, and one set of samples shall be retained, free from damage, by the CONTRACTOR at the job site until completion of the Work.

- E. Unless clearly stated otherwise, it is assumed that all colors and textures of specified items presented in sample submittal are from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products or equipment lines, and their selection will require an increase in Contract Time or Price, the CONTRACTOR will clearly indicate this on the transmittal page of the submittal.

1.6 PRODUCT DATA SUBMITTALS

- A. The CONTRACTOR shall collect all the Product Data into a single submittal for each element or system. Mark each copy to show applicable choices and options. Where Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
 - 1. Manufacturer's printed recommendations.
 - 2. Compliance with recognized trade association standards.
 - 3. Compliance with recognized testing agency standards.
 - 4. Application of testing agency labels and seals.
 - 5. Notation of dimensions verified by field measurement.
 - 6. Notation of coordination requirements.
 - 7. Preliminary Submittal: Submit a preliminary single-copy where selection of options is required.
- B. Furnish copies of final submittal to installers, and others required for performance of construction activities. Show distribution on transmittal forms. Do not proceed with installation until an approved copy of Product Data is in the installer's possession. Do not permit use of unmarked copies of Product Data in connection with construction.

1.7 PROPOSED SUBSTITUTE OR "OR EQUAL" ITEM SUBMITTALS

- A. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required. If the name is followed by the words "or-equal" indicating that a substitution is permitted, materials or equipment of other Suppliers may be accepted by the Contracting Officer if sufficient information is submitted by the CONTRACTOR to allow the Contracting Officer to determine that the material or equipment proposed is equivalent or equal to that named, subject to the following and further requirements within Section 012513, Product Substitutions:

1. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
2. The Contracting Officer will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the Contracting Officer's decision shall be final.
3. The Contracting Officer may require the CONTRACTOR, to furnish at the CONTRACTOR's expense, additional data about the proposed substitute.
4. DEPARTMENT may require CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or surety with respect to substitute products or materials.
5. Acceptance by the Contracting Officer of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
6. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR's Work, the Work of its Subcontractors and of other contractors, and shall effect such changes without cost to the DEPARTMENT. This shall include the cost for redesign and claims of other contractor(s) affected by the resulting change.

B. The procedure for review by the Contracting Officer will include the following:

1. If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the Contracting Officer on the "Substitution Request Form" for acceptance thereof.
2. Unless otherwise provided by law or authorized in writing by the Contracting Officer, the "Substitution Request Form(s)" shall be submitted within the 30-day period after Notice of Award except as otherwise permitted by the Contracting Officer.
3. Wherever a proposed substitute material or equipment has not been submitted within said 30-day period, or wherever the submission of a proposed substitute material or equipment has been judged to be unacceptable by the Contracting Officer, the CONTRACTOR shall provide material or equipment named in the Contract Documents.
4. CONTRACTOR shall certify that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified, and be suited to the same use as that specified.
5. Contracting Officer will be allowed a reasonable time within which to evaluate each proposed substitute. In no case will this reasonable time period be less than 14 days.

6. As applicable, no Shop Drawing submittals will be made for a substitute item nor will any substitute item be ordered, installed, or utilized without the Contracting Officer's prior written acceptance of the CONTRACTOR's "Substitution Request Form" which will be evidenced by a Change Order.
- C. The CONTRACTOR's application using the "Substitution Request Forms" shall contain the following statements and/or information which shall be considered by the Contracting Officer in evaluating the proposed substitution when one or more of the following conditions are satisfied, as determined by the Contracting Officer; otherwise, requests will be returned without action except to record non-compliance with these requirements.
1. Extensive revisions to the Contract Documents are not required.
 2. Proposed changes are in keeping with the general intent of the Contract Documents.
 3. The request is timely, fully documented, and properly submitted.
 4. Request is directly related to an 'or equal' clause or similar language in the Contract Documents.
 5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of the CONTRACTOR's failure to pursue the Work promptly, or to coordinate activities properly.
 6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered to the DEPARTMENT, in terms of cost, time, energy conservation, or other considerations of merit, after deducting off-setting responsibilities the DEPARTMENT may be required to bear. Additional responsibilities for the DEPARTMENT may include additional compensation to the Design Professional of Record for redesign and evaluation services, increased cost of other construction by the DEPARTMENT, or separate contractors, and similar considerations.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the CONTRACTOR certifies that the substitution will overcome the incompatibility.
 9. Specified product or method of construction cannot be coordinated with other materials, and where CONTRACTOR certifies that the proposed substitution can be coordinated.

10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the CONTRACTOR certifies that the proposed substitution will provide the required warranty.
 11. The evaluation and acceptance of the proposed substitute will not prejudice the CONTRACTOR's achievement of Substantial Completion within Contract Time.
 12. Available maintenance, repair, and replacement service and its estimated cost will be indicated.
 13. Whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.
 14. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change.
- D. The CONTRACTOR's submittal and Contracting Officer's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute Approval.

1.8 SCHEDULE OF VALUES

- A. For Lump Sum Contracts, the CONTRACTOR shall submit a Schedule of Values to the Contracting Officer. The Schedule of Values shall list the cost breakdown of the lump sum Contract and shall be coordinated with the construction schedule.
1. Correlate line items in the Schedule of Values with other schedules and forms.
 2. Use the Contract Document's Table of Contents as a guide to establish the format for the Schedule of Values.
 3. Include Record Drawings as a line item.

1.9 PROGRESS SCHEDULE

- A. The progress schedule shall be in Bar Chart or Critical Path Method (CPM) form, as required by the Contracting Officer.
- B. The progress schedule shall show the order in which the CONTRACTOR proposes to carry out the Work and the contemplated date on which the CONTRACTOR and their Subcontractors will start and finish each of the salient features of the Work, including any scheduled periods of shutdown. The schedule shall also indicate any anticipated periods of multiple-shift work.

- C. Upon substantial change to the CONTRACTOR's progress schedule of Work or upon request of the Contracting Officer, the CONTRACTOR shall submit a revised progress schedule(s) in the form required. Such revised schedule(s) shall conform to the Contract Time and take into account delays which may have been encountered in the performance of the Work. In submitting a revised schedule, the CONTRACTOR shall state specifically the reason for the revision and the adjustments made in the schedule or methods of operation to ensure the completion of all the Work within the Contract time.

1.10 OPERATING MANUALS

- A. The CONTRACTOR shall submit three sets of operating manuals, including **two bound and one electronic** version, as specified.

1.11 RECORD DRAWING SUBMITTAL

- A. The CONTRACTOR shall keep and maintain, at the job site, one set of Record Documents. On these, they shall mark all Project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented on the original Contract Documents, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said Record Documents shall be supplemented by any detailed sketches as necessary or directed to indicate, fully, the Work as actually constructed. These master Record Documents of the CONTRACTOR's representation of as-built conditions, including all revisions made necessary by addenda, Change Orders, and the like shall be maintained up-to-date during the progress of the Work.
- B. Copies of the Record Documents shall be submitted to the Contracting Officer prior to the issuance of the Certificate of Substantial Completion by the Contracting Officer.
- C. Final payment will not be acted upon until the CONTRACTOR prepared Record Documents have been delivered to and Approved by the Contracting Officer.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION



PROJECT AND SITE SAFETY

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 SAFETY PROGRAM

A. General:

1. The safety of bidders, the CONTRACTOR, their work forces in total, the Using Agency's Personnel, and the public is a major concern of the Contracting Officer. To ensure Project wide safety the CONTRACTOR shall carefully adhere to the following requirements.

B. The CONTRACTOR shall:

1. Abide by all applicable safety practices and requirements, irrespective of their origins.
2. Designate a safety officer and attend safety related meetings as periodically required by the Contracting Officer.
3. CONTRACTOR shall employ a safety program to insure that CONTRACTOR's personnel and all personnel of the Subcontractors, Suppliers, Installers and material men are trained and kept abreast of current safety requirements. Maintain program throughout construction period until Final Completion.

1.2 SAFETY STANDARDS

- A. Those safety related standards promulgated by safety or code enforcement agencies, such as but not limited to AK-DEC, OSHA, Building Officials and Fire Marshal's Office representatives.
 - B. Safety guidelines and policies established under the CONTRACTOR's own safety program.
 - C. Safety requirements required by the Contract Documents.
1. Restrict entry of persons and vehicles into Project site and Work areas, as appropriate.

1.3 MINIMUM SAFETY REQUIREMENTS

- A. CONTRACTOR and CONTRACTOR's workforce shall continuously monitor the Work site to ensure safe Work practices affecting workers, Using Agency personnel and the public are followed.
- B. CONTRACTOR shall ensure that barriers (barricades) of sufficient height and strength (42" minimum) are in place at all drop off areas, openings or other locations where the height of the drop off is 30" or more and such drop off would be open to the public in the absence of such barriers. Such barriers shall not be climbable by children nor readily moved. Barriers must be continuous in all drop off zones such that an individual cannot inadvertently walk around the barrier to the drop off area.
- C. In areas where dangerous or hazardous conditions exist and people other than the CONTRACTOR's workforce must travel through or adjacent to such areas, barriers shall be constructed to readily preclude access into these areas by unauthorized individuals. Such barriers shall not restrict required widths of fire exits or corridors (per ADA requirements) unless specifically authorized in writing by the Contracting Officer. Contracting Officer may require alternate means of egress should such barriers impede traffic flows from the facility.
- D. Contractor shall not leave and unprotected openings, energized electrical devices, exposed electrical wiring or similar hazards during any times that the CONTRACTOR's workforce is absent. "Hot" circuits and similar devices shall be protected at the end of each work day, during breaks or absences (when workforce is not present) and at any time when there is an absence of workers in the immediate area of such circuits.
- E. CONTRACTOR shall ensure that all floors are free of trip hazards and slip hazards. Routinely patrol areas adjacent to public traffic areas to ensure that such hazards do not develop. Remove any debris which could cause a trip hazard and mop (dry) any areas of standing water. Wipe up any spilled oils or lubricants.
- F. CONTRACTOR shall ensure that no harmful airborne or waterborne chemicals are released into the facility. Should such a release occur, CONTRACTOR shall immediately notify the Contracting Officer and take the necessary actions to remedy the release. Should the release require evacuation of the facility, CONTRACTOR shall monitor the situation and advise the Contracting Officer as to when the space may be ready for occupancy. The decision to re-occupy the facility shall be the exclusive right of the Contracting Officer.
- G. CONTRACTOR shall coordinate the use of all operations involving open flames with the Contracting Officer and obtain Approval prior to commencing the Work.
- H. Should the Contracting Officer observe (or should the Using Agency bring to his attention) any deficiencies in the above requirements, or in other areas of safety not specifically described

above the Contracting Officer shall issue a Stop Work notice until such time that the safety conditions are adequately remedied. Time lost due to Stop Work notices shall not be a basis of delay claims by the CONTRACTOR.

- I. CONTRACTOR shall quarantine all areas with appropriate barriers and signs to ensure that no one from the public can walk under areas where the CONTRACTOR will be working on staging above entry/exit to the building, pathways to cars in the parking garages and any other like area.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



SECURITY

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 SECURITY PROGRAM

A. The CONTRACTOR shall:

1. Protect Work, existing premises, and Using Agency's operations from theft, vandalism, and unauthorized entry.
2. Initiate program in coordination with Using Agency's existing security program at initialization of Project mobilization.
3. Maintain program throughout construction period until Final Completion.

1.2 ENTRY CONTROL

A. The CONTRACTOR shall:

1. Restrict entry of persons and vehicles into Project site, as appropriate.
2. Allow entry only to authorized persons with proper identification.
3. Maintain log of visitors/inspectors and make log available to Contracting Officer on request.

1.3 PERSONNEL IDENTIFICATION

A. It is likely that during the life of the Project the Using Agency will initialize some form of personal security measures. If this occurs, at the discretion of the Contracting Officer the CONTRACTOR shall:

1. Require each person authorized to enter premises to possess and visibly display an identification card.

2. Maintain a list of authorized persons and assigned card number. Submit copy to Contracting Officer on request. Individuals not visibly displaying an identification card can be denied access to the Project.
 3. Require return of cards from all individuals when they are no longer involved with Work at the Project site.
- B. Identification card shall be provided by the Using Agency and include: personal photograph; name, title and employer, and assigned number.

1.4 SECURITY SERVICE

- A. The CONTRACTOR shall:
1. Using Agency employs uniformed guard service to provide surveillance of facility during all non-working hours.
 2. CONTRACTOR shall cooperate fully with Using Agency to ensure Acceptable security.

1.5 RESTRICTIONS

- A. The CONTRACTOR shall not allow cameras on Project site or photographs taken except by written Approval of Contracting Officer.
- B. All personnel employed on the Project site by the CONTRACTOR, Subcontractors, Suppliers, installers and other entities engaged in Work shall strictly adhere to the security, safety, and other program requirements as Directed by the Contracting Officer.

PART 2 – PRODUCTS

[Not Used]

PART 3 – EXECUTION

[Not Used]

END OF SECTION



QUALITY CONTROL

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. General Quality Control.
- B. Workmanship.
- C. Manufacturer's Instructions.
- D. Manufacturer's Certificates.
- E. Mockups.
- F. Manufacturers' Field Services.
- G. Testing Laboratory Services.
- H. Departmental Inspection Services.

1.02 RELATED REQUIREMENTS

- A. Document 007200 - General Conditions: Inspection and testing required by governing authorities.
- B. Section 011000 – Summary of Work: Work Plans and Access to Facility, Individual Work Areas, Tests required for inspection of the existing roof deck and structural members.
- C. Section 014219 Reference Standards: Applicability of Reference Standards.
- D. Section 013219 Submittals: Shop Drawings, Product Data, and Samples

1.03 QUALITY CONTROL, GENERAL

- A. Maintain quality control over Suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

1.04 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform Work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.05 MANUFACTURERS' INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from DEPARTMENT before proceeding.

1.06 MANUFACTURERS' CERTIFICATES

- A. When required by individual Specifications section, submit manufacturer's certificate, in duplicate, that products meet or exceed specified requirements.

1.07 MOCKUPS

- A. When required by individual Specifications section, erect complete, full-scale mockup of assembly at site, perform required tests, and remove mockup at completion, when approved by DEPARTMENT.

1.08 MANUFACTURERS' FIELD SERVICES

- A. When required by manufacturer or when specified in respective Specification sections, require manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to make appropriate recommendations.
- B. Require manufacturer's representative to submit written report to DEPARTMENT listing observations and recommendations.

1.09 TESTING LABORATORY SERVICES

- A. CONTRACTOR shall employ and pay for services of an independent testing laboratory to perform inspections, tests, and other services required by individual Specification sections.
- B. Services will be performed in accordance with requirements of governing authorities and with specified standards.
- C. Reports will be submitted to DEPARTMENT in triplicate giving observations and results of tests, indicating compliance or non-compliance with specified standards and with Contract Documents.
- D. CONTRACTOR shall cooperate with testing laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify DEPARTMENT and testing laboratory 72 hours prior to expected time for operations requiring testing services.
 - 2. Make arrangements with testing laboratory and pay for additional samples and tests for CONTRACTOR's convenience.

1.10 DEPARTMENTAL INSPECTION SERVICES

A. REQUEST AND PAYMENT

- 1. CONTRACTOR shall request and when applicable pay for services provided by the DEPARTMENT to perform specified inspection and testing.
- 2. Inspection by the DEPARTMENT or its agents shall in no way relieve CONTRACTOR of obligation to perform Work in accordance with requirements of Contract Documents.

B. QUALITY ASSURANCE

- 1. Comply with requirements of all referenced standards.
- 2. DEPARTMENT shall retain a registered Engineer or Architect on staff to provide review services in those areas of their immediate expertise.
- 3. Engineers or Architects will be registered in State in which Project is located.
- 4. Testing equipment shall be calibrated at reasonable intervals with devices of an accuracy traceable to either NBS Standards or accepted values of natural physical constants.

C. DEPARTMENT RESPONSIBILITIES

1. Review schedules and request for inspections as submitted by CONTRACTOR for timeliness and conformance.
2. Provide qualified personnel at site after due notice; cooperate with CONTRACTOR in performance of services.
3. Perform specified inspection, inventorying, and testing of products in accordance with specified standards.
4. Ascertain compliance of materials and equipment with requirements of Contract Documents.
5. Promptly notify CONTRACTOR of observed irregularities or non-conformance of Work or products.
6. Perform additional inspections and re-tests required by the Contract Documents.
7. When applicable provide to the CONTRACTOR a written description of DEPARTMENT's costs attributed to the inspection.

D. DEPARTMENT REPORTS

1. After each inspection and/or test, promptly submit one copy of inspection report to CONTRACTOR. Include: Date issued, Project title and DEPARTMENT Project number, name of inspector(s), date and time of inspection, identification of product and Specifications section, location in the Project, type of inspection or test, results of inspection or tests, and conformance with Contract Documents. When requested in writing by CONTRACTOR, provide interpretation of results.

E. LIMITS ON AUTHORITY RESULTING FROM INSPECTIONS

1. DEPARTMENT may not release, revoke, alter, or enlarge on requirements of Contract Documents through the issuance of an inspection report.
2. DEPARTMENT may not approve or accept any portion of the Work through the issuance of an inspection report.
3. DEPARTMENT may not assume any duties of CONTRACTOR through the issuance of an inspection report.
4. DEPARTMENT has no authority to stop Work through the issuance of an inspection report.

F. CONTRACTOR RESPONSIBILITIES

1. Cooperate with DEPARTMENT personnel, and provide access to Work and when appropriate to manufacturer's facilities.
2. Provide incidental labor and facilities to provide access to Work to be inspected, to obtain and furnish incidental supplies at the site or at source of products to be inspected, to facilitate tests and inspections, and for storage and curing of test samples when appropriate.
3. Notify DEPARTMENT as stated above in Contractor Submittals for operations requiring inspection, special inspection and testing services.
4. Pay costs of DEPARTMENT furnished services for all re-inspections as required by Contract Documents.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION



TEMPORARY ENVIRONMENTAL CONTROLS

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 - GENERAL

1.1 DUST ABATEMENT

- A. The CONTRACTOR shall furnish all labor, equipment, and means required and shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, machinery or equipment, or causing a nuisance to persons within the facility or living in buildings in the vicinity. The CONTRACTOR shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the Contracting Officer.

1.2 RUBBISH CONTROL

- A. During the progress of the Work, the CONTRACTOR shall keep the site of the Work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the Work site, and shall establish regular intervals of collection and disposal of such materials and waste. The CONTRACTOR shall also keep its haul routs free from trash, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction. All fire exists shall be maintained at all times.

1.3 SANITATION

- A. Toilet Facilities. Toilets within the Project Work Site are not available for CONTRACTOR's use. CONTRACTOR to provide portable toilets unless otherwise directed by the Contracting Officer.
- B. Sanitary and Other Organic Wastes. The CONTRACTOR shall establish a regular collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the

CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the Contracting Officer and in accordance with all laws and regulations pertaining thereto.

1.4 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer. In addition, see the requirements set forth in paragraph 6.11 of the General Conditions.

1.5 CULTURAL RESOURCES

- A. The CONTRACTOR's attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470) and 36 CFR 800 which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").
- B. The CONTRACTOR shall conform to the applicable requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.
- C. In the event potential cultural resources are discovered during subsurface excavations at the site of construction, stop Work immediately and notify the Contracting Officer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION



MATERIALS AND EQUIPMENT

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

1.1 GENERAL

- A. The word "Products," as used herein, is defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for the Project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of Work. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," special construction, and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- B. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

1.2 QUALITY ASSURANCE

- A. Source Limitations. To the greatest extent possible for each unit of work, the CONTRACTOR shall provide products, materials, or equipment of a singular generic kind from a single source.
- B. Compatibility of Options. Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment already selected. Compatibility is a basic general requirement of product/material selections.

1.3 PRODUCT DELIVERY-STORAGE-HANDLING

- A. The CONTRACTOR shall deliver, handle, and store products in accordance with manufacturer's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at site and overcrowding of construction spaces. In particular, the CONTRACTOR

shall ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

1.4 TRANSPORTATION AND HANDLING

- A. Products shall be transported by methods to avoid product damage and shall be delivered in undamaged condition in manufacturer's unopened containers or packaging.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment by methods to prevent soiling and damage.
- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

1.5 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with manufacturer's written instructions, with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's written instructions.
- B. For exterior storage of fabricated products, they shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering; ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.

1.6 MAINTENANCE OF STORAGE

- A. Stored products shall be periodically inspected on a scheduled basis. The CONTRACTOR shall maintain a log of inspections and shall make said log available on request.
- B. The CONTRACTOR shall verify that storage facilities comply with manufacturer's product storage requirements.
- C. The CONTRACTOR shall verify that manufacturer-required environmental conditions are maintained continually.

- D. The CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes does not occur.
- E. For mechanical and electrical equipment, the CONTRACTOR shall provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
- F. Products shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document prior to Approval by the Contracting Officer in accordance with the Contract Documents.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



MOBILIZATION

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 GENERAL

A. Mobilization shall include obtaining all permits; moving all plant and equipment onto the Project site; furnishing and erecting plants, temporary buildings, and other construction facilities; implementing security requirements, all as required for the proper performance and completion of the Work. Mobilization shall include the following principal items:

1. Moving all the CONTRACTOR's plant and equipment required for operations onto the site.
2. Providing all on-site communication facilities, including radios and cellular phones.
3. Providing on-site sanitary facilities.
4. Obtaining all required permits.
5. Having all OSHA required notices and establishment of safety programs.
6. Having the CONTRACTOR's superintendent at the Project site full time.
7. Submitting and obtaining Approval of initial submittals.
8. Arranging for, and erection of, CONTRACTOR's Work and storage yard.

1.2 PAYMENT FOR MOBILIZATION

A. The CONTRACTOR's attention is directed to the condition that no payment for mobilization, or any part thereof, will be Approved for payment under the Contract until all mobilization items listed above have been completed as specified.

- B. As soon as practicable, after receipt of Notice to Proceed, the CONTRACTOR shall submit a breakdown showing the estimated value of each major component of mobilization to the Contracting Officer for Approval. When Approved by the Contracting Officer, the breakdown will be the basis for initial progress payments in which Mobilization is included.

PART 2 – PRODUCTS

[Not Used]

PART 3 – EXECUTION

[Not Used]

END OF SECTION



CUTTING & PATCHING

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- B. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. Patching: Patch construction by filling, repairing, refinishing, closing up and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 2. Floor and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 3. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
- B. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION



FINAL CLEANUP AND SITE RESTORATION

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 - GENERAL

1.1 DESCRIPTION

The Work under this Section includes providing all supervision, labor, materials, tools and equipment necessary for final clean-up and restoration of all areas disturbed by construction activities, to a condition equal to, or better than, before construction started. This does not include clean-up or restoration incidental to, or directly provided for by other construction items.

PART 2 – PRODUCTS

2.1 MATERIALS

All materials requiring cleaning shall conform to appropriate Specification Sections.

PART 3 – EXECUTION

3.1 GENERAL

- A. The CONTRACTOR shall promptly remove from the vicinity of the completed Work and all sites disturbed by the construction, all rubbish and debris, unused materials, construction equipment, and temporary structures and facilities used during construction and shall grade the sites so that no standing water is evident. Final acceptance of the Work by the Contracting Officer will be withheld until the CONTRACTOR has satisfactorily complied with the foregoing requirements for final clean-up of the Project site.

3.2 FINAL CLEANING OF SURFACES.

- A. The CONTRACTOR shall employ experienced workers for final cleaning. Clean each surface to the condition expected in a commercial building maintenance program. Complete the following before requesting inspection for Certification of Substantial Completion:

1. Remove labels that are not permanent labels.

2. Clean transparent materials. Remove glazing compound. Replace chipped or broken glass.
3. Clean exposed hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
4. Clean exterior light fixtures and lamps from falling debris or caulking.
5. Clean the site of rubbish, litter and other foreign substances.
6. Sweep paved areas, remove stains, spills and other foreign deposits.
7. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Remove waste materials from the site and dispose of in a lawful manner.
8. Remove temporary protection and facilities.

END OF SECTION



PROJECT CLOSEOUT

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 - GENERAL

1.1. CLOSEOUT TIMETABLE.

- A. The CONTRACTOR shall establish dates for product testing, acceptance periods, and on-site instructional periods (as required under the Contract). Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the Using Agency, the Contracting Officer, and their authorized representatives sufficient time to schedule attendance at such activities.

1.2 SUBSTANTIAL COMPLETION.

- A. Before requesting inspection for certification of Substantial Completion, complete the following:
1. In the Application for Payment that coincides with the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed substantially complete.
 2. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 3. Submit maintenance manuals.
 4. Complete testing of caulking for adhesion and instruction of Using Agency's maintenance personnel. Remove temporary facilities from the site, along with construction tools, mock ups, and similar elements.
 5. Complete final clean-up. Touch-up and repair and restore marred or damaged finishes where exposed.

Transmit "site access" keys to the Contracting Officer.

1.3 INSPECTION PROCEDURES

- A. Upon receipt of a request for inspection for Substantial Completion, the Contracting Officer will proceed and advise the CONTRACTOR of unfilled requirements. The Contracting Officer will prepare the Certificate of Substantial Completion following inspection, or advise the CONTRACTOR of construction that must be completed or corrected before the certificate will be issued.
- B. The Contracting Officer will re-inspect the Work upon receipt of notice by the CONTRACTOR that the Work has been completed, except items whose completion has been delayed because of circumstances acceptable to the Contracting Officer. If re-inspection is requested and the CONTRACTOR has not completed all punch list items, the cost of that inspection will be paid by the CONTRACTOR.

Upon completion of re-inspection, the Contracting Officer will prepare a certificate of final acceptance, or advise the CONTRACTOR of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance. If necessary, re-inspection will be repeated.

- C. The Contracting Officer will repeat inspection when requested and assured by the CONTRACTOR that the Work has been substantially completed.
- D. Results of the completed inspection will form the basis of requirements for Final Acceptance.

1.4 FINAL ACCEPTANCE.

- A. Before requesting inspection for certification of Final Acceptance and final payment, complete and submit the following:
 - 1. Submit final payment request.
 - 2. Submit a final change order request.
 - 3. Submit a copy of the final inspection list stating that each item has been completed or otherwise resolved for acceptance.
 - 4. Submit final meter readings for utilities and similar data as of Substantial Completion.
 - 5. Submit consent of surety to final payment.
 - 6. Submit evidence of continuing insurance coverage complying with insurance requirements.

7. Submit those items listed under Article 1.5 - FINAL SUBMITTALS of this section as they apply.
8. Written guarantees, where required.
9. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
10. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.
11. Completed Certificate of Compliance and Release for all contractors involved in the Work.
12. Submit "Notice of Work" and "Notice of Completion" from the Department of Labor.

1.5 FINAL SUBMITTALS

- A. Maintenance (O&M) Manuals. Provide O&M Manuals as specified in section 013219, Contractor Submittals, and section 017900, Final Testing and Maintenance Training.
- B. Product and Maintenance Instructions. Arrange for the installer of the product to meet with Using Agency personnel to provide instruction in proper product maintenance per the requirements of Section 017900.

MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in Article 13 of the General Conditions and as may be modified in the Supplementary General Conditions.
- B. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the Contracting Officer. If the CONTRACTOR fails to make such repairs or replacements promptly, the Contracting Officer reserves the right to do the Work and the CONTRACTOR and its surety shall be liable to the DEPARTMENT for the cost thereof.

PART 2 - MATERIALS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



FINAL TESTING AND MAINTENANCE TRAINING

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 GENERAL

- A. Final testing and maintenance procedures are requisite to satisfactory completion of the Contract and, therefore, shall be completed within the Contract Time.

1.2 PRODUCT TESTING

- A. The CONTRACTOR shall provide the services of an experienced and authorized representative of the manufacturer of each item provided as a part of the Work, who shall visit the site of the Work and inspect, check, adjust if necessary, and approve the product's performance. In each case, the CONTRACTOR shall arrange to have the manufacturer's representative revisit the job site as often as necessary until any and all trouble is corrected and the product installation is satisfactory to the Contracting Officer.
- B. The CONTRACTOR shall require that each manufacturer's representative furnish to the Contracting Officer a written report addressed to the Using Agency certifying that the product has been properly installed.
- C. The CONTRACTOR shall be responsible for scheduling all product testing. The CONTRACTOR is advised that the Contracting Officer and the Using Agency's Maintenance personnel will witness product testing. Qualified persons who have been made familiar in advance with the product requirements shall conduct the testing. Prior to scheduling any product testing, the CONTRACTOR shall have previously furnished the Product Manuals required under Section 013219, CONTRACTOR Submittals and described within paragraph 1.3 of this Section.
- D. CONTRACTOR shall notify the Contracting Officer at least 3 days in advance of each product test.
- E. The CONTRACTOR shall furnish all personnel, and all other necessary product, facilities, and services required for conducting the tests.

1.3 PRODUCT OPERATION AND MAINTENANCE (O&M) MANUALS

- A. Provide O&M manuals specified in Section 013219, CONTRACTOR Submittals, for all products furnished under the Specifications within the Contract Documents. The CONTRACTOR shall provide three copies, including two bound and one electronic version. Deliver final corrected copies, as specified in Section 013219, CONTRACTOR Submittals, prior to scheduled product testing.
- B. The information included must be the exact product installed. Where sheets show the product installed and other product, the installed product shall be neatly and clearly identified on such sheets.
- C. These O&M manuals shall contain all the information needed to maintain all products provided in the Project. Present and arrange information in a logical manner for efficient use by the Using Agency's maintenance personnel. The information provided shall include but not be limited to the following:
 - 1. Product manufacturer, make, model number, size, nameplate data, etc.
 - 2. Dimensional and performance data for products provided as appropriate.
 - 3. Manufacturer's recommended servicing data including frequency.
 - 4. Complete product list including reordering information, and anticipated useful life (if appropriate). Product lists shall give full ordering information assigned by the original product manufacturer. Relabeled and/or renumbered product information as reassigned by product supplier not acceptable.
 - 5. Shop Drawings.
 - 6. A complete list of local (nearest) manufacturer representative and distributor contacts for each type of product and manufacturer. Include name, company, address, phone, fax, e-mail address, and web site.
- D. Group the information contained in the manuals in an orderly arrangement by Specification index. Provide a typewritten index and divider sheets between categories with identifying tabs. Bind the documents into heavy-duty, "D" ring binders no larger than 3". Materials should not exceed 80% of the binder capacity, if exceeded, provide multiple volumes as required. Imprint the covers with the name of the Project, Project Number, DEPARTMENT, CONTRACTOR and year of completion.
- E. Electronic version shall be submitted on USB flash drive.

1.4 PRODUCT MAINTENANCE TRAINING

- A. Activities associated to the proper maintenance and care of all products are fundamental to ensuring the maximum life expectancy and warranty coverage of the products. The CONTRACTOR shall provide the required expertise through the presence of manufacturers, subcontractors, and installers to insure, to the satisfaction of the Contracting Officer, that the Using Agency's operating personnel are properly instructed in the maintenance and care of all products.
- B. Training shall not commence until all required product testing has been completed to the satisfaction of the Contracting Officer.
- C. Instruction shall cover as a minimum, routine care and maintenance of the product, annual maintenance such as cleaning, testing and repairs to be made by the Using Agency's personnel and that are permitted under warranty. Instruction shall include the "hands on" training and operation of any required maintenance product. Such instruction shall be scheduled at a time arranged with the Using Agency at least 1 week in advance.
- D. The CONTRACTOR shall provide qualified personnel for the duration of the product training. Additionally, the CONTRACTOR shall provide all required consumables.
- E. The CONTRACTOR shall immediately correct all defects in materials or quality of Work, which appear during this training period.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



PROTECTION AND RESTORATION OF EXISTING FACILITIES

Project Name: JSOB Front Stair Replacement

Project Number: 2019-0222-3961

PART 1 – GENERAL

1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. CONTRACTOR shall be the responsible for all utility locates.
- C. The CONTRACTOR shall verify the exact location and depth of all utilities. CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the Work. All such exploratory excavations shall be performed as soon as practicable after Award of the Contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's Work. The CONTRACTOR, prior beginning the Work and to avoid damage, shall rebury any utility or service in conflict with the Work.
- D. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.2 RIGHTS-OF-WAY (Not Used)

1.3 PROTECTION OF SURVEY MONUMENTS, STREET OR ROADWAY MARKERS. (Not Used)

1.4 RESTORATION OF PAVEMENT (Not Used)

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. General. The CONTRACTOR shall protect all concealed or Underground Utilities and other improvements that may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Utilities to be Moved. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the Contracting Officer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Contracting Officer and the owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- D. DEPARTMENT's Right of Access. The right is reserved to the DEPARTMENT to enter the Project site at any time for the purpose of making changes in their property made necessary by the Work of this Contract.
- E. Concealed or Underground Utilities Indicated. Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation, backfilling or other construction. If damaged, such utilities shall be immediately repaired or replaced by the CONTRACTOR.
- F. Concealed or Underground Utilities Not Indicated. In the event that the CONTRACTOR damages any existing utility lines that are not indicated, or locations thereof are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the Contracting Officer. If directed by the Contracting Officer, repairs shall be made by the CONTRACTOR under the provisions for changes and extra Work contained in Articles 10, 11, and 12 of the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the Work which was interrupted or idled by removal or relocation of

such utility facilities, and which was necessarily idled during such work will be paid for as extra Work in accordance with the provisions of Articles 10, 11, and 12 of the General Conditions.

- H. Approval of Repairs. All repairs to a damaged utility or improvement are subject to inspection and approval by the Contracting Officer before being concealed by backfill or other Work.
- I. Maintaining in Service. All oil and gasoline pipelines, power, telephone, cables or communication cable ducts, gas and water lines, sewer lines, storm/roof drain lines, poles, and overhead power and communication wires and cables encountered during Work operations shall remain continuously in service. When other arrangements, satisfactory to the Contracting Officer, are made with the owner of said pipelines, duct, main, sewer, drain, pole, or wire or cable, services may be interrupted. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or concealment and is not discovered until after completion of the backfilling or other construction.

1.6 TREES WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

(Not Used)

1.7 PROTECTION OF EXISTING STRUCTURES

- A. Compaction Equipment and Similar Operations. The CONTRACTOR shall restrict his compaction operations as necessary to assure no damage occurs to adjacent building components.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION

SECTION 057310 STAINLESS STEEL HANDRAIL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes installing prefabricating stainless steel handrails as shown on the Drawings and as described in this Section.

1.3 SUBMITTALS

- A. Shop Drawings showing complete dimensions, layout, plan views, elevations, sections, material types, connections, brackets for the handrail system. Shop drawings shall clearly show that the handrail supplier and the CONTRACTOR have coordinated on the submittal.

1.4 PERFORMANCE REQUIREMENTS

- A. Allow for thermal action resulting from the maximum range change in ambient temperature in the design, fabrication and installation of the handrail systems, to prevent opening of joints, buckling, and other detrimental effects, including over-stressing of connections and components.
- B. Prevent galvanic action and other forms of corrosion by isolating dissimilar metals to prevent them from being in direct contact with each other.

1.5 QUALITY ASSURANCE

- A. Provide quality in appearance and physical properties, without delaying the work. All connection fittings must be bolted. The finish of any handrail welds must be completely seamless.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver handrails, and related components in protective packaging and store components to avoid damage from moisture, abrasion and other construction activity.

PART 2- PRODUCTS

2.1 MATERIALS

- A. Provide materials free from surface blemishes where exposed to view in the finished installation.

- B. Stainless steel handrail and connection hardware, brackets to be brushed stainless steel 316 material.
- C. Wedge anchor bolts for connecting the handrail to the concrete wall shall be Simpson “Wedge All” anchors, or approved equal.
- D. Bolts, screws and nuts: 304 stainless steel. Do not use metals that will be corrosive and incompatible with other materials being fastened.
- E. Stainless Steel Handrail with integrated LED Lighting: (Alternate No. 1)
 - 1. 1.5” Stainless Steel 316 material.
 - 2. #6 Satin Finish
 - 3. 3000K Warm White
 - 4. 120 V AC
 - 5. Basis of Design Viva Railings IRail LED Illuminated Railing (www.vivarailings.com)

PART 3 - EXECUTION

3.1 GENERAL

- A. Confirm guardrail dimensions prior to ordering materials by field measuring.
- B. Review and coordinate setting drawings, templates and related items that are to be anchored to the top of the existing concrete retaining wall.
- C. Handrail shall be set parallel with the top surface of the concrete retaining wall with all posts and end rail elements set vertical. Pipe railing and brackets shall be installed to conform to the details shown on the Drawings.
- D. Wedge anchor bolts shall be installed per manufacturer’s recommendations.

3.2 CLEANING AND PROTECTION

- A. Immediately upon completion of installation clean all stainless steel surfaces with stainless steel cleaner. Do not use abrasive agents or harsh chemicals. Provide plastic sheet protection for all surfaces of completed installations to prevent damage during remainder of construction activities.

END OF SECTION 057310

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Building wires and cables rated 2000V and less.
 - 2. Connectors, splices, and terminations rated 600 V and less.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA70, by a qualified testing agency, and marked for intended location and application.
- B. Standards:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 - 2. RoHS compliant.
 - 3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- C. Conductors: Copper, complying with NEMA WC 70/ICEA S-95-658.
 - 1. Conductor Insulation : Comply with NEMA WC 70/ICEA S-95-658 for type THHN/THWN-2 and Type XHHW-2.
- D. Cable: Comply with NEMA WC 70/ICEA S-95-685 for metal-clad cable, Type MC and Type SO with ground wire.

2.2 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Service Entrance: Type XHHW-2, single conductors in raceway.
- B. Exposed Feeders: Type THHN/THWN-2, single conductors in raceway or Type XHHW-2, single conductors in raceway.
- C. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspace: Type THHN/THWN-2, single conductors in raceway.
- D. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type XHHW-2, single conductors in raceway.
- E. Exposed Branch Circuits, Including in Crawlspace: Type THHN/THWN-2, single conductors in raceway.
- F. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway.
- G. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type XHHW-2, single conductors in raceway.
- H. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit application.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

- B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.
- C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- B. Make splices, terminations, and taps that are compatible with conductor material.
 - 1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.5 IDENTIFICATION

- A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

3.6 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- C. Perform tests and inspections.
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.
 - 2. Perform each of the following visual and electrical tests:

- a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
 - b. Test bolted connections for high resistance using one of the following:
 - 1) A low-resistance ohmmeter.
 - 2) Calibrated torque wrench.
 - 3) Thermographic survey.
 - c. Inspect compression-applied connectors for correct cable match and indentation.
 - d. Inspect for correct identification.
 - e. Inspect cable jacket and condition.
 - f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500-V dc for 300-V rated cable and 1000-V dc for 600-V rated cable for a one-minute duration.
 - g. Continuity test on each conductor and cable.
 - h. Uniform resistance of parallel conductors.
3. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch 11 months after date of Substantial Completion.
- D. Cables will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports to record the following:
- 1. Procedures used.
 - 2. Results that comply with requirements.
 - 3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 260519

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes grounding and bonding systems and equipment.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

2.2 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.

3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

2.3 CONNECTORS

- A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.
- B. Conduit Hubs: Mechanical type, terminal with threaded hub.

PART 3 - EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

3.2 GROUNDING AT THE SERVICE

- A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.3 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 1. Feeders and branch circuits.
 2. Lighting circuits.
 3. Receptacle circuits.
- C. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.

- D. Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply circuit raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure, and install a separate insulated equipment grounding conductor. Isolate conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service unless otherwise indicated.

3.4 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor and install in conduit.
- C. Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade unless otherwise indicated.
 - 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
 - 2. Use exothermic welds for all below-grade connections.
 - 3. For grounding electrode system, install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.
- D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - 2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
 - 3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.
- E. Concrete-Encased Grounding Electrode: Fabricate according to NFPA 70; using electrically conductive coated steel reinforcing bars or rods, at least 20 feet (6.0 m) long. If reinforcing is in multiple pieces, connect together by the usual steel tie wires or exothermic welding to create the required length.

- F. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.
1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 2. Make connections with clean, bare metal at points of contact.
 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections with the assistance of a factory-authorized service representative.
- B. Tests and Inspections:
1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
 3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal. Make tests at ground rods before any conductors are connected.
 - a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - b. Perform tests by fall-of-potential method according to IEEE 81.
- C. Grounding system will be considered defective if it does not pass tests and inspections.

END OF SECTION 260526

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Conduit and cable support devices.
 - 2. Support for conductors in vertical conduit.
 - 3. Hangers and supports for electrical equipment and systems.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
 - a. Slotted support systems, hardware, and accessories.
 - b. Clamps.
 - c. Hangers.
 - d. Sockets.
 - e. Eye nuts.
 - f. Fasteners.
 - g. Anchors.
 - h. Saddles.
 - i. Brackets.
 - 2. Include rated capacities and furnished specialties and accessories.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
1. Flame Rating: Class 1.
 2. Self-extinguishing according to ASTM D 635.

2.2 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Preformed steel channels and angles with minimum 13/32-inch- (10-mm-) diameter holes at a maximum of 8 inches (200 mm) o.c. in at least one surface.
1. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
 2. Material for Channel, Fittings, and Accessories: [Galvanized steel] [Plain steel] [Stainless steel, Type 304] [Stainless steel, Type 316].
 3. Channel Width: [Selected for applicable load criteria] [1-5/8 inches (41.25 mm)] [1-1/4 inches (31.75 mm)] [13/16 inches (20.64 mm)] <Insert dimension>.
 4. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
 5. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
 6. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
 7. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- C. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
 2. Mechanical-Expansion Anchors: Insert-wedge-type, [**zinc-coated**] [**stainless**] steel, for use in hardened portland cement concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
 3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.
 4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.

5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: All Stainless-steel springhead type.
7. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Comply with the following standards for application and installation requirements of hangers and supports, except where requirements on Drawings or in this Section are stricter:
 1. NECA 1.
 2. NECA 101
- B. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping materials and installation for penetrations through fire-rated walls, ceilings, and assemblies.
- C. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."
- D. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- E. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.

3.2 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, **EMT and RMC** may be supported by openings through structure members, according to NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches (100 mm) thick.
6. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Comply with installation requirements in Section 055000 "Metal Fabrications" for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

3.4 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 260529

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Metal conduits and fittings.
 - 2. Nonmetallic conduits and fittings.
 - 3. Metal wireways and auxiliary gutters.
 - 4. Nonmetal wireways and auxiliary gutters.
 - 5. Surface raceways.
 - 6. Boxes, enclosures, and cabinets.
 - 7. Handholes and boxes for exterior underground cabling.

1.3 DEFINITIONS

- A. GRC: Galvanized rigid steel conduit.
- B. IMC: Intermediate metal conduit.

1.4 ACTION SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

PART 2 - PRODUCTS

2.1 NONMETALLIC CONDUITS AND FITTINGS

- A. Nonmetallic Conduit:

1. Listing and Labeling: Nonmetallic conduit shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Fiberglass:
 - a. Comply with NEMA TC 14.
 - b. Comply with UL 2515 for aboveground raceways.
 - c. Comply with UL 2420 for belowground raceways.
3. ENT: Comply with NEMA TC 13 and UL 1653.
4. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.
5. LFNC: Comply with UL 1660.
6. Rigid HDPE: Comply with UL 651A.
7. Continuous HDPE: Comply with UL 651A.
8. Coilable HDPE: Preassembled with conductors or cables and complying with ASTM D 3485.
9. RTRC: Comply with UL 2515A and NEMA TC 14.

2.2 METAL WIREWAYS AND AUXILIARY GUTTERS

- A. Description: Sheet metal, complying with UL 870 and NEMA 250, Type 1 unless otherwise indicated, and sized according to NFPA 70.
 1. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.
- C. Wireway Covers: Screw-cover type unless otherwise indicated.
- D. Finish: Manufacturer's standard enamel finish.

2.3 SURFACE RACEWAYS

- A. Listing and Labeling: Surface raceways and tele-power poles shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Surface Metal Raceways: Galvanized steel with snap-on covers complying with UL 5. Prime coated, ready for field painting.

2.4 BOXES, ENCLOSURES, AND CABINETS

- A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.
- B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.
- C. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1 and UL 1773, galvanized, cast iron with gasketed cover.
- D. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb (23 kg). Outlet boxes designed for attachment of luminaires weighing more than 50 lb (23 kg) shall be listed and marked for the maximum allowable weight.
- E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- F. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
- G. Device Box Dimensions: 4 inches square by 2-1/8 inches deep (100 mm square by 60 mm deep).
- H. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1 with continuous-hinge cover with flush latch unless otherwise indicated.
 - 1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
 - 2. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.
- I. Cabinets:
 - 1. NEMA 250, Type 1 galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - 2. Hinged door in front cover with flush latch and concealed hinge.
 - 3. Metal barriers to separate wiring of different systems and voltage.

2.5 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

- A. General Requirements for Handholes and Boxes:
 - 1. Boxes and handholes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
 - 2. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.

1. Standard: Comply with SCTE 77.
2. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, LIGHTING.
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below unless otherwise indicated:
1. Exposed Conduit: GRC or IMC
 2. Concealed Conduit, Aboveground: GRC or IMC.
 3. Underground Conduit: RNC, Type EPC-40-PVC or Type EPC-80-PVC, direct buried
- B. Indoors: Apply raceway products as specified below unless otherwise indicated:
1. Exposed, Not Subject to Physical Damage: EMT.
 2. Exposed, Not Subject to Severe Physical Damage: EMT.
 3. Exposed and Subject to Severe Physical Damage: GRC or IMC. Raceway locations include the following:
 - a. Loading dock.
 - b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
- C. Minimum Raceway Size: 1/2-inch (16-mm) trade size.
- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
 2. EMT: Use setscrew or compression fittings. Comply with NEMA FB 2.10.
 3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.
- E. Install surface raceways only where indicated on Drawings.

3.2 INSTALLATION

- A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

- B. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.
- C. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- D. Complete raceway installation before starting conductor installation.
- E. Arrange stub-ups so curved portions of bends are not visible above finished slab.
- F. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.
- G. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.
- H. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- I. Support conduit within 12 inches (300 mm) of enclosures to which attached.
- J. Stub-Ups to Above Recessed Ceilings:
 - 1. Use EMT, IMC, or RMC for raceways.
 - 2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
- K. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- L. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.
- M. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.
- N. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.
- O. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

- P. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.
- Q. Cut conduit perpendicular to the length. For conduits 2-inch (53-mm) trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.
- R. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.
- S. Surface Raceways:
 - 1. Install surface raceway with a minimum 2-inch (50-mm) radius control at bend points.
 - 2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches (1200 mm) and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.
- T. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings according to NFPA 70.
- U. Comply with manufacturer's written instructions for solvent welding RNC and fittings.
- V. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of **72 inches (1830 mm)** of flexible conduit for **recessed and semirecessed luminaires**, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
 - 1. Use LFMC in damp or wet locations subject to severe physical damage.
 - 2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.
- W. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to **center** of box unless otherwise indicated.
- X. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box.
- Y. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.
- Z. Locate boxes so that cover or plate will not span different building finishes.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Section 312000 "Earth Moving" for pipe less than 6 inches (150 mm) in nominal diameter.
2. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Section 312000 "Earth Moving."
3. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through floor.
 - a. Couple steel conduits to ducts with adapters designed for this purpose and encase coupling with 3 inches (75 mm) of concrete for a minimum of 12 inches (300 mm) on each side of the coupling.
 - b. For stub-ups at equipment mounted on outdoor concrete bases and where conduits penetrate building foundations, extend steel conduit horizontally a minimum of 60 inches (1500 mm) from edge of foundation or equipment base. Install insulated grounding bushings on terminations at equipment.
4. Underground Warning Tape: Comply with requirements in Section 260553 "Identification for Electrical Systems."

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.
- B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch (12.5-mm) sieve to No. 4 (4.75-mm) sieve and compacted to same density as adjacent undisturbed earth.
- C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch (25 mm) above finished grade.
- D. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.5 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Color and legend requirements for raceways, conductors, and warning labels and signs.
 - 2. Labels.
 - 3. Bands and tubes.
 - 4. Tapes and stencils.
 - 5. Tags.
 - 6. Signs.
 - 7. Cable ties.
 - 8. Paint for identification.
 - 9. Fasteners for labels and signs.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Comply with ASME A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Comply with ANSI Z535.4 for safety signs and labels.

- E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.
- F. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 COLOR AND LEGEND REQUIREMENTS

- A. Warning labels and signs shall include, but are not limited to, the following legends:
 - 1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
 - 2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."
- B. Equipment Identification Labels:
 - 1. Black letters on a white field.

2.3 LABELS

- A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.
- B. Snap-around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeves, with diameters sized to suit diameters and that stay in place by gripping action.
- C. Self-Adhesive Wraparound Labels: Preprinted vinyl flexible label with acrylic pressure-sensitive adhesive.
 - 1. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over the legend. Labels sized such that the clear shield overlaps the entire printed legend.
 - 2. Marker for Labels: Permanent, waterproof, black ink marker recommended by tag manufacturer.
 - 3. Marker for Labels: Machine-printed, permanent, waterproof, black ink recommended by printer manufacturer.
- D. Self-Adhesive Labels: Vinyl, thermal, transfer-printed, 3-mil- (0.08-mm-) thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.

2.4 SIGNS

A. Baked-Enamel Signs:

1. Preprinted aluminum signs punched or drilled for fasteners, with colors, legend, and size required for application.
2. 1/4-inch (6.4-mm) grommets in corners for mounting.
3. Nominal Size: 7 by 10 inches (180 by 250 mm).

B. Metal-Backed Butyrate Signs:

1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with 0.0396-inch (1-mm) galvanized-steel backing, punched and drilled for fasteners, and with colors, legend, and size required for application.
2. 1/4-inch (6.4-mm) grommets in corners for mounting.
3. Nominal Size: 10 by 14 inches (250 by 360 mm).

C. Laminated Acrylic or Melamine Plastic Signs:

1. Engraved legend.
2. Thickness:
 - a. For signs up to 20 sq. in. (129 sq. cm), minimum 1/16 inch (1.6 mm) thick.
 - b. For signs larger than 20 sq. in. (129 sq. cm), 1/8 inch (3.2 mm) thick.
 - c. Engraved legend with black letters on white face
 - d. Self-adhesive.
 - e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.5 CABLE TIES

A. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 12,000 psi (82.7 MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black, except where used for color-coding.

B. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 12,000 psi (82.7 MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black.

C. Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, and self-locking.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 7000 psi (48.2 MPa).
3. UL 94 Flame Rating: 94V-0.
4. Temperature Range: Minus 50 to plus 284 deg F (Minus 46 to plus 140 deg C).
5. Color: Black.

2.6 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).
- B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

- A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.
- B. Install identifying devices before installing acoustical ceilings and similar concealment.
- C. Verify identity of each item before installing identification products.
- D. Apply identification devices to surfaces that require finish after completing finish work.
- E. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.
- F. System Identification for Raceways and Cables under 600 V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.
 1. Secure tight to surface of conductor, cable, or raceway.

- G. System Identification for Raceways and Cables over 600 V: Identification shall completely encircle cable or conduit. Place adjacent identification of two-color markings in contact, side by side.
 - 1. Secure tight to surface of conductor, cable, or raceway.
- H. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.
- I. Vinyl Wraparound Labels:
 - 1. Secure tight to surface of raceway or cable at a location with high visibility and accessibility.
 - 2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.
- J. Snap-around Labels: Secure tight to surface at a location with high visibility and accessibility.
- K. Self-Adhesive Wraparound Labels: Secure tight to surface at a location with high visibility and accessibility.
- L. Marker Tapes: Secure tight to surface at a location with high visibility and accessibility.
- M. Floor Marking Tape: Apply stripes to finished surfaces following manufacturer's written instructions.

3.3 IDENTIFICATION SCHEDULE

- A. Accessible Fittings for Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive labels containing the wiring system legend and system voltage. System legends shall be as follows:
 - 1. "EMERGENCY POWER."
 - 2. "POWER."
- B. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color – coding conductor tape to identify the phase.
 - 1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.
- C. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive labels with the conductor or cable designation, origin, and destination.

- D. Control-Circuit Conductor Termination Identification: For identification at terminations, provide self-adhesive labels with the conductor designation.
- E. Locations of Underground Lines: Underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.
- F. Concealed Raceways and Duct Banks, More Than 600 V, within Buildings: Apply floor marking tape to the following finished surfaces:
 - 1. Floor surface directly above conduits running beneath and within 12 inches (300 mm) of a floor that is in contact with earth or is framed above unexcavated space.
 - 2. Wall surfaces directly external to raceways concealed within wall.
 - 3. Accessible surfaces of concrete envelope around raceways in vertical shafts, exposed in the building, or concealed above suspended ceilings.
- G. Instructional Signs: Self-adhesive labels, including the color code for grounded and ungrounded conductors.
- H. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive labels.
 - 1. Apply to exterior of door, cover, or other access.
 - 2. For equipment with multiple power or control sources, apply to door or cover of equipment, including, but not limited to, the following:
 - a. Power-transfer switches.
 - b. Controls with external control power connections.
- I. Arc Flash Warning Labeling: Self-adhesive labels.
- J. Operating Instruction Signs: Self-adhesive labels.
- K. Equipment Identification Labels:
 - 1. Equipment to Be Labeled:
 - a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be in the form of a engraved, laminated acrylic or melamine label.
 - b. Enclosures and electrical cabinets.
 - c. Emergency system boxes and enclosures.
 - d. Motor-control centers.
 - e. Enclosed switches.
 - f. Enclosed circuit breakers.
 - g. Enclosed controllers.
 - h. Variable-speed controllers.
 - i. Push-button stations.
 - j. Power-transfer equipment.
 - k. Contactors.

1. Remote-controlled switches, dimmer modules, and control devices.

END OF SECTION 260553

SECTION 260923 - LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Photoelectric switches.
 - 2. Standalone daylight-harvesting switching and dimming controls.
 - 3. Digital timer light switches.
 - 4. Outdoor motion sensors.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
 - 1. Interconnection diagrams showing field-installed wiring.
 - 2. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Sample Warranty: For manufacturer's warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each type of lighting control device to include in operation and maintenance manuals.

1.6 WARRANTY

- A. Manufacturer's Warranty: Manufacturer and Installer agree to repair or replace lighting control devices that fail(s) in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Faulty operation of lighting control software.
 - b. Faulty operation of lighting control devices.
2. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 OUTDOOR PHOTOELECTRIC SWITCHES

- A. Description: Solid state; one set of NO dry contacts rated for 24 V dc at 1 A, to operate connected load, complying with UL 773, and compatible with lighting control panelboard.
 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 2. Light-Level Monitoring Range: 1.5 to 10 fc (16.14 to 108 lux), with an adjustment for turn-on and turn-off levels within that range.
 3. Time Delay: Thirty-second minimum, to prevent false operation.
 4. Mounting: 1/2-inch (13-mm) threaded male conduit.
 5. Failure Mode: Luminaire stays ON.
 6. Power Pack: Dry contacts rated for 20-A LED load at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.
 - a. LED status lights to indicate load status.
 - b. Plenum rated.

2.2 LIGHTING CONTACTORS

- A. Description: Electrically operated and electrically held, combination-type lighting contactors with complying with NEMA ICS 2 and UL 508.
 1. Current Rating for Switching: Listing or rating consistent with type of load served, including tungsten filament, inductive, and high-inrush ballast (ballast with 15 percent or less THD of normal load current).
 2. Fault Current Withstand Rating: Equal to or exceeding the available fault current at the point of installation.
 3. Enclosure: Comply with NEMA 250.
 4. Provide with control and pilot devices as scheduled, matching the NEMA type specified for the enclosure.
- B. Interface with DDC System for HVAC: Provide hardware interface to enable the DDC system for HVAC to monitor and control lighting contactors.
 1. Monitoring: On-off status
 2. Control: On-off operation

2.3 CONDUCTORS AND CABLES

- A. Power Wiring to Supply Side of Remote-Control Power Sources: Not smaller than No. 12 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- B. Classes 2 and 3 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 18 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- C. Class 1 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 14 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine lighting control devices before installation. Reject lighting control devices that are wet, moisture damaged, or mold damaged.
- B. Examine walls and ceilings for suitable conditions where lighting control devices will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SENSOR INSTALLATION

- A. Comply with NECA 1.
- B. Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, smoke detectors, fire-suppression systems, and partition assemblies.
- C. Install and aim sensors in locations to achieve not less than 90-percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.

3.3 CONTACTOR INSTALLATION

- A. Comply with NECA 1.
- B. Mount electrically held lighting contactors with elastomeric isolator pads to eliminate structure-borne vibration unless contactors are installed in an enclosure with factory-installed vibration isolators.

3.4 WIRING INSTALLATION

- A. Comply with NECA 1.
- B. Wiring Method: Comply with Section 260519 "Low-Voltage Electrical Power Conductors and Cables." Minimum conduit size is 1/2 inch (13 mm).
- C. Wiring within Enclosures: Comply with NECA 1. Separate power-limited and nonpower-limited conductors according to conductor manufacturer's written instructions.
- D. Size conductors according to lighting control device manufacturer's written instructions unless otherwise indicated.
- E. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures.

3.5 IDENTIFICATION

- A. Identify components and power and control wiring according to Section 260553 "Identification for Electrical Systems."
 - 1. Identify controlled circuits in lighting contactors.
 - 2. Identify circuits or luminaires controlled by photoelectric and occupancy sensors at each sensor.
- B. Label time switches and contactors with a unique designation.

3.6 FIELD QUALITY CONTROL

- A. Testing Agency: a qualified testing agency to evaluate lighting control devices and perform tests and inspections.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- C. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. Operational Test: After installing time switches and sensors, and after electrical circuitry has been energized, start units to confirm proper unit operation.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Lighting control devices will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports.

3.7 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting lighting control devices to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.
 - 1. For occupancy and motion sensors, verify operation at outer limits of detector range. Set time delay to suit Owner's operations.
 - 2. For daylighting controls, adjust set points and deadband controls to suit Owner's operations.
 - 3. Align high-bay occupancy sensors using manufacturer's laser aiming tool.
 - 4. .

3.8 DEMONSTRATION

- A. Coordinate demonstration of products specified in this Section with demonstration requirements for low-voltage, programmable lighting control systems specified in Section 260943.16 "Addressable-Luminaire Lighting Controls" and Section 260943.23 "Relay-Based Lighting Controls."

END OF SECTION 260923

SECTION 265119 - LED INTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes the following types of LED luminaires:
 - 1. Linear industrial.
 - 2. Surface mount, linear.
- B. Related Requirements:
 - 1. Section 260923 "Lighting Control Devices" for automatic control of lighting, including time switches, photoelectric relays, occupancy sensors, and multipole lighting relays and contactors.

1.3 DEFINITIONS

- A. CCT: Correlated color temperature.
- B. CRI: Color Rendering Index.
- C. Fixture: See "Luminaire."
- D. IP: International Protection or Ingress Protection Rating.
- E. LED: Light-emitting diode.
- F. Lumen: Measured output of lamp and luminaire, or both.
- G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Arrange in order of luminaire designation.
 - 2. Include data on features, accessories, and finishes.

3. Include physical description and dimensions of luminaires.
4. Include emergency lighting units, including batteries and chargers.
5. Include life, output (lumens, CCT, and CRI), and energy-efficiency data.
6. Photometric data and adjustment factors based on laboratory tests, complying with IES "Lighting Measurements Testing and Calculation Guides" for each luminaire type. The adjustment factors shall be for lamps and accessories identical to those indicated for the luminaire as applied in this Project.
 - a. Manufacturers' Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
 - b. Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.
2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

C. Sustainable Design Submittals:

D. Product Schedule: For luminaires and lamps

1.5 INFORMATIONAL SUBMITTALS

A. Seismic Qualification Data: For luminaires, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

B. Product Certificates: For each type of luminaire.

C. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and lighting systems to include in operation and maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.
- B. Provide luminaires from a single manufacturer for each luminaire type.
- C. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.9 WARRANTY

- A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.
- B. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.
 - 1. The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces specified"

2.2 LUMINAIRE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
 - 1. Label shall include the following lamp characteristics:

- a. "USE ONLY" and include specific lamp type.
 - b. Lamp diameter, shape, size, wattage, and coating.
 - c. CCT and CRI.
- C. Recessed luminaires shall comply with NEMA LE 4.

2.3 MATERIALS

A. Metal Parts:

- 1. Free of burrs and sharp corners and edges.
- 2. Sheet metal components shall be steel unless otherwise indicated.
- 3. Form and support to prevent warping and sagging.

B. Steel:

- 1. ASTM A 36/A 36M for carbon structural steel.
- 2. ASTM A 568/A 568M for sheet steel.

C. Stainless Steel:

- 1. 1. Manufacturer's standard grade.
- 2. 2. Manufacturer's standard type, ASTM A 240/240 M.

D. Galvanized Steel: ASTM A 653/A 653M.

E. Aluminum: ASTM B 209.

2.4 METAL FINISHES

- A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.5 LUMINAIRE SUPPORT

- A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.
- B. Single-Stem Hangers: 1/2-inch (13-mm) steel tubing with swivel ball fittings and ceiling canopy. Finish same as luminaire.
- C. Wires: ASTM A 641/A 641 M, Class 3, soft temper, zinc-coated steel, [**12 gage (2.68 mm)**]
- D. Rod Hangers: 3/16-inch (5-mm) minimum diameter, cadmium-plated, threaded steel rod.

- E. Hook Hangers: Integrated assembly matched to luminaire, line voltage, and equipment with threaded attachment, cord, and locking-type plug.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before luminaire installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with NECA 1.
- B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.
- C. Install lamps in each luminaire.
- D. Supports:
 - 1. Sized and rated for luminaire weight.
 - 2. Able to maintain luminaire position after cleaning and relamping.
 - 3. Provide support for luminaire without causing deflection of ceiling or wall.
 - 4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.
- E. Flush-Mounted Luminaires:
 - 1. Secured to outlet box.
 - 2. Attached to ceiling structural members at four points equally spaced around circumference of luminaire.
 - 3. Trim ring flush with finished surface.
- F. Wall-Mounted Luminaires:
 - 1. Attached to structural members in walls.
 - 2. Do not attach luminaires directly to gypsum board.
- G. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections.

3.3 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
 - 1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
 - 2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.
- B. Luminaire will be considered defective if it does not pass operation tests and inspections.
- C. Prepare test and inspection reports.

3.5 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting the direction of aim of luminaires to suit occupied conditions. Make up to two visits to Project during other-than-normal hours for this purpose. Some of this work may be required during hours of darkness.
 - 1. During adjustment visits, inspect all luminaires. Replace lamps or luminaires that are defective.
 - 2. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
 - 3. Adjust the aim of luminaires in the presence of the Architect.

END OF SECTION 265119

SECTION 268313 – SNOW MELTING/DEICING SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes components necessary for a complete and operating Snow Melting/Deicing System including but not limited to the following:
 - 1. Mineral Insulated (MI) Heat Trace Cable
 - 2. Heat Trace Controller
 - 3. Contactors
 - 4. Air Temperature Sensor
 - 5. Aerial Moisture Sensor

1.3 SYSTEM DESCRIPTION

- A. The system shall consist of all equipment and materials for a complete snow melting system installed in stairs, landings, sidewalks, and plazas.
- B. Provide a nominal heat density of 40 watts per square foot. The heat trace cable rating and spacing shall be developed to meet that requirement.
- C. The controls shall provide both manual and automatic operation. Air temperature and sense of precipitation shall initiate and maintain operation of the snow melt system.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product including equipment and material selection, and installation and programming instructions.
- B. Shop Drawings:
 - 1. Plan views illustrating heat trace layout if different from the Drawings.
 - 2. Control Panel layout.
 - 3. Wiring and Schematic diagrams.
 - 4. Installation details.

1.5 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each device to include in operation and maintenance manuals.
- B. Program Configuration: Printout of software application and graphic screens.

1.7 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Company regularly engaged in manufacturing of electric cable heating elements, of type, sizes, and ratings required, whose products have been in satisfactory use in similar services for not less than five years.
- B. Regulatory Requirements
 - 1. Provide products that are listed or recognized and labeled by National Recognized Testing Laboratory (NRTL).

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle in accordance with manufacturer's written instructions. Store materials in a dry indoor location off the ground.
- B. Remove damaged materials from job site and replace with new at no additional cost to owner.

PART 2 - PRODUCTS

2.1 SNOW MELTING CABLES

- A. Mineral insulated copper conductor with magnesium oxide insulation, corrosion resistant outer sheath, factory spliced and sealed, cold leads, and as indicated.
- B. Standards:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 - 2. UL Listed: E33597

2.2 ACCESSORIES

- A. Galvanized steel prepunched strapping to hold cables in place when embedded in concrete.

2.3 CONTROLS

- A. Control module specifically designed for snow and ice melting systems for sidewalks, stairs, and plazas.
 - 1. Programmable with automatic snow and ice melting control.
 - 2. Manual zone activation.
 - 3. Accesses air temperature and precipitation conditions from separate sensors.
- B. Sensors:
 - 1. Air temperature: Measures ambient air temperatures from -40 deg F to 150 deg F.
 - 2. Aerial moisture: Detects falling or blowing snow. Mounts to conduit mast
- C. Contactors:
 - 1. Electrically operated and held.
 - 2. Current Rating for Switching: Listing or rating consistent with type of load served.
 - 3. Contactor Coils: Pressure-encapsulated type.
 - 4. Power Contacts: Totally enclosed, double-break, silver-cadmium oxide; assembled to allow inspection and replacement without disturbing line or load wiring.
- D. Cabinet:
 - 1. NEMA 250, Type 4, stainless steel box with removable interior panel, finished inside and out with manufacturer's standard enamel.
 - 2. Hinged door with locking latch.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Examine areas where the snow melting heat trace cables are to be installed for cleanliness and conditions appropriate for successful installation.
- B. Install cables in accordance with manufactures instructions.
- C. Secure heating cables to anchoring devices.
- D. Do not bunch or cross cables.
- E. Space and route cables as illustrated in the Shop Drawings.
- F. Cross concrete joints as instructed by the manufacturer.
- G. Power only after the concrete has cured for 28 days.
- H. Test the cable continuity and insulation resistance before, and during and 24 hours after pouring concrete.

- I. Install the control panel and sensors in accordance to the manufacturers instructions. Coordinate the program requirements for automatic controls with the Engineer.

3.2 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 1. Continuity/resistance tests: Confirm conductor resistance as prescribed to yield the heating requirement illustrated in the Drawings.
 2. Insulation tests: Confirm the insulation resistance exceeds the manufacturers minimum value.
 3. Controls: Confirm that all operations occur as programmed.
- B. Confirm that all heat trace cable is embedded per the Drawings.
- C. Cables will be considered defective if they do not pass tests and inspections.
- D. Prepare test and inspection reports to record the following:
 1. Cable resistances
 2. Test procedures used.
 3. Results that comply with requirements.
 4. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

3.3 DEMONSTRATION

- A. Provide demonstration and training to the Owner's maintenance staff in the operation and maintenance of the snow and ice melting system.

END OF SECTION 268313

SECTION 311900 – EROSION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary to maintain existing temporary erosion control devices; including, but not limited to, straw wattles and catch basin silt sack inserts.
- B. The WORK also includes sweeping, watering, vacuuming of the existing asphalt roadways and surfaces used, including Calhoun Avenue and the asphalt paved surfaces between the State of Alaska SOB and AOB.

1.3 THE REQUIREMENT

- A. The WORK under this section includes providing all labor, materials, tools and equipment necessary to construct and maintain temporary erosion control works; including but not limited to, straw wattles, silt fences, silt sacks in storm drain structures etc.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials shall be suitable for the intended use and perform effectively to control silt and surface erosion. All materials shall remain the property of the CONTRACTOR.
- B. CONTRACTOR shall submit an erosion and sediment control plan to the ENGINEER for review and approval 7 days prior to commencing WORK.

PART 3 - EXECUTION

3.1 GENERAL

- A. The CONTRACTOR shall install temporary erosion control structures and devices as required by their approved erosion and sediment control plan.
- B. Temporary erosion control structures shall remain in place until the project is completed and replaced by permanent erosion control WORK, protected by final stabilization or until the ENGINEER approves their removal.

END OF SECTION 311900

SECTION 312001 - EXCAVATION AND EMBANKMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary for excavation for new concrete plaza and concrete stairway construction to the lines, grades and cross sections indicated in the Drawings, or as directed by the ENGINEER.

PART 2 – PRODUCTS

2.1 EXCAVATION

- A. Excavation shall be silt, organics, muck, sand, gravel, cobbles, boulders and other granular material other than rock, and shall consist of excavation and disposal of these materials when encountered in the WORK.

2.2 USABLE EXCAVATION

- A. Usable material from excavation shall be sand, gravel, rock or combination thereof containing no muck, peat, frozen materials, roots, sod or other deleterious material. The ENGINEER shall determine if the excavated material meets the requirements of useable excavation.

2.3 EMBANKMENT

- A. Material for embankment construction shall consist of non-frost-susceptible earth, sand, gravel, fractured rock or combination thereof containing no muck, peat, frozen materials, roots, sod or other deleterious materials, and shall be compactable to the density required by the Specifications.

2.4 SELECTED EMBANKMENT

- A. Selected Embankment shall meet all the requirements for Embankment Material, and in addition, shall have a plasticity index not greater than 6 as determined by AASHTO T 90 and shall contain no more than 6% by weight of material passing the 200 mesh sieve. The percentage of material passing the 200 mesh sieve shall be determined using only the material which passes a 3 inch sieve.

2.5 BORROW

- A. Borrow shall meet the requirements for Embankment above.

2.6 SELECTED BORROW

- A. Selected Borrow shall meet the requirements for Selected Embankment above.

PART 3 – EXECUTION

3.1 EXCAVATION

- A. Excavations shall be reasonably smooth and uniform to the lines, grades and cross sections shown in the Drawings or as directed by the ENGINEER. Excavations shall be conducted to ensure that material outside of excavation limits remains undisturbed.
- B. When excavation to the limits indicated on the Drawings encounters unsuitable underlying material, the ENGINEER may require the CONTRACTOR to remove the unsuitable material and backfill with approved material. The CONTRACTOR shall take the necessary cross section measurements before backfill is placed in order to measure the amount of unsuitable material removed.
- C. Excavated soils that do not meet the requirements for selected borrow material and surplus excavation shall be disposed of by the CONTRACTOR at a location and in a manner approved by the ENGINEER. No material may be wasted without the prior approval of the ENGINEER.
- D. The CONTRACTOR is responsible for securing waste disposal sites. The CONTRACTOR shall obtain the written permission of the landowner for use of all disposal sites, and shall either obtain any required permits or assure that they have been obtained by others. If required by the ENGINEER, the CONTRACTOR shall furnish the permit numbers of all required permits for the disposal sites. The costs of securing such sites shall be borne by the CONTRACTOR.
- E. Temporary storage on site of excavated materials that may be used on the Project is the responsibility of the CONTRACTOR.
- F. The CONTRACTOR shall conduct all operations to prevent contaminating useable excavation with unsuitable material.
- G. The CONTRACTOR shall provide added care when excavating adjacent to existing roadways, sidewalks, curbs, retaining walls, canopy foundation tie back system and underground utilities. Damage caused to existing roadways, sidewalks, curbs, retaining walls and underground utilities by the CONTRACTOR shall be repaired at the CONTRACTOR's expense.

- H. After excavation to the limits shown is complete and prior to backfilling, the bottom of the excavation shall be proof rolled with an excavator or backhoe-mounted vibrating compactor until a firm base for the backfill material is obtained.

3.2 EMBANKMENT

- A. Embankments shall be constructed to a reasonably smooth and uniform shape conforming to the lines, grades and cross sections indicated on the Drawings or as directed by the ENGINEER.
- B. Embankment construction includes, but is not limited to, placing and compacting selected borrow adjacent to retaining wall foundation and footings, canopy foundation system, sidewalks, curbs and underground structures. Only approved materials shall be used in the construction of embankments and backfills. Embankment material will be approved for gradation following placement, but prior to compaction.
- C. Embankment shall not be placed on frozen ground.
- D. When embankment is to be placed on both sides of a concrete wall or box-type structure, operations shall be so conducted that the embankment is always at approximately the same elevation on both sides of the structure.
- E. The finish subgrade surface (bottom of base course level) shall not vary more than 0.05-foot when tested using a ten foot straightedge, applied parallel with and at right angles to the centerline of the roadway or parking area to receive base course grading D-1 material, nor vary more than 0.05-foot from the established grade.
- F. If continued hauling over a completed or partially completed embankment causes loss of stability as evidenced by pumping or rutting, or other damage, the CONTRACTOR shall repair the damaged embankment at its own expense and adjust its hauling equipment and procedures so as to avoid further damage.

END OF SECTION 312001

SECTION 312003 - BASE COURSE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary for furnishing and placing aggregate base course on a prepared surface to the lines and grades shown on the Drawings.

1.3 SUBMITTALS

- A. Base course grading D-1 gradation and modified proctor (ASTM 1557/AASHTO T180-D) from independent laboratory from current construction season (2018).

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Aggregate base course shall consist of crushed gravel or crushed stone, conforming to the quality requirements of AASHTO M 147. The aggregate shall be free from lumps, balls of clay, or other objectionable matter, and shall be durable and sound.
- B. The base course shall be sampled according to "WAQTC FOP for AASHTO T2-Sampling Aggregates" as described in the *Alaska Test Methods Manual*, published by the Alaska Department of Transportation and Public Facilities.
- C. Coarse aggregate (that material retained on a No. 4 sieve) shall be crushed stone and shall consist of sound, tough, durable rock of uniform quality. Rock shall be free of schist that cleaves along preferred foliation planes. Rock shall be free of platy mineral grains. Metamorphosed rock shall be free of slaty cleavage. All material shall be free of from clay balls, vegetable matter or deleterious matters. Coarse aggregate shall not be coated with dirt or other finely divided matter. All aggregates shall be free of roots and wood. In addition, coarse aggregate shall meet the following requirements:

L.A. Wear, %, 25% maximum loss in accordance with AASHTO T 96.

Degradation Value, 45 minimum in accordance with ATM 313.

Sodium Sulfate Soundness Loss, %, 9 maximum in accordance with AASHTO T 104.

- D. Base course material shall conform to the following gradations:

BASE COURSE GRADING D-1 GRADATION

(Percent passing by weight)

Sieve Size	D-1
1"	100
3/4"	70-100
3/8"	50-80
No. 4	35-50
No. 8	20-35
No. 40	8-20
No. 200	0-6

For grading D-1, at least 70% by weight of the particles retained on a No. 4 sieve shall have at least one fractured face as determined by Alaska T-4.

PART 3 - EXECUTION

3.1 GENERAL

- A. Prior to placement of the base course, the underlying surface shall be prepared by dressing, shaping, wetting or drying, and compacting of the underlying material to a minimum density of 95% as determined by AASHTO T 180-D. Surfaces shall be cleaned of all foreign substances and debris.
- B. Any ruts or soft yielding spots that may appear shall be corrected by loosening and removing unsatisfactory material and adding approved material as required, reshaping, and recompacting the affected areas to the lines and grades indicated on the Drawings. If required by the ENGINEER the CONTRACTOR shall proof load questionable areas with a loaded truck or other piece of equipment approved by the ENGINEER.
- C. Blue-top grading hubs shall be set to the top of base course to control the base course grade beneath the concrete switch gear and transformer slabs.
- D. Base course material shall be deposited and spread in a uniform layer to the required grades, and to such loose depth that when compacted to the density required, the thickness will be as indicated on the Drawings. Portions of the layer which become segregated shall be removed and replaced with a satisfactory mixture, or shall be remixed to the required gradation.
- E. The maximum compacted thickness of any one layer shall not exceed six inches, except the compacted depth of a single layer may be increased to eight inches if compaction equipment capable of delivering sufficient compactive energy, as determined by the ENGINEER, is used. If the contract documents require the compacted depth to exceed six inches, the base shall be constructed in two or more layers of approximately equal thickness. Each layer shall be shaped and compacted before the succeeding layer is placed.

- F. The base course shall be compacted to at least 95% of maximum density as determined by AASHTO T 180-D. In places not accessible to rolling equipment, the mixture shall be compacted with hand-tamping equipment.
- G. Blading, rolling, and tamping shall continue until the surface is smooth and free from waves and irregularities. If at any time the mixture is excessively moistened, it shall be serrated by means of blade graders, harrows, or other approved equipment, until the moisture content is such that the surface can be recompact and finished as above.
- H. The finished surface of the base course, when testing using a ten foot straightedge shall not show any deviation in excess of 3/8 inch between two contact points. The finish surface shall not vary more than 1/2 inch from established grade.
- I. The initial density at any location will be paid for by the OWNER. If the initial test shows that the material compaction is not as specified, the CONTRACTOR shall modify the compaction methods used, as approved by the ENGINEER, and have the material retested until the tests show that the compaction meets the Specification requirements. All tests after the initial test at any given location shall be paid for by the CONTRACTOR.

END OF SECTION 312003

SECTION 316000 - CONSTRUCTION SURVEYING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary to perform all surveying and staking necessary for the completion of the Project in conformance with the Drawings and Specifications and standard surveying practices required to accomplish the WORK.
- B. The WORK shall include the staking, referencing and all other actions as may be required to preserve and restore land monuments and property corners which are situated within the Project area, and to establish monuments as shown on the Drawings.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. All surveying involving property lines or monuments shall be done by, or under the direction of, a Registered Land Surveyor licensed in the State of Alaska.
- B. The ENGINEER will supply information relative to the approximate locations of monuments and corners, but final responsibility for locations, referencing, and restoration shall rest with the CONTRACTOR.
- C. In the event the CONTRACTOR does not replace the survey monuments and property corners disturbed by the CONTRACTOR's operations, the ENGINEER may, after first notifying the CONTRACTOR, replace the monuments in question. The cost of such replacements shall be deducted from payments to the CONTRACTOR.
- D. The CONTRACTOR shall obtain all information necessary for as-built plan production, from actual measurements and observations made by its own personnel, including Subcontractors, and submit this information to the ENGINEER.
- E. The CONTRACTOR shall use competent, qualified personnel and suitable equipment for the layout work required and shall furnish all stakes, templates, straightedges and other devices necessary for establishing, checking and maintaining the required points, lines and grades.

- F. The CONTRACTOR shall perform all staking necessary to delineate the proposed switch gear and transformer locations as indicated in the Drawings.
- G. Field notes shall be kept in standard bound notebooks in a clear, orderly and neat manner, consistent with standard surveying practices. The CONTRACTOR's field books shall be available for inspection by the ENGINEER at any time.
- H. The ENGINEER may randomly spot-check the CONTRACTOR's surveys, staking and computations at the ENGINEER discretion. After the survey or staking has been completed, the CONTRACTOR shall provide the ENGINEER with a minimum of 72 hours notice prior to performing any WORK, and shall furnish the appropriate data as required, to allow for such random spot-checking; however, the ENGINEER assumes no responsibility for the accuracy of the WORK.

END OF SECTION 316000

SECTION 321313 - SITE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary for furnishing and installing portland cement concrete for the construction of the JSOB Front Stair Replacement project including stairs, stair landing and plaza concrete in conformance with the Drawings and Specifications.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT

- A. Portland cement shall conform to the requirements of AASHTO M 85.
- B. Unless otherwise permitted by the ENGINEER, the product from only one mill and one brand and type of portland cement shall be used on the Project.

2.2 FINE AGGREGATE

- A. Fine aggregate for portland cement concrete shall conform to the requirements of AASHTO M 6 with the following exceptions:

Delete section on deleterious substances and substitute the following:

The amount of deleterious substances shall not exceed the following limits:

Friable particles percent by weight 5 max.
Coal and Lignite, percent by weight using a liquid of 1.95 specific gravity
(only material that is brownish-black shall be considered as coal or lignite)... 0.5 max.
Material passing the No. 200 sieve, percent by weight..... 3.0 max.

Delete paragraph 4.2 of AASHTO M 6.

2.3 COARSE AGGREGATE

- A. Coarse aggregate for portland cement concrete shall conform to the requirements of AASHTO M 80, class A, with the following exceptions:

Delete section on deleterious substances and substitute the following:

The amount of deleterious substances shall not exceed the following limits:

Coal and Lignite, percent by weight (only material that is brownish-black or black shall be considered coal or lignite) 1.0 max.
Material passing the No. 200 sieve 1.0 max.
Thin-elongated pieces, percent by weight. (Length greater than five (5) times average thickness)..... 15 max.
Sticks and roots, percent by weight.....0.10 max.
Friable Particles, percent by weight0.25 max.
Maximum loss from AASHTO T 96 shall be 50 percent.
Maximum loss from AASHTO T-104 shall be 12 percent.

2.4 JOINT FILLERS

A. Joint filler, of the type designated in the contract, shall conform to the following:

1. Poured filler shall conform to AASHTO M 173 or AASHTO M 282 as specified.
2. Preformed fillers shall conform to AASHTO M 33 for bituminous type; AASHTO M 153 for sponge rubber (type I), cork (type II), and self-expanding cork (type III); AASHTO M 213 for nonextruding and resilient bituminous types and resilient bituminous types and AASHTO M 220 for pre-formed elastomeric types as specified.
3. AASHTO M 220 for preformed elastomeric types as specified. The filler shall be punched to admit the dowels where called for on the Drawings. Joint filler shall be furnished in a single piece for the depth and width required for the joint unless otherwise authorized by the ENGINEER. When more than one piece is authorized for a joint, the abutting ends shall be fastened securely, and held accurately to shape, by stapling or other positive fastening satisfactory to the ENGINEER.
4. Foam filler shall be expanded polystyrene filler having a compressive strength of not less than 10 psi.
5. Hot -poured sealants for concrete and asphaltic pavements shall conform to ASTM D 3405.
6. Hot-poured elastomeric type sealant for concrete pavements shall conform to ASTM D 3406.
7. Cold-poured silicone type sealant for concrete pavements shall conform to Federal Specification TT-S-1543, Class A. The sealant shall be a one part, low-modulus silicone rubber with an ultimate elongation of 1,200 percent.

2.5 CURING MATERIAL

A. Curing material shall conform to the following requirements as specified:

1. Burlap Cloth made from Jute Kenaf AASHTO M 182.
2. Sheet Material for Curing Concrete AASHTO M 171.
3. Liquid Membrane-Forming Compounds AASHTO M 148 for Curing Concrete, Type I.

B. The requirements specified in AASHTO M 148 covering "Liquid Membrane-Forming Compounds for Curing Concrete" are modified by adding the following:

1. Liquid membrane-forming compounds utilizing linseed oil shall not be used.

2.6 AIR ENTRAINING AGENTS

- A. Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

2.7 MIXING WATER

- A. Unless otherwise permitted in writing by the ENGINEER, all water shall be obtained from the CBJ potable water system.

2.8 REINFORCING STEEL

- A. Reinforcing shall conform to AASHTO M 31, and be of grade 60 or the grade designated on the Drawings or in the Specifications. Welded wire fabric shall conform to AASHTO M 55. Epoxy coated reinforcing bars shall conform to AASHTO M 284.

2.9 SHIPPING AND STORAGE OF CEMENT

- A. Cement may be shipped from pretested approved bins. The cement shall be well protected from rain and moisture. Any cement damaged by moisture or which fails to meet any of the specified requirements shall be rejected and removed from the WORK.
- B. Cement stored by the CONTRACTOR for a period longer than 60 days in other than sealed bins or silos shall be retested before being used. Cement of different brands, types, or from different mills shall be stored separately.

2.10 COMPOSITION OF CONCRETE

- A. All portland cement concrete shall be ready-mix, provided by an approved plant regularly engaged in the production of concrete, unless otherwise authorized in writing by the ENGINEER. Ready-mix concrete shall conform to the requirements of AASHTO M 157.
- B. The CONTRACTOR shall furnish the mix design to the ENGINEER for approval. The mix design shall be suitable for its intended use. Concrete shall be designed using an absolute volume analysis. The CONTRACTOR shall be responsible for having each mix design tested at a laboratory. Prior to the start of production of any mix design, the CONTRACTOR shall submit test results and certifications for all materials, detailed mix design data and results of laboratory tests to the ENGINEER for approval. Approval by the ENGINEER will be based on apparent conformity to these Specifications. It shall remain the CONTRACTOR's responsibility during production to produce concrete conforming to the mix design and the minimum acceptance criteria in the contract. When requested by the ENGINEER, the CONTRACTOR shall submit samples of all materials for verification testing. Production shall not commence until the mix design is approved by the ENGINEER.

- C. Unless otherwise specified the design mix shall meet the following:
- | | |
|--|--------------------------------|
| Minimum cement content | 6 1/2 sacks (611 lb.) per C.Y. |
| Maximum water/cement ratio | 5.75 gal/sack (0.51 W/C ratio) |
| 28-day compressive strength (fc) | as indicated on Drawings. |
| Slump | 3" ± 1" |
| Entrained Air | 3 to 6% |
| Coarse Aggregate | AASHTO M 43, Gradation No. 67 |
| Cement factors are based on 94-pound sacks | |
- D. The CONTRACTOR shall be responsible for producing and placing specification concrete with a cement content within a tolerance of two percent.
- E. The use of superplasticizers in the concrete mix to improve the workability of mixes with low water cement ratios will require prior written approval by the ENGINEER.
- F. The CONTRACTOR may, subject to prior approval in writing, use alternative sizes of coarse aggregate as shown in Table 1 of AASHTO M 43. If the use of an alternative size of coarse aggregate produces concrete which exceeds the permissible water-cement ratio above, thereby requiring additional cement above that specified, no compensation will be made to the CONTRACTOR for the additional cement.

2.11 SAMPLING AND TESTING

- A. Field tests of all materials will be made by the ENGINEER when deemed necessary, in accordance with the applicable Specifications. When the results of the field tests indicate the material does not conform to the requirements of the Specifications, the re-tests required by the ENGINEER shall be at the CONTRACTOR's expense.
- B. Materials which fail to meet contract requirements, as indicated by laboratory tests, shall not be used in the WORK. The CONTRACTOR shall remove all defective materials from the site.
- C. Types and sizes of concrete specimens shall be in accordance with ASTM C 31. Additional slump tests and/or test cylinders may be required at the discretion of the ENGINEER. Should the analysis of any test cylinder not meet the preceding requirements of Article 2.10 (Composition of Concrete) its representative concrete shall be removed and replaced at the CONTRACTOR's expense.
- D. Three copies of all test reports shall be furnished to the ENGINEER.

2.12 COLD WEATHER CONCRETE

- A. Concrete shall not be placed when the descending air temperature in the shade, away from artificial heat, falls below 40°F. Placement of concrete shall not resume before the ascending air temperature reaches 35°F, without specific written authorization. When the air temperature falls below 40°F, or is, in the opinion of the ENGINEER, likely to do so within a 24 hour period after placing concrete, the CONTRACTOR shall have ready on

the job materials and equipment required to heat mixing water and aggregate and to protect freshly placed concrete from freezing.

- B. Concrete placed at air temperatures below 40°F shall have a temperature not less than 50°F nor greater than 70°F when placed in the forms. These temperatures shall be obtained by heating the mixing water and/or aggregate. Mixing water shall not be heated to more than 160°F.
- C. Binned aggregates containing ice or in a frozen condition will not be permitted nor will aggregates which have been heated directly by gas or oil flame or heated on sheet metal over an open fire. When aggregates are heated in bins, only steam-coil or water-coil heating will be permitted, except that other methods, when approved, may be used. If live steam is used to thaw frozen aggregate piles, drainage times comparable to those applicable for washed aggregates shall apply.
- D. When the temperature of either the water or aggregate exceeds 100°F, they shall be mixed together so that the temperature of the mix does not exceed 80°F at the time the cement is added.
- E. Any additives must have prior approval of the ENGINEER before being used.
- F. The use of calcium chloride is prohibited.
- G. When placing concrete in cold weather, the following precautions shall be taken in addition to the above requirements:
 - 1. Heat shall be applied to forms and reinforcing steel before placing concrete as required to remove all frost, ice, and snow from all surfaces which will be in contact with fresh concrete.
 - 2. When fresh concrete is to be placed in contact with hardened concrete, the surface of the previous pour shall be warmed to at least 35°F, thoroughly wet, and free water removed before fresh concrete is placed.
 - 3. When Type I or II cement is used, freshly placed concrete shall be maintained at a temperature of not less than 70°F for three days or not less than 50°F for five days. When Type III cement is used, freshly placed concrete shall be maintained at a temperature of not less than 70°F for two days or not less than 50°F for three days.
 - 4. The above requirements are not intended to apply during the normal summer construction season when air temperatures of 40°F or higher can reasonably be anticipated during the two-week period immediately following concrete placement, or until the concrete is no longer in danger from freezing.
- H. When temperatures below 20°F are not expected during the curing period and, in the opinion of the ENGINEER, no other adverse conditions, such as high winds, are expected, concrete temperatures may be maintained in thick concrete sections by retention of heat of hydration by means of adequately insulated forms.

- I. When, in the opinion of the ENGINEER, greater protection is required to maintain the specified temperature, the fresh concrete shall be completely enclosed and an adequate heat source provided. Such enclosure and heat source shall be so designed that evaporation of moisture from the concrete during curing is prevented. Precautions shall be taken to protect the structure from overheating and fire.
- J. At the end of the required curing period protection may be removed, but in such a manner that the drop in temperature of any portion of the concrete will be gradual and not exceed 30°F in the first 24 hours.
- K. For concrete placed within cofferdams and cured by flooding with water, the above conditions may be waived provided that the water in contact with the concrete is not permitted to freeze. De-watering shall not be carried out until the ENGINEER determines that the concrete has cured sufficiently to withstand freezing temperatures and hydrostatic pressure.
- L. The CONTRACTOR shall be wholly responsible for the protection of the concrete during cold weather operations. Any concrete injured by frost action or overheating shall be removed and replaced at the CONTRACTOR's expense.

2.13 FORMS

- A. Forms shall be so designed and constructed that they may be removed without injuring the concrete.
- B. Unless otherwise specified, forms for exposed surfaces shall be made of plywood, hard-pressed fiberboard, sized and dressed tongue-and-groove lumber, or metal in which all bolt and rivet holes are countersunk, so that a plane, smooth surface of the desired contour is obtained. Rough lumber may be used for surfaces that will not be exposed in the finished structure. All lumber shall be free from knotholes, loose knots, cracks, splits, warps, or other defects affecting the strength or appearance of the finished structure. All forms shall be mortar tight, free of bulge and warp, and shall be cleaned thoroughly before reuse.
- C. In designing forms and falsework, concrete shall be regarded as a liquid. In computing vertical loads a weight of 150 pounds per cubic foot shall be assumed. The lateral pressure for design of wall forms shall not be less than that given by the following formulas:

For walls with R less than or equal to 7 feet per hour:

$$P=150 + \frac{9000R}{T}, \text{ but not more than } 2000 \text{ p.s.f. or } 150 \text{ h, whichever is less.}$$

For walls with R greater than 7 feet per hour:

$$P=150 + \frac{43,400}{T} + \frac{2800R}{T}, \text{ but not more than } 2000 \text{ p.s.f. or } 150 \text{ h, whichever is less.}$$

Where:

P = lateral pressure for design of wall forms, p.s.f.

R = rate of placement, feet per hour

T = temperature of concrete in forms, °F

h = maximum height of fresh concrete in form, feet.

- D. The above formulas apply to internally vibrated concrete placed at 10 feet per hour or less, without the use of retarding agents, and where depth of vibration is limited to four feet below the top of the concrete surface. The CONTRACTOR shall state the placement rate and minimum concrete temperature on the working drawings for concrete form WORK. Deflection of plywood, studs, and walers shall not exceed 1/360 of the span between supports.
- E. Forms shall be so designed that placement and finishing of the concrete will not impose loads on the structure resulting in adverse deflections or distortions.
- F. The forms shall be so designed that portions covering concrete that is required to be finished may be removed without disturbing other portions that are to be removed later. As far as practicable, form marks shall conform to the general lines of the structure.
- G. When possible, forms shall be day-lighted at intervals not greater than 10 feet vertically, the openings being sufficient to permit free access to the forms for the purpose of inspecting, and working.
- H. Metal ties or anchorages within the forms shall be so constructed as to permit their removal to a depth of at least one inch from the face without injury to the concrete. All fittings for metal ties shall be of such design that, upon their removal, the cavities which are left will be of the smallest possible size.
- I. All exposed edges 90° or sharper shall be chamfered 3/4 inch unless otherwise noted. Chamfering of forms for re-entrant angles shall be required only when specifically indicated on the Drawings.
- J. Forms shall be inspected immediately prior to the placing of concrete. Dimensions shall be checked carefully and any bulging or warping shall be remedied and all debris and standing water within the forms shall be removed. Special attention shall be paid to ties and bracing and where forms appear to be braced insufficiently or built unsatisfactorily, either before or during placing of the concrete, the ENGINEER shall order the WORK stopped until the defects have been corrected.
- K. Forms shall be constructed true to line and grade. Clean-out ports shall be provided at construction joints.
- L. All forms shall be installed in accordance with approved fabrication and erection plans.

- M. All porous forms shall be treated with non-staining form oil or saturated with water immediately before placing concrete.
- N. Falsework shall be built to carry the loads without appreciable settlement. Falsework that cannot be founded on solid footings must be supported by ample falsework piling. Falsework shall be designed to sustain all imposed loads.
- O. Detail drawings of the falsework shall be submitted for review, but such review shall not relieve the CONTRACTOR of any responsibility under the contract for the successful completion of the structure.
- P. Forms and falsework shall not be removed without the consent of the ENGINEER. The ENGINEER consent shall not relieve the CONTRACTOR of responsibility for the safety of the WORK. Blocks and bracing shall be removed at the time the forms are removed and in no case shall any portion of the wood forms be left in the concrete.
- Q. To facilitate finishing, forms used on exposed vertical surfaces shall be removed in not less than 12, nor more than 48 hours, depending upon weather conditions.

2.14 STAIR TREAD NOSINGS

- A. Stair tread nosings for the cast in place concrete stairs shall be 801 Bronzacast non-slip metal stair nosing with abrasive granules with cast on anchor assemble as manufactured by American Safety Tread or approved equal. 4-inch wide for full width of stair.

PART 3 - EXECUTION

3.1 GENERAL

- A. All concrete shall be placed before it has taken its initial set and, in any case, within 30 minutes after mixing. Concrete shall be placed in such a manner as to avoid segregation of coarse or fine portions of the mixture, and shall be spread in horizontal layers when practicable. Special care shall be exercised in the bottom of slabs and girders to assure the working of the concrete around nests of reinforcing steel, so as to eliminate rock pockets or air bubbles. Enough rods, spades, tampers and vibrators shall be provided to compact each batch before the succeeding one is dumped and to prevent the formation of joints between batches.
- B. Extra vibrating shall be done along all faces to obtain smooth surfaces. Care shall be taken to prevent mortar from splattering on forms and reinforcing steel and from drying ahead of the final covering with concrete.
- C. Concrete shall not be placed in slabs or other sections requiring finishing on the top surface when precipitation is occurring or when in the opinion of the ENGINEER precipitation is likely before completion of the finishing, unless the CONTRACTOR

shall have ready on the job all materials and equipment necessary to protect the concrete and allow finishing operations to be completed.

- D. Troughs, pipes, or short chutes used as aids in placing concrete shall be arranged and used in such a manner that the ingredients of the concrete do not become separated. Where steep slopes are required, troughs and chutes shall be equipped with baffle boards or shall be in short lengths that reverse the direction of movement. All chutes, troughs, and pipe shall be kept clean and free of hardened concrete by flushing thoroughly with water after each run. Water used for flushing shall be discharged clear of the concrete in place. Troughs and chutes shall be of steel or plastic or shall be lined with steel or plastic and shall extend as nearly as possible to the point of deposit. The use of aluminum for pipes, chutes or tremies is prohibited. When discharge must be intermittent, a hopper or other device for regulating the discharge shall be provided.
- E. Dropping the concrete a distance of more than five (5) feet or depositing a large quantity at any point and running or working it along the forms will not be permitted. The placing of concrete shall be so regulated that the pressures caused by wet concrete shall not exceed those used in the design of the forms.
- F. High frequency internal vibrators of either the pneumatic, electrical, or hydraulic type shall be used for compacting concrete in all structures. The number of vibrators used shall be ample to consolidate the fresh concrete within 15 minutes of placing in the forms. In all cases, the CONTRACTOR shall provide at least two concrete vibrators for each individual placement operation (one may be a standby), which shall conform to the requirements of these Specifications. Prior to the placement of any concrete, the CONTRACTOR shall demonstrate that the two vibrators are in good working order and repair and ready for use.
- G. The vibrators shall be an approved type, with a minimum frequency of 5,000 cycles per minute and shall be capable of visibly affecting a properly designed mixture with a one inch slump for a distance of at least 18 inches from the vibrator.
- H. Vibrators shall not be held against forms or reinforcing steel nor shall they be used for flowing the concrete or spreading it into place. Vibrators shall be so manipulated as to produce concrete that is free of voids, is of proper texture on exposed faces, and of maximum consolidation. Vibrators shall not be held so long in one place as to result in segregation of concrete or formation of laitance on the surface.
- I. Concrete shall be placed continuously throughout each section of the structure or between indicated joints. If, in any emergency, it is necessary to stop placing concrete before a section is completed, bulkheads shall be placed as the ENGINEER may direct and the resulting joint shall be treated as a construction joint.
- J. The presence of areas of excessive honeycomb may be considered sufficient cause for rejection of a structure. Upon written notice that a given structure has been rejected, the rejected WORK shall be removed and rebuilt, in part or wholly as specified, at the CONTRACTOR's expense.

3.2 PUMPING CONCRETE

- A. Concrete may be placed by pumping if the CONTRACTOR demonstrates that the pumping equipment to be used will effectively handle the particular class of concrete with the slump and air content specified and that it is so arranged that no vibrations result that might damage freshly placed concrete. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced.
- B. When pumping is completed, the concrete remaining in the pipeline, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned. Slump tests shall be taken at the discharge end of the pipe.

3.3 EXPANSION JOINTS

- A. Expansion joints shall be located and formed as required on the Drawings.
- B. Open Joints. Open joints shall be placed in the location shown on the Drawings and shall be formed. The form shall be removed without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint, unless so specified on the Drawings.
- C. Filled Joints. Unless otherwise shown on the Drawings, expansion joints shall be constructed with pre-molded expansion joint filler with a thickness equal to the width of the joint.
- D. The joint filler shall be cut to the same shape and size as the adjoining surfaces. It shall be fixed firmly against the surface of the concrete already in place in such manner that it will not be displaced when concrete is deposited against it.
- E. Immediately after the forms are removed, the expansion joints shall be inspected carefully. Any concrete or mortar that has sealed across the joint shall be removed.
- F. Joint sealer for use in deck joints shall be of the type shown on the Drawings conforming to the requirements of Article 2.4 (Joint Filler) of this Section. The faces of all joints to be sealed shall be free of foreign matter, paint, curing compound, oils, greases, dirt, free water, and laitance.
- G. Elastomeric Compression Seals. The joint seal shall be shaped as shown on the Drawings. It shall be installed by suitable hand or machine tools and thoroughly secured in place with a lubricant-adhesive recommended by the seal manufacturer. The lubricant-adhesive shall cover both sides of the seal over the full area in contact with the sides of the joint.
- H. The seal shall be in one piece for the full width of the joint. Any joints at curbs shall be sealed adequately with additional adhesive.

- I. The seal may be installed immediately after the curing period of the concrete. Temperature limitations of the lubricant-adhesive as guaranteed by the manufacturer shall be observed.
- J. Strip Seals. Expansion joint strip seals shall be as shown on the Drawings, and composed of a steel extrusion and an extruded strip seal. The steel shall conform to ASTM A242 or A588. Strip seals shall be one piece for the length of the joint.
- K. Installation of the expansion joints shall be in accordance with the manufacturer's recommendations, except that the joint opening shall be adjusted for the dimensions indicated on the Drawings.

3.4 PIPES, CONDUITS, AND DUCTS

- A. Pipes, conduits, and ducts that are to be encased in concrete shall be installed in the forms by the CONTRACTOR before the concrete is placed. Unless otherwise indicated, they shall be standard, lightweight cast-iron water pipe or wrought iron. They shall be held rigidly so they will not be displaced during concrete placement.

3.5 FINISHING CONCRETE SURFACES

- A. All concrete surfaces exposed in the completed WORK shall receive an Ordinary Finish, as described below, unless otherwise noted on the Drawings or in the special provisions.

3.6 ORDINARY FINISH

- A. An Ordinary Finish is defined as the finish left on a surface after the removal of the forms, the filling of all holes left by form ties, and the repairing of all defects. The surface shall be true and even, free from stone pockets and depressions or projections. All surfaces that cannot be satisfactorily repaired shall be given a Rubbed Finish.
- B. The concrete in caps and tops of walls shall be struck off with a straightedge and floated to true grade. The use of mortar topping for concrete surfaces shall in no case be permitted.
- C. As soon as the forms are removed, metal devices that have been used for holding the forms in place, and which pass through the body of the concrete, shall be removed or cut back at least one inch beneath the surface of the concrete. Fins of mortar and all irregularities caused by form joints shall be removed.
- D. All small holes, depressions, and voids that show upon the removal of forms, shall be filled with cement mortar mixed in the same proportions as that used in the body of the WORK. In patching larger holes and honeycombs, all coarse or broken material shall be chipped away until a dense uniform surface of concrete exposing solid coarse aggregate is obtained. Feathered edges shall be cut away to form faces perpendicular to the surface. All surfaces of the cavity shall be saturated thoroughly with water, after which a thin layer of neat cement mortar shall be applied. The cavity shall then be filled with stiff mortar composed of one part portland cement to two parts sand, which shall be

thoroughly tamped into place. The mortar shall be pre-shrunk by mixing it approximately 20 minutes before using. The length of time may be varied in accordance with brand of cement used, temperature, humidity, and other local conditions. The surface of this mortar shall be floated with a wooden float before initial set takes place and shall be neat in appearance. The patch shall be kept wet for a period of five days.

- E. For patching large or deep areas, coarse aggregate shall be added to the patching material. All mortar for patching on surfaces which will be exposed to view in the completed structure shall be color matched to the concrete. Test patches for color matching shall be conducted on concrete that will be hidden from view in the completed WORK and shall be subject to approval.

3.7 RUBBED FINISH

- A. When forms can be removed while the concrete is still green, the surface shall be pointed and wetted and then rubbed with a wooden float until all irregularities and form marks are removed and the surface is covered with a lather composed of cement and water. This lather shall be allowed to set for at least five days. The surface shall then be smoothed by being rubbed lightly with a fine carborundum stone. If permitted, a thin grout composed of one part cement and one part fine sand may be used in the rubbing.
- B. If the concrete has hardened before being rubbed, a medium coarse carborundum stone shall be used to finish the surface. Such WORK shall not be done until at least four days after placing and it shall be done in the following manner:
 - 1. A thin grout composed of one part cement and one part fine sand shall be spread over a small area of the surface. It shall be rubbed immediately with the stone until all form marks and irregularities are removed and the surface is covered with a lather. The surface shall then be finished as described above for green concrete.
- C. The surface shall be smooth in texture and uniform in appearance. The building up of depressions will not be permitted.
- D. If, through the use of first-class form materials and the exercise of special care, concrete surfaces are obtained that are satisfactory, the CONTRACTOR may be relieved entirely or in part from the requirements for a rubbed finish.

3.8 CURING CONCRETE

- A. Water Curing:
 - 1. All concrete surfaces shall be kept wet for at least seven (7) days after placement if Type I or II cement has been used or for three days if Type III cement has been used. Concrete shall be covered with wet burlap, cotton mats, or other materials meeting the requirements of AASHTO M 171 immediately after final finishing of the surface. These materials shall remain in place for the full curing period or they may be removed when the concrete has hardened sufficiently to prevent

marring. The surface shall immediately be covered with sand, earth, straw, or similar materials.

2. In either case the materials shall be kept thoroughly wet for the entire curing period. All other surfaces, if not protected by forms, shall be kept thoroughly wet, either by sprinkling or by the use of wet burlap, cotton mats, or other suitable fabric, until the end of the curing period. If wood forms are allowed to remain in place during the curing period, they shall be kept moist at all times to prevent opening at joints.

- B. Membrane Curing. Liquid membrane curing compound meeting the requirements of AASHTO M 148, Type I, may be permitted, subject to approval by the ENGINEER. Compounds utilizing linseed oil shall not be used. All finishing of concrete surfaces shall be performed to the satisfaction of the ENGINEER prior to applying the impervious membrane-curing compound. The concrete surfaces must be kept wet with water continuously until the membrane has been applied. The manufacturer's instructions shall be carefully followed in applying the membrane. In all cases, the membrane-curing compound must always be thoroughly mixed immediately before application. If the membrane becomes marred, worn, or in any way damaged, it must immediately be repaired by wetting the damaged area thoroughly and applying a new coat of the impervious membrane-curing compound. Membrane curing will not be permitted for concrete slabs that are to be covered with waterproof membranes, for polymer modified concrete or at construction joints.

3.9 BACKFILLING

- A. Unbalanced backfilling against concrete structures will not be permitted until the concrete has attained a compressive strength of not less than 80% of the ultimate strength (f'_c) shown on the Drawings.
- B. The compressive strength shall be determined from informational test cylinders cured on the site under similar conditions of temperature and moisture as the concrete in the structure.

3.10 CLEANING UP

- A. Upon completion of the structure and before final acceptance, the CONTRACTOR shall remove all falsework. Falsework piling shall be removed or cut off at least two feet below the finished ground line.

END OF SECTION 321313

SECTION 321315 - SIDEWALK, CURB AND GUTTER

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools, and equipment necessary for furnishing and installing concrete sidewalks, stair landing slabs, upper plaza slab and curb and gutter, as shown on the Drawings.

1.3 SUBMITTALS

- A. Samples: For each of the following materials:
 - 1. Sidewalk joint filler.
- B. Technical data sheets for the concrete acrylic fortifier, pigmented concrete admixture and water based stain resistant sealer.
- C. Construction Joint Layout: Indicate proposed construction joints in the field as indicated in the Drawings and required to construct the Project.
 - 1. Location and layout of joints is subject to the approval of the ENGINEER prior to Contractor placing concrete.
- D. Pigmented color samples for the pigmented concrete to be placed. See Architectural for coordination on this item.

1.4 QUALITY CONTROL

- A. Mockups: Before placing concrete, build flat work mockups to verify selections made under sample submittals and to demonstrate typical joints, surface finish, texture, colors, tolerances, and standard of workmanship. Build mockups to comply with the following requirements, using materials indicated for the completed WORK:
 - 1. Build mockups of typical pigmented cast-in-place concrete as required for verification, as shown on the Drawings. There shall be two separate mockups done on separate days to provide visual acceptance that the pigmented concrete batched on separate days is consistent in color. Mockups shall be cast on site in a 10' x 10' size, location to be directed by the OWNER.
 - 2. Obtain ENGINEER's approval of mockups before proceeding with casting concrete.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials shall conform to the requirements of Section 32 1313 Site Concrete, except "Concrete International Corporation" Ashford Formula, or approved equal, shall be used instead of the specified curing materials.
- B. Synthetic fibers shall be used for reinforcement with curb and gutter and concrete sidewalk replacements, except a 6-foot length of No. 4 reinforcing bar shall be centered across catch basins centered in the curb.
- C. Joint fillers shall conform to requirements of Section 32 1313 – Site Concrete.
- D. Synthetic fibers shall be added to concrete at the batch plant with the types and weights as follows:
 - 1. Sidewalk – Fibermesh 150 (formerly Stealth), as manufactured by “SI Concrete Systems,” or approved equal, at 1.5 pounds per cubic yard of concrete.
 - 2. Curb and Gutter – Fibermesh 300 (fibrillated fibers), as manufactured by “SI concrete Systems,” or approved equal, at 1.5 pounds per cubic yard of concrete.

PART 3 - EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Sidewalk, concrete slabs, curb and gutter shall conform to the applicable requirements of Section 32 1313 – Site Concrete, and as shown on the Drawings, except "Concrete International Corporation" Ashford formula, or approved equal, shall be used as a curing compound.
 - 1. The curing compound shall be sprayed on the surface with a low-pressure sprayer immediately following the finishing operation.
 - 2. The entire surface shall be kept wet for 30 minutes by brooming excess material onto the dry spots or by re-spraying them immediately. No areas on the concrete surface shall be allowed to dry during the initial 30 minute period.
 - 3. As the curing compound begins to dry into the surface and becomes slippery, lightly sprinkle the surface with water to aid the penetration of the curing compound and to bring any alkali to the surface.
 - 4. After 30 to 40 minutes, squeegee or broom the surface to remove any excess curing compound and alkali or other impurities brought to the surface. All WORK required for the application of the curing compound shall conform to the manufacturer's recommendations.

- B. All exposed or unprotected edges of sidewalks shall be tooled to a radius of not more than one-half inch. After floating, trowel finish the entire surface using steel trowels. Final finish shall be obtained by brooming the surface, including the tooled edge, to a gritty finish after all free moisture has disappeared from the surface. Sprinkling of cement or sand for blotting will not be permitted.
- C. Concrete curb and gutter shall be integral, one course construction, and molded in place on a compacted base course. The face forms of the integral curb and gutter shall be removed as soon as practicable. The top and inclined surface shall then be worked with float or steel trowels to a gritty finish. Glazing, sprinkling of sand or cement, or blotting will not be permitted. Both front and back edges shall be tooled to a radius of one-half inch.
- D. Use of monolithic curb and gutter machines will be permitted only with the written approval of the ENGINEER. Mortar may be added to the curb machine in a quantity approved by the ENGINEER.
- E. Expansion joints shall be placed at a maximum of 30-foot intervals, along all structures and about all features that project into, through, or against the concrete. An expansion joint shall be constructed at the intersection of sidewalks and at the beginning and end of curb returns. Expansion joints shall not be placed between the sidewalk and the curb.
- F. Expansion joint material shall conform to the requirements of AASHTO M 213. This material shall extend the full width of the structure and shall be cut to such dimensions that the base of the expansion joint shall extend to the subgrade and the top shall be depressed not less than one-quarter inch nor more than one-half inch below the finished surface of the concrete. The material shall be one piece in the vertical dimension and shall be securely fastened to the existing concrete face against which fresh concrete is to be poured.
- G. Joints shall be cleared of all gravel and loose material. Joint surfaces shall be kept clean and dry during sealing. Sealing shall be done in accordance to manufacturer's recommendations. Sealant placed incorrectly shall be removed and replaced at the CONTRACTOR's expense.
- H. Transverse contraction joints, cut to a depth of $\frac{1}{4}$ of the slab thickness prior to the final set of the concrete. The joints shall be tooled in the sidewalk as shown on the Drawings. Where the sidewalk adjoins the curb (parallel to it), contraction joints in the sidewalk and curb shall be made to match where practicable.
- I. The top and face of the finished curb shall be true and straight and the top surface of curbs shall be of uniform width, free from lumps, sags, or other irregularities. When a straightedge 10 feet long is laid on the top or face of the curb, or on the surface of gutters, the surface shall not vary more than 0.02 foot from the edge of the straightedge except at grade changes or curves. All discolored concrete shall be cleaned at the CONTRACTOR's expense. The concrete may be cleaned by abrasive blast cleaning or other methods approved by the ENGINEER. Repairs shall be made by removing and replacing the entire unit between scoring lines or joints.

END OF SECTION 321315

SECTION 321316 - REMOVE EXISTING SIDEWALK, CONCRETE SLAB, CONCRETE STAIRS OR CURB AND GUTTER

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this section includes providing all labor, materials, tools, and equipment necessary for sawcutting, removing and disposing of existing concrete sidewalks, concrete slabs, concrete stairs and concrete curb and gutter as indicated on the Drawings or as directed by the ENGINEER.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONSTRUCTION

- A. Concrete sidewalks, concrete slabs, concrete stairs and concrete curb and gutter to be removed shall be separated from the remaining portion by saw cutting. Saw cuts shall be at right angles to the curb, sidewalk, or slab edge. Broken edges shall be trimmed to eliminate jagged or irregular surfaces. The CONTRACTOR shall dispose of the material at an approved disposal area.
- B. The CONTRACTOR is responsible to secure disposal sites, including obtaining written permission from the owner and any required permits, if none are indicated on the Drawings. The cost of securing such sites shall be borne by the CONTRACTOR.

END OF SECTION 321316

SECTION 321317 – CONCRETE WALL REPAIR

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The WORK under this Section includes repair of spalled or damaged concrete barrier wall where designated on the Drawings or as directed by the ENGINEER. Surfaces to be repaired may be on horizontal, vertical, or inclined surface.
- B. Provide and remove upon completion all necessary staging, shoring, safety equipment, environmental protection. Cleanup and remove from site all surplus materials and debris.

1.2 SUBMITTALS

- A. Product Data for each product indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Patching Mortar shall be polymer or microsilica modified Portland cement with non-sag filler. It shall be suitable for overhead and vertical surface placement in depths from ¼-inch to 3-inches. It shall meet the requirements of ASTM C928 – Standard Specification for Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repair.
- B. Bonding Agents shall meet the requirements of ASTM C1059 – Standard specification for Latex Agents for Bonding Fresh to Hardened Concrete.
- C. Submit two (2) copies of product manufacturer's technical literature and Material Safety Data Sheets (MSDS).
- D. Compressive strength (per ASTM C109/C109M-02 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars) shall be 2,500 psi after 24 hours, 5,000 psi after 7 days. For Concrete refer to Section 321313.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. The perimeter of the area to be repaired shall be saw cut, slightly undercutting the sound concrete (without cutting reinforcing steel) to a minimum depth of 1-1/2 inches. Patch areas shall be roughly rectangular in shape.

- B. Mechanically remove unsound concrete or debris to a minimum depth of 1-1/2 inches. The aggregate fractured surface shall have a minimum profile of 1/8 inch (i.e. a minimum 1/8" projection of aggregate pieces beyond the cement mortar substrate). Sound surface after initial removal to detect delamination or sub-surface voids. If such areas are detected, break out to greater depth.
- C. Concrete must be free of materials such as paint, oil, curing compound, bond breaker, etc. that will inhibit bonding.
- D. Clean reinforcing steel, if exposed, by wire-brushing or other mechanical means to remove all rust.
- E. Thoroughly clean extraneous material such as dirt, loose chips and dust from concrete surface. If compressed air is used, it shall be free of oil.
- F. Concrete surface shall be saturated with potable water and standing water shall be removed from surface to achieve a Saturated, Surface Dry (SSD) condition.
- G. Apply bonding agent in accordance with manufacturer's direction to the prepared surface. Place mortar before bonding agent dries.

3.2 MIXING

- A. Organize personnel and equipment before mixing.
- B. Use amount of water in the range specified by the manufacturer per bag of patching mortar. Do not exceed the maximum amount specified.
- C. Mixed material should have a temperature of about 70°F. Warmer material will set faster than expected and cooler material will have slower strength gain. Control the mixed temperature by protecting the bags of repair material from temperature extremes and adjust the mixed temperature by using hot or cold water.
- D. Place dry materials in the mixer. Mix additives specified by the manufacturer, if necessary, into the water and add that water to the mixer. Mix for 2 to 3 minutes to achieve a uniform, lump-free consistency.
- E. Do not add any other admixtures. Do not add sand, aggregate, or cement.
- F. Do not re-temper.

3.3 PLACEMENT

- A. Place repair material onto the Saturated, Surface Dry (SSD) substrate, coated with bonding agent.

- B. Place repair material only if surface and ambient temperatures are above 45°F and rising.
- C. Place bonding agent and then place patching mortar immediately after mixing.
- D. Work repair material firmly into sides and bottom of repair area to achieve good bond. Place in layers, compacted with hand troweling. Roughen layer surface to enhance bond with subsequent layers.
- E. Do not feather edge repair material. Begin final finishing as soon as possible.

3.4 CURING

- A. Begin water cure when repair area begins to lose its moist sheen and keep continuously wet until 1 hour after final set.

3.5 CLEAN UP

- A. Clean mixer immediately after use, or add mix water and begin mixing immediately for the next batch. Do not allow buildup of hardened repair material in the mixer, since this creates inefficient mixing and the heat generated accelerates later batches.
- B. Clean all tools immediately after use.
- C. Clean excess material from surrounding areas immediately.

END OF SECTION

SECTION 331117 - PIPE INSULATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary for furnishing and installing rigid board insulation for underground utilities at locations shown on the Drawings and as directed by the ENGINEER.

PART 2 – PRODUCTS

2.1 RIGID INSULATION

- A. Rigid board insulation shall be closed cell polystyrofoam material containing a flame retardant additive specifically designed for underground pipe installations, equivalent to Dow Chemical Company Styrofoam HI, and approved by the ENGINEER.

2.2 SPRAYED-ON INSULATION

- A. Sprayed-on urethane foam insulation applied directly to the pipe exterior with an elastomeric coating, may be approved by the ENGINEER, provided the material has demonstrated a satisfactory performance history in underground installation and has the following physical properties:

Density	2 pcf, Minimum
Compressive Strength (ASTM D 1621)	35 psi, Minimum at 5% Deflective or Yield
Water Absorption (ASTM C 177)	0.25% by Vol. Maximum
Thermal Conductivity (ASTM C 177)	<u>Max. 0.23 BTU</u> Hr.Ft. ² EF.In. Thickness

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. Rigid insulation shall be a minimum of 2-feet wide and 2-inches thick. The length of insulation required shall be as directed by the ENGINEER. Insulation shall be placed between 6 and 12-inches from the underground utility pipe with the width centered on the longitudinal axis of the underground pipe as shown on the Drawings.
- B. Sprayed-on urethane foam insulation shall be a minimum of 4-inches thick and be installed in strict conformance to the manufacturer's recommendations. Precautions to protect CONTRACTOR personnel, Project inspectors, and the public in general shall be taken by the CONTRACTOR in compliance with OSHA Standards and the manufacturer's recommendations.

END OF SECTION 331117